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Keynote Spekaer

1. **Assoc. Prof. Dr. Mohd. Mahzan Awang**
   Universiti Kebangsaan Malaysia
2. **Dr. Awaluddin Tjalla**
   Pusat Kurikulum dan Pembelajaran
3. **Prof. Dr. Deni Darmawan, M.Si.**
   Universitas Pendidikan Indonesia
4. **Professor Emeritus Tan Sri Dato Dzulkifli Abdul Razak,**
   Rector, International Islamic University Malaysia
5. **Assoc. Prof. Dr. Michael David Hall**
   University of Nottingham

Theme

Re-Thinking of the Current Education and Disruptive Curriculum in the Era 5.0

Sub Theme

1. 21st Century Learning in Disruptive Era
2. 21st Century teaching and learning in Era 5.0
3. 21st Century competencies
4. Information Literacy, Media, and Digital in eEra 5.0
5. Model of Character Education Curriculum in the Disruptive Era
6. Future Curriculum in era 5.0
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Reviewer

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Prof. Dr. Ashari Johar, M.Pd

Dr. H.Asep Herry Hernawan, M.Pd

Dr. H.Rudi Susilana, M.Si.

Dr. Rusman, M.Pd

DEVELOPMENT OF TRAINING PROFESSIONAL PRACTICE TRAINING (PPK) FOR TEACHERS TO IMPROVE GUIDANCE COMPETENCE IN STUDENTS OF PPK S1

Kapraja Sangadji
Educational Technology Postgraduate Program, State University of Jakarta, Indonesia
State Islamic Religion Institute Ambon, Jl. Dr. Tarmizi Taher, Keb. Cengkeh Batu Merah Atas Kota Ambon-Maluku 97128
16sangadji@gmail.com

Nurdin Ibrahim [2)]
Department of Educational Technology Jakarta State University. Jl.Rawamangun Muka Jakarta 13220
nurdin1349@yahoo.com
Etin Solihatin [3)]
Department of Educational Technology Jakarta State University. Jl.Rawamangun Muka Jakarta 13220
etin_solihatin@unj.ac.id

Muhammad Ridha Albaar[4)]
AIKOM Ternate Lecture
Ternate Maluku
ridha_fara13@yahoo.co.id

ABSTRACT

The purpose of this study is to facilitate teacher tutors to fully understand the concept of teacher professional practice, while honing their knowledge, attitudes, and skills, as well as guiding procedures for teacher tutors in improving pedagogical competencies of undergraduate students in managing quality learning. The development of PPK training for tutor teachers in the form of modules refers to the Rowntree model. The Rowntree model is a development model specifically aimed at developing learning materials which have three main stages namely Planning materials, preparing for writing, writing and re-writing. PPK training materials can have a positive influence and have a significant impact on teacher tutoring effectively in mentoring student students. This will be seen from the improvement of teacher tutor competence in mentoring PPK students. Teacher tutoring competency can improve learning performance and contribute to the ability and willingness in collaboration for self-development and contribute to the development of student mentoring

Keywords: Training, Tutor Teachers, Guidance Competence.

A. INTRODUCTION

In the world of education, where the role and function of teachers is one very significant factor. Unable indisputable that teachers are the most important part in the learning process, especially in the educational path formal.Oleh Therefore, in every effort to improve the quality of education, the teacher's existence can not be separated from the role. Thus the presence and professionalism is very influential in creating a national education program. Teachers should have sufficient quality, because the teacher is one component of education is very strategic and corpulent take a role in the learning process in schools.

In line with this, the Educational Personnel Education Institution has a major role in producing graduates who are competent and competent teachers, especially in facing the era of global competition. Considering the importance of the quality of graduates of competent and competitive teacher candidates, it is necessary to carry out a high quality learning process. According to Herman Budiyono et al (2014), it is clear that the problem of Indonesian teacher competency is the still large number of teacher education qualifications required, the low quality of teacher performance is reflected in some of the results of studies conducted by the Ministry of Education and Culture, and the low pedagogical competence of teachers. Weak teacher mentoring ability in improving the pedagogical competence of students practicing in managing learning. This failure is due to the weakness of the teacher tutor's pedagogical competence, the teacher's lack of knowledge about the KDP program so that it affects the weak pedagogical competence of students practicing in managing quality

learning, the unavailability of learning materials in modules or the like, and there is no socialization from the LPTK IAIN Ambon.

Teachers must be able to provide a strategic role in creating quality mentoring, so that students have the ability to manage learning effectively and efficiently. However, the reality is not in line with expectations, this is based on various problems presented above. This study is to develop KDP training materials based on educational technology principles, namely to facilitate tutors in optimally improving the quality of mentoring. Thus the development of this training material is appropriate for review. On that basis, the problem in this study is "How to develop teacher professional practice training materials for tutors in improving the teaching abilities of students practicing?.

B. LITERATURE REVIEW

Development of training materials in the form of modules, if properly developed can improve the quality of tutor teachers in mentoring student practice. The development of training materials will be based on philosophical and psychological foundations based on needs, namely the formation of tutors' abilities in guiding students to practice as a form of performance that is facilitated through a learning material that is developed effectively, efficiently, and attractively. One form of learning material for tutor teacher is a module training material.

According to Russell in Roguel, (2015) explains the understanding of the module is a module as an instructional package dealing with a single conceptual unit of subject-matter. Modules are designed to help students achieve certain well-defined objectives. With the use of a module, instructions can be individualized. The learners can go through the material at their own pace and at their own time. This opinion explains that the module is a learning package that is interconnected between units of material to be studied. Modules are designed to assist participants in achieving specific goals with clear concepts, participants (tutors) can complete the material independently at any time.

According to the research of Neelam Dhamija and Ms. Kanchan, (2014) states that: Self Learning Modules create an effective learning environment for the learners to learn. These contain the answers of all possible queries, confusions and questions that may come in the mind of the learner at the time of learning. These also provide immediate feedback on the performance of the students. These also help to maintain high interest level and sufficient motivation for the learners. These Self Learning Modules have enriched features such as Self-explanatory, Selfcontained, Self-directed, Self-motivating and Self-evaluating which help to cater to the needs of all types of learners.

Teaching Professional Practice (PPK) training materials for tutors are in line with the definition of the Association for Education Communication and Technology (AECT) on the concept of educational technology specifically in facilitating learning and improving performance. Thus the concept of educational technology based on AECT 2004 is "*educational technology is the study athical practice of facilitating learning and improving performance by creating, using, and managing appropriate technilogical processes and resources"*(Januszewski and Molanda, 2008; 1).

According to Smaldino, et.al, the module is An instructional module is any self-contained instructiona unit designed for use by a single learner or small group of learners without teacher's expression (Smaldino, Russel al.at, 2008: 214) This concept explains that the learning module is part of a complete learning unit and is specifically designed for learning that will be used by students both individually and in groups without the presence of a teacher.

Referring to the various concepts above, it can be concluded that the module as a form of PPK training materials in the form of modules is a unit of learning material that is designed

systematically, directed, and structured and uses language that is easy to understand in order to facilitate teacher tutor in activities guidance to students, both independently and in groups to improve teaching competence. To that end, the preparation of PPK training materials in the form of this module is arranged systematically, that is, the material is presented coherently or in sequence. It is said to be operational because every definition or material presented in the training material in the form of modules is easy to understand, and directed because its development is based on the objectives and functions, characteristics, principles of its supervision, as well as its advantages and disadvantages.

C. RESULTS AND DISCUSSION

The research method used in this study is the R and D. Research and Development (R&D) is a research method used to produce certain products and test the effectiveness of these methods. In the field of education, research and development or Research and Development (R&D), is a research method used to develop or validate products used in education and learning.

Research conducted by Cally with the title Understanding Professional Development Teacher Training, The purpose of this article was to explore the notion of continuing professional development (CDP) and its potential application in Indonesian physical education. The article begins with the Indonesian professional development (PD) contexts, critiques on traditional PD, and the rationales to understand the concept of PD. It then explores the concept of PD including situated learning/community of practice as its theoretical underpinning, and impacts on student learning.

Nguyen's research results, conclude that mentoring can be used as a catalyst to restructure TESOL practicums to be given to EFL teaching preservice teachers and more support through the peer mentoring process. The results of this empirical study also indicate the need for peer mentoring in providing flexibility to EFL teachers so that the implementation of this approach is effective, and if preservice teachers are involved in this scheme well they will guide one another, this will help and support friends. This type of support is very important in enhancing positive experiences for EFL teachers in practicum schools.

Nancy Lee Ming See's findings in her research entitled Mentoring and Developing Pedagogical Content Knowledge in Beginning Teachers, that there is a significant relationship between mentoring and subject matter knowledge (SMK) or subject matter knowledge of ($\beta = .302$, $t(119) = 3{,}471$, $p < .05$), while mentoring with general pedagogical knowledge (GPK) or general pedagogical knowledge of ($\beta = .336$, $t(120) = 3{,}944$, $p < .05$), and mentoring with knowledge of context (KOC) or knowledge of context ($\beta = .372$, $t(119) = 4{,}387$, $p < .05$). thus mentoring or mentoring gives the greatest influence on KOC, GPK and SMK. Overall, there was a significant relationship between mentoring and PCK for initial teachers ($\beta = 0.389$, $t(119) = 4.488$, $p < .05$). This finding illustrates that with effective assistance will produce optimal performance. Therefore, the importance of the role of lecturers and tutors in mentoring or mentoring and involving students for the formation and improvement of student competencies in the teaching profession practice in managing effective, efficient, and interesting learning.

the results of research from Dhaliwal, Simpson, & Kim-Sing, (2018) that the module as a guide in decision making. Furthermore Dhaliwal et al., (2018) suggested that the module is very effective as a study guide. While Patelis, Matheiken, & Beard, (2015) in their research argued that the module has the potential to improve training.

while the researchers conducted this preliminary research by developing teacher professional practice training materials with the Rowntree development model, the Rowntree Model is a development model specifically directed to develop learning material that has three main stages namely Planning materials, preparing for writing, writing and re-writing .

PPK training materials can have a positive influence and have a significant impact on teacher tutoring effectively in mentoring student students. This will be seen from the increasing pedagogical competence of students practicing in managing learning resulting from tutor tutoring activities after using the PPK training modules. Pedagogic competence can improve learning performance and contribute to the ability and willingness in pedagogic collaboration for self-development and contribute to the development of students being taught.

In developing PPK training materials for tutors, teachers refer to the Rowntree . The Rowntree model is a development model specifically aimed at developing open learning materials, distance learning or learning that suits students' needs, Rowntree calls it flexible learning. This model has three main stages, namely Planning materials, preparing for writing, writing and re-writing (Rowntree, 1994; 5) And these three stages have several sub stages which can be seen which in Figure 2.1

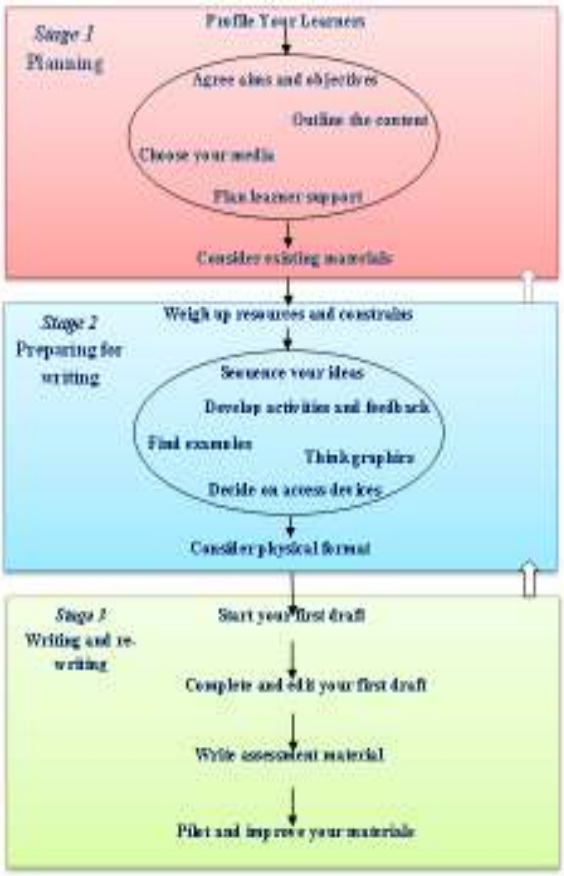

Figure 2.1 Rowntree Model

The following three main stages and sub-stages of this model can be explained as follows.
1. Planning Phase
In the planning stage about the translation of the tutor tutor viz

1. Formulating general learning goals and specific learning goals
2. Arranging lines of material contents
3. Determine the media
4. Plan learning support
5. Considering existing learning materials.

2. Writing Preparation Phase
At this stage is the development or preparation of research by considering the sources and obstacles, which consist of:

1. Sorting ideas on ideas of writing
2. Develop learning activities
3. Determine related examples
4. Determine images and graphics
5. Determine the required equipment
6. Formulate physical form

3. Writing and Editing Stage.
Activities at this stage include:

1. Make a draft.
2. Completion and editing of drafts.
3. Make a measuring instrument in the form of a test for assessment
4. Try out and improve training materials.

D. CONCLUSION

Based on the results of the above research, it can be concluded:

1. PPK training material in the form of modules is a unit of learning material that is designed in a systematic, directed, and structured manner and uses language that is easy to understand in order to facilitate teacher tutor activities in mentoring students practice both independently and in groups to improve teaching competence. The development of PPK training materials for tutors refers to the Rowntree model.
2. The Rowntree model is a development model specifically aimed at developing open learning materials, distance learning or learning that suits students' needs, Rowntree calls it flexible learning. This model has three main stages, namely Planning materials, preparing for writing, writing and re-writing.
3. PPK training materials in the form of modules can have a positive influence and have a significant impact on tutors effectively in mentoring students practically optimally.

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DESIGNING MOMENTUM LEARNING IN PHYSICS TO TRAIN 21ST CENTURY SKILLS OF HIGH SCHOOL STUDENTS THROUGH INQUIRY PROJECT-BASED LEARNING WITH READING INFUSION STRATEGY

Setiya Utari, setiyautari@upi.edu
Ayesha Bilqis, ayeshabilqis@upi.edu
Department of Physics Education
Universitas Pendidikan Indonesia
Jl. Dr. Setiabudi No. 229, Bandung, Indonesia
ayeshabilqis@upi.edu

Abstract. A number of ways have been generated to train 21st century skills on momentum material in physics learning for high school students. Those are built based on 21 century skills responses from the students. The 21st century skills responses were measured using rubric adopted and adapted from Boss. It was done by developing a number of projects related to determination of the center of mass from the particle system, minimization of the external force in the collision process, and increasement of the velocity of rocket motion based on the exhaust gas speed. Reading infusion is used as a knowledge that needs to be infused to students so that students can have sufficient knowledge for completing their projects. While the inquiry process is built to overcome the essential concepts which are needed to build the projects. Some actions still need to be built and developed related to reading infusion assignment. Punishment and reward method needs to be provided so that students are encouraged to have sufficient knowledge. The inquiry process needs to be established by constructing inductive hypotheses reasoning to produce essential concepts used in completing projects. It is necessary to modify the project-based learning (PjBL), according to the characteristics of high school students. In general, students still do not have adequate inquiry skill so that teacher intervention in physics learning is still dominantly needed.

Keyword: 21st century skills, inquiry project-based learning, reading infusion

A. INTRODUCTION

The development of information, communication, and technology (ICT) provides change in all areas of life so that working competency becomes very important. Works that require routine activities can be replaced by machines. Recent technology also can create self-learning machines (Industry 4.0). Related to this condition, working competency prioritizes competencies that are supported by important skills that are urgently needed at this time, such as critical thinking, collaboration, communication, and creative thinking skills. These important skills are known as the 21st century skills [1, 2, 3].

The concept of 21st century skills has been developed since 1997. UNESCO recommends continuing education related to providing human resources with challenges in the 21st century by introducing four pillars of education, namely learning to know, learning to do, learning to be, and learning to live together [4,5]. The Assessment and Teaching of the 21st Century Skills Project (AT21CS) has categorized 21st century skills into four parts, namely ways of thinking, ways of working, tools of working, and skills for living in the world [4]. Partnership for 21st Century Skills [6] proposes four skills that are key to success in work and life in the 21st century. The four skills include 'The 4Cs', namely communication, collaboration, critical thinking, and creativity. Furthermore, these skills are important that need to be equipped so that the curriculum policy direction in several developing countries supports this debriefing in secondary schools education, including in Indonesia.

Because these skills are perceived as important, some researches have been developed to train 21st century skills. Research related to ICT usage, both in the use of media or game tournaments, in addition to train digital literacy it can also train 21st century skills [2,7,8,9]. On the other hand, some researches reveals that the project-based learning (PjBL) model is seen as capable of training 21st century skills [10,11]. However, the study results show that the trained 21st century skills (4C's) are still sporadic (each skill from the 4C's is not entirely measured yet). This study also shows that there are still difficulties associated with the lack of

knowledge students have, so the teacher's dominance is very high in helping them to complete projects. Therefore, it is necessary to insert supporting knowledge so that the learning process can run better through the reading infusion strategy [12]. Besides the limited knowledge, the other factor that impedes the PjBL process is students do not yet have the inquiry ability [13]. That way, inquiry skill needs to be trained before the PjBL is done, which is called inquiry project-based learning (IPjBL) [14].

Momentum is one of the taught physics topics in class. But it is often that this material is taught not starting from the particle system motion topic. Whereas, the particle system concept is very important because the studied momentum topic is the central momentum of the particle system [15]. To teach conservation of momentum, students need to understand the validity of the Momentum Conservation Law when there is no external force. In real conditions, the law is difficult to prove with simple equipment. Therefore, students are left to discover the invalidation of the Momentum Conservation Law in real phenomena so that students' analytical skills can be developed [13]. The researchers have built a number of experiments that can be used to develop those concepts through experimental activities using ICT [16]. Through the developed experiments, projects can be built to fulfill the IPjBL process in training 4C's on the momentum material in high school.

B. RESEARCH METHOD

The method used in this study is quasi-experiment with one group pre-test post-test design, to get a momentum learning design that can facilitate 4C's training based on students' responses. The participants of this study are 121 students, randomly picked from 288 students at one of the senior high schools in West Bandung district. Four classes were selected randomly from eight available classes total. Students in each class were divided into six groups. A group contained five to six students to work on projects related to momentum and impulses material.

The 21st century skills measured are "4C's" skills, which are critical thinking, creative thinking, communicating, and collaborating skills. The development of 4C's was observed based on the performance assessment rubric, adopted and adapted from Boss [17]. This rubric consists of 16 indicators that elaborate the achievement of students' 21st century student skills for each stage of project-based learning. This rubric has a maximum score of 4 for each indicator, so the total score is 64.

The description of students' 4C's development refers to the criteria or standards adapted from Boss [17], which has been tested through inter-rater reliability technique. The reliability value was found around 0.67. This value is categorized as "substantial" [18], so Boss' criteria can be used to describe the performance of students' 4C's in this study. The criterias are "Above standard", "At standard" (in accordance with the achievements of practicum laboratory test results), "Approaching standard" (the solution proposed by students can be used to complete the projects, but it is still less effective and not really efficient), and "Below standard" (the solution proposed by students cannot be used to complete the projects).

This criteria is shown in Table 1. And the performance assessment rubric is shown in Table 2.

Table 1. Standards adapted from Boss [17].

Score	Category
75-100	Above standard
75	At standard
50-75	Approaching standard
0-50	Below standard

Table 2. The performance assessment rubric of 21st century skills (4C's) [17]

Stages of project-based learning vs 4C's	Critical Thinking	Collaboration	Communication	Creative Thinking

Launching the project	Determine the stages of problem solving.	Divide the works according to the stages of problem solving.	Find the information to get knowledge and present it to the group.	Express the ideas to improve the stages of problem solving.
Building knowledge, understanding and skills	Ensure the effective and efficient steps to be used as project completion.	Work in a solid group to complete the project.	Write down the observation's results effectively and correctly.	Use the right methods and techniques when doing measurements.
Developing and revising ideas and products	Criticize the results and give reasons scientifically based on the data.	Discuss with the group to observe the results and express ideas to improve results.	Communicate with the group to provide explanations or express ideas.	Express the ideas to improve results.
Presenting products and answers to driving question	Express the result's limitations (product's advantages and disadvantages).	Take part in drawing conclusions and agree to the conclusions produced together.	Each group member gives note to the results.	Deliver the results in creative ways.

C. RESULT AND DISCUSSION

The projects developed in this study refers to momentum material in 10th grade. The learning activities were performed in three meetings. Based on the projects built and rubrics that have been developed, students' achievement for critical thinking skill is still in "Below standard" category. The diagram in Figure 1 shows students' achievement of critical thinking skill for each meeting (the 1st, 2nd, and 3rd meeting).

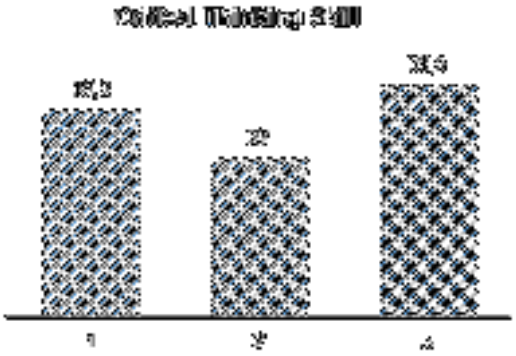


Figure 1. The result of students' critical thinking skill

The observed critical thinking skill were only in two indicators, namely "determine the stages of problem solving" and "criticize the results and give reasons scientifically based on the data". The results showed that students' critical thinking skills from 1st to 3rd meeting are still in "Below standard" category. This means that the reading infusion provided does not support sufficient knowledge to make students have critical thinking on solving problems. This result is supported by the data of reading infusion work assignments, showed in Table 3. Reading infusion used in this study applies SQ4R (Survey, Question, Read, Recite, Review, & Reflect) method. Table 3 shows that the average percentage of students' scores is 33.85%, that is in "Below standard" category. So it can be interpreted that students' reading ability is still low. The other data shows that the inquiry process developed has not yet provided sufficient experience to make students have the inquiry skills in designing problem solving steps. This is indicated by the average score of students when they complete their inquiry worksheets, showed in Table 4. The average score of students' critical thinking skill on inquiry activity in those two indicators is 39.29. It means that the ability of students to do the inquiry is still in "Below standard" category.

Table 3. The results of reading infusion's score

Meeting	Students' average score					The SQ4R average score on each meeting
	Survey	Question	Recite	Review	Reflect	
1	27,38	32,14	25,60	26,19	26,19	27,50

2	64,68	57,94	40,87	24,40	18,06	41,19
3	34,52	39,29	37,50	32,74	20,24	32,86
The average percentage of students' scores (%)						33,85

Table 4. Students' inquiry worksheets score in critical thinking skill indicators

No	Indicators	Question number	Students' average score		
			M-1	M-2	M-3
1	Determine the stages of problem solving.	2	41,52	32,59	46,43
2	Criticize the results and give reasons scientifically based on the data.	3	41,52	33,04	41,07
Average score of each meeting			41,52	32,59	43,75

Notes : M-1 = 1st meeting; M-2 = 2nd meeting; and M-3 = 3rd meeting.

For students' achievement in collaboration skill, it reaches "Approaching standard" category as shown in diagram on Figure 2. The observed collaboration skill's indicators include "divide the works according to the stages of problem solving", "work in a solid group to complete the project", and "take part in drawing conclusions and agree to the conclusions produced together".

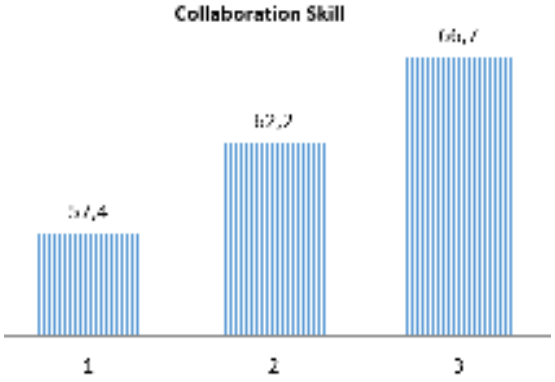


Figure 2. The result of students' collaboration skill

Based on the result in Figure 2, the result obtained that students' collaborative skill reaches "Approaching standard" category, although it does not reach "Standard" category. The implemented learning design is able to facilitate collaborative skill so that most students can be engaged in learning activites and be able to collaborate with their groups, even though the teacher still very dominantly guide the students. Project-work instructions still must be built very tightly so students can divide the work between group members. Collaboration skill is also established through the division of different tasks on students' worksheet in order to see the group strength. Even so, student activities to discuss improving data have not emerged yet. This is because students do not have the same level of knowledge.

The achievement of students' communication skill can be seen in Figure 3. Students' communication skill has not reached the "Standard" category, but it still in "Approaching standard" category.

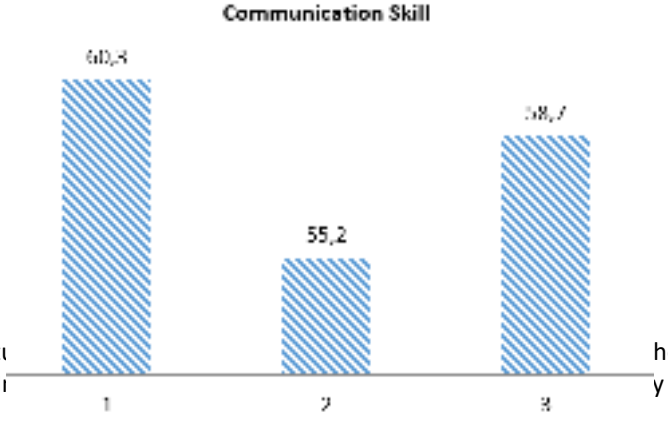


Figure 3. The result of students' communication skill

The observed communication skill's indicators includes activities to "find the information to get knowledge and present it to the group", "write down the observation's results effectively and correctly", "communicate with the group to provide explanations or express ideas", and "each group member gives note to the results". Even though students' communication skill has reached "Approaching standard" category, students still seem reluctant to give notes on the results of the obtained project work. Giving notes to the results of project work on students' worksheet was only done dominantly by students who are interested in doing it. In the discussion activities carried out, students do not have an overview of the products' quality produced in project completion. So in this case, the teacher needs to have the space or time to express the product standards produced in the project so that students can compare and have the knowledge to discuss improvements from those produced products.

Students' creative thinking skill also has not yet reached "Standard" category, as shown in Figure 4. At first meeting, students' creative thinking skill is still in "Below standard" category. Whereas at the second and third meetings, students' creative thinking skill reaches "Approaching standard" category. Creative thinking skill were only observed in "deliver the results in creative ways" indicator. Other indicators of creative thinking skill still did not appear. This happened because students are not accustomed to do projects that require creativity. The reading infusion articles given cannot be used as information that can support student creativity. On the other hand, the application of this IPjBL model requires very strict time management so that e-learning support can be built through Whatsapp group or Google Classroom to report the inquiry results. That way, students can have enough time to make reports of the project results, either by using photos, videos, or other forms.

Regarding the instruments developed to measure 4C's through PjBL and the use of reading infusion and inquiry strategies, the outline of momentum learning design can be shown through the following diagram in Figure 5. And related to the momentum material in high school, the actions designed can be built as shown in Table 5.

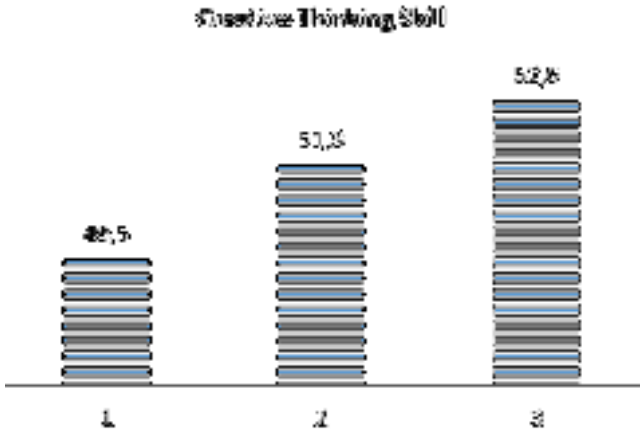
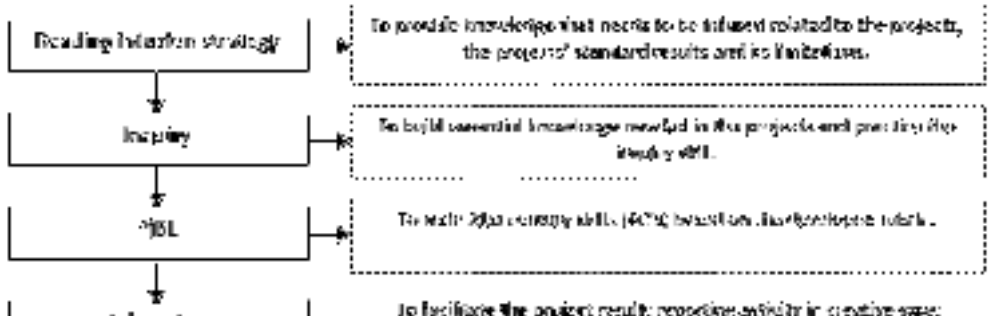


Figure 4. The result of students' creative thinking skill



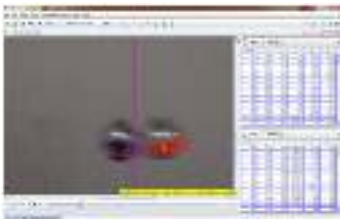
11 Des rough

Figure 5. The IPjBL learning design using Reading Infusion and e-learning strategies for training 21st century skills (4C's)

This design was obtained from analysis in the implementation of student responses to 4C's. Teaching 4C's to students in this study is still very difficult. Some of the causes include the lack of scientific process skills and inquiry skills in students' mind and students are not accustomed to build knowledge through scientific inquiry processes. So it requires quite a long time to build those skills. It will be different if students have been taught to build knowledge through inquiry from an early age. Therefore, infused knowledge is needed so that students are ready to do inquiry through reading infusion [12].

In several learning sources, PjBL is done while building knowledge and also completing projects. Students will have better knowledge if they learn from mistakes. Therefore, the PjBL model makes students have meaningful experiences [17]. But it seems that this method cannot be done for students who are not accustomed to inquiry based on the Level of Inquiry developed by Wenning [19]. Problem solving learning is at the highest level of inquiry where student dominance is much greater than the dominance of teachers. Because of that, the independence of students is challenged to solve the problem. And this is a failure of inquiry if inquiry is seen as a partial process. On the other hand, Marzano in the Marzano learning dimension revealed that the use of knowledge is done after students have knowledge. Problem solving activities, include the use of knowledge by students, is done after students have gained knowledge and obtained knowledge refinement. PjBL is included in problem solving models so that in this research the PjBL that is developed is included in the knowledge application after students receive important knowledge through the inquiry process. Therefore, the model developed in this study is called IPjBL [14].

Table 5. The action designed in learning activities to teach momentum material in high school

Stages	1st meeting	2nd meeting	3rd meeting
Project			
	Designing objects that break into pieces in the air. Determine its center of mass speed using Tracker program. Use "Punish and Reward" strategy so that students want to read and do assignments given.	Minimize the external force in the collision process. Increase students' independence so they can work on assignments independently.	Designing rocket motion's speed based on exhaust gas speed using a video Tracker. Build awareness of the importance of basic knowledge to develop projects.
Reading Infusion	Contains of the center of mass, the center of mass motion, the relation between the momentum of the particle system and the center of mass velocity of the particle system.	Contains of the requirement of the Momentum Conservation Law validity, speed measurement techniques in the collision process using a video Tracker.	Contains of rocket motion's equation, measuring the speed of the exhaust gas technique.

Inquiry	What is the shape of the center of mass for any random object?	Experiment of the validity of the Momentum Conservation Law in the collision process.	Measuring rocket motion's speed.
PjBL	Facilitating students to practice developing 21st century skills (4C's) with a fairly high teacher dominance.	Facilitating students to practice developing 21st century skills (4C's) with reduced teacher dominance.	Facilitating students to practice developing 21st century skills (4C's) with higher student dominance.
E-learning	Determine standards for making reports using creative ways, such as in the form of data and graphics. Besides that, students can also show the videos related to the project results.		

The inquiry activity aims to train the scientific process and provide important concepts that will be used in the project completion. Due to time constraints, the implementation of the demonstrative inquiry strategy was chosen [19]. This strategy is included in the level of inquiry with a fairly high teacher dominance. The teacher presents a phenomenon to be observed to raise an inquiry question. Students are invited to recognize the independent, bound, and controlled variables to make a hypothesis through demonstrations shown by teacher. After that, students develop procedures, and then students can take data and make conclusions based on data obtained. In a relatively short period of time, students can build a process of inquiry skill that supports the steps developed in the project that will be given.

Some projects are selected which can be done in the learning hours provided. The projects also should be contextual so that students can feel the meaning and benefits of the momentum material that is given (a meaningful learning). The use of this learning design really requires a time management strategy, because the process is so dense that the teacher must prepare several supporting facilities and also a good interrelationships between each learning processes that will be held in class. Reading infusion provides important knowledge that must be infused so students can build the inquiry process and supporting knowledge in the project that will be done. Reading infusion is done through e-learning through structured assignments given before the learning process in class. The use of inquiry is performed to build essential concepts, which will be used in the project completion as well as instilling inquiry skill as steps that students will use in completing the project. The use of PjBL was carried out to build 4C's through relatively moderate and contextual projects. Due to limited time, the project results are delivered through e-learning where each student can develop posters (or other creative format) which are done through e-learning. Thus this design is expected to facilitate learning activity that trains 21st century skills.

D. CONCLUSION

The learning design of momentum material to train 21st century skills was developed by adding e-learning activities to overcome time constraints in making project reports that brings up creativity of using ICT.

The reading infusion materials are focused on providing the knowledge needed in making projects and product standards so that students have the thoughts toward producing products to solve problems, and have the knowledge to develop critical and creative ideas.

The inquiry process that was given before the project introduction activity was focused on building essential concepts. The inquiry process also put more emphasis on inquiry skill, so that this inquiry skill can be applied to the PjBL.

Teacher domination needs to be developed from high dominance at first to gradually low dominance, until it becomes student-dominance in building 21st century skills.

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THE INOVATION OF *SISTEM KREDIT SEMESTER (SKS)* SERVES STUDENTS WHO HAVE THE RIGHT TO LEARN AT A DIFFERENT PACE

mariati.prb@gmail.com
leli.alhapip@kemdikbud.go.id

ABSTRACT

The semester credit system, that which is commonly known as *Sistem Kredit Semester* (SKS), was introduced in 2006, in accordance with the Government Regulation which provided the basis for the implementation of the system, along with *sistem paket* ("package system"). As far as curriculum is concerned, the implementation of the credit system is a form of innovation for it provides opportunities for schools to develop curriculum programs aiming at meeting the needs of students who learn at a different pace. Currently, out of 13,841 high schools in Indonesia, there are 236 schools which have implemented the system. This research aims at studying the different schools that have implemented the system and how the school curriculum documents have been developed. In this research data were collected through questionnaires, as well as focus group discussions. The main findings of the study underlines that some of the teachers show a significant lack of understanding with regard to the implementation of the SKS. A successful implementation of the SKS necessitates a deep understanding of the nature of the SKS within the school community, the incorporation of SKS into the school curriculum and the academic regulations, and choosing suitable class management, be it heterogenous or homogenous.

A. INTRODUCTION

The semester credit system (SKS) is a form of curriculum innovation because it provides opportunities for schools to develop curriculum programs in accordance with the talents, interests, abilities and / or learning pace of students. SKS began to be trialled in the academic year of 2004/2005 along with the presence of government regulation No. 19 of 2005 which provided an opportunity for schools to implement SKS beside the package system that had been implemented. An initial study of SKS in 2007 at Mataram (Mariati, 2008) showed that there were 17 high schools that had carried out SKS in Mataram, since 2005. Mataram was the first city in Indonesia to implement SKS. The SKS implementation policy was formally formulated in Minister of Education and Culture Regulation No 158/2014. From 2014 to 2019 only 216 high schools out of 13. 841 high schools (Dit PSMA, 2019) have implemented SKS. This fact shows that less than 2% of high schools in Indonesia hold SKS.

The implementation of SKS provides an opportunity for diversity of services (diversification) of the curriculum that can produce a variety of curriculum that has relevance value to the abilities and needs of students (--, 2015). The impact of that curriculum innovation has brought about to the then prevalent cultures of teaching (Cheng, 2005). Creativity and innovation are 21st Century skills in the category of ways of thinking (Irenka,2013) that needs to be developed at school.

This study aims at problematic analysis through exploratory studies of principals and teachers understanding of SKS policy as curriculum innovation, curriculum at the school level known as KTSP, academic regulation, and classroom management. In this research data were collected through questionnaires, as well as focus group discussions. Based on the findings of this exploratory study a policy will be formulated regarding the implementation of SKS in high school.

B. Principals 'and teachers' understanding of The semester credit system

The school has developed KTSP. 74 schools (91%) stated that the SKS was included in their KTSP. However, from the focus group discussions (FGD) information was obtained that not all teachers and other education staff understood SKS. SKS is only understood by the school curriculum team (consisting of the principal and several teacher representatives).

All teachers usually give integrity pacts to show responsibility for carrying out tasks. A total of 541 respondents (60%) signed an integrity pact to be willing to serve students in teaching and learning

activities in accordance with the pace of learning. However, 363 respondents (40%) said they did not know or did not sign the integrity pact. Several reasons for respondents such as, not understanding, just being transferred, and there is no acceleration program at school. Based on the results of the FGD, information was obtained that the fact of integrity is not an obligation at the school, but the principal really hoped that the teacher could sign the fact of integrity at the beginning of the year. This fact of integrity is very much needed to show the teacher's responsibility towards his task

C. Curriculum Innovation The Semester Credit System

The study was conducted with a quantitative and qualitative approach to get accurate results in implementing SKS in senior high school (SMA). A total of 904 respondents from 82 schools spread in 50 cities and 12 provinces. Data obtained from questionnaires and followed by focus group discussions in five cities.

Figure 1: Distribution of respondents in 50 cities and 12 provinces in Indonesia (Aceh, Riau Islands, Lampung, Jakarta, West Java, Central Java, East Java, West Nusa Tenggara, East Nusa Tenggara, North Maluku, East Kalimantan, and North Kalimantan

Research data found that student graduation varied from 2 years (4 semesters), 5 semesters, 3 years, 7 semesters, and a maximum of 4 years. A variety of graduations encourage schools to innovate curriculum management and learning.

3.1 Curriculum Management for students who have graduated 2 years

The regular curriculum structure for high school students is 3 years (6 semesters), but for students who have above average abilities and speed can complete studies in 2 years and 5 semesters.

Table 1: Alternative 1: graduate 4 semesters

1st year	1st semester curriculum: July-October (October report card)
	2nd semester curriculum: November-February (February report card)
	3rd semester curriculum: March-June (print report card June)
2nd year	4th semester curriculum: July-September (October report card)
	5th semester curriculum: October-December (December report card printed)
	6th semester curriculum: January-March (May report card)
	March-April: School Exams and National Exams

Table 2: Alternative 2: graduate 4 semesters

1st year	1st semester curriculum: July-December (December report card printed)
	2nd semester curriculum: January-March (March report card)
	3rd semester curriculum: April-June (June report card)
2nd year	4th semester curriculum: July-September (September report card)
	5th semester curriculum: October-December (December report card printing)
	6th semester curriculum: January-March (May report card)
	March-April: School Exams and National Exams

3.2 Curriculum Management for students who have completed 5 semesters

Some schools complete the study load for 5 semesters but because the national exam cannot be conducted in semester 5, the 6th semester students are facilitated by the school to carry out various activities such as college entrance preparation and enrichment in certain fields.

Table 3: Students complete 5 semesters of study but graduate 6 semesters

1st year	1st semester curriculum: July-November (November report card printing)
	2nd semester curriculum: December-April (February report card)
2nd year	3rd semester curriculum: May-September (October report card)
	4th semester curriculum: October-February (December report card)
	5th semester curriculum: March-July (December report card)
3rd year	6th semester curriculum: August-December (May report card)
	January-April: Preparation for higher education and enrichment activities according to students' interests
	March-April: School Exams and National Exams

Curriculum innovation is followed by innovations in learning that serve students with technology-based management learning systems using online and face-to-face programs together. Blended learning is expected to facilitate communication between students and teachers without being limited by space and time.

The school provides services for students who have graduated more than 3 years due to several cases including: students participating in field activities by sports, art, scientific work, competitions, exchanging students abroad, and because of illness. Some students must follow remedies or repeat because they are slow in learning. Education policy in Indonesia determines that the time to study in senior high school is a maximum of 4 years

D. Classroom management in The Semester Credit System

Studies show that classroom management varies both homogeneous and heterogeneous. In the beginning of the implementation of credits, most schools used heterogeneous methods, but schools said that it was very difficult to manage because it was complicated. At present many schools use homogeneous classroom management rather than heterogeneous.

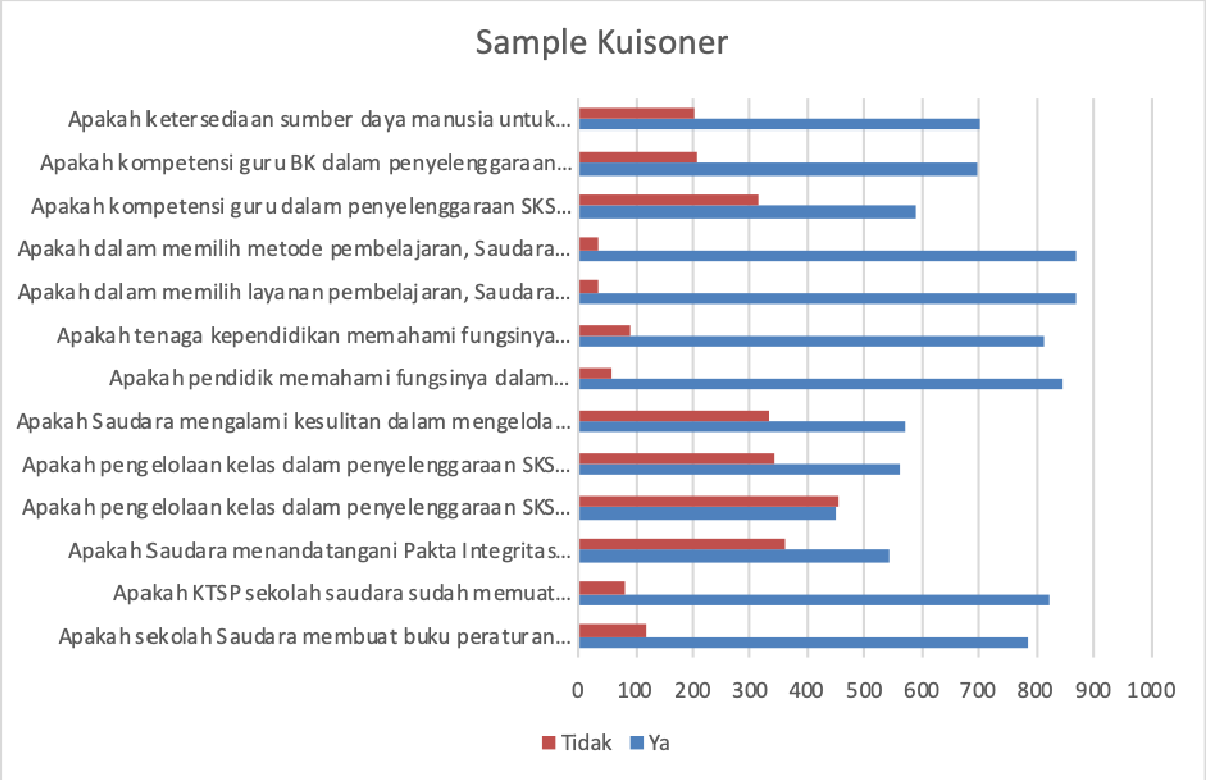

Figure 2: Showing a sample of questionnaires including class management

In class management an important point is how schools conduct teaching and learning both homogeneous and heterogeneous classes. A total of 31 schools respondents (38%) had homogeneous classroom management and 52 respondents (62%) had heterogeneous classroom management. However, in general respondents (63%) had difficulty in teaching in heterogeneous classes. As many as 70% of respondents said they would choose homogeneous classes rather than heterogeneous in their schools because it is easier to manage.

5. Conclusions and recommendation

Based on the results of the research and FGD it can be concluded that socialization to all teachers and other school members so that there is a shared understanding of school members about the implementation of SKS, it is better to include the SKS program in the Curriculum at the schools level and in school academic regulations. The school arranges curriculum and classroom management according to the speed of student learning both 2 years, 5 semesters, 3 years, 7 semesters, and a maximum of 4 years. Need to provide facts of integrity about the shared responsibility of all school members, class management can be homogeneous or heterogeneous depending on the abilities and peculiarities of the school. Implementing SKS stimulates teachers to do online learning by utilizing IT.

The results of this study recommend that more schools are willing and able to innovate with SKS because this system can serve students according to their talents, interests, abilities, and / or speed of learning. For teachers and principals this system encourages creativity and innovation in curriculum management and classroom management.

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DEVELOPMENT OF 21ST CENTURY COMPETENCIES IN THE BASIC EDUCATION CURRICULUM

Yogi Anggraena
Pusat Kurikulum dan Pembelajaran
Jl. Gunung Sahari Raya No 4. Jakarta Pusat
e-mail:yogi_anggraena@yahoo.com

Rahmi Rivalina
Pusat Kurikulum dan Pembelajaran
Jl. Gunung Sahari Raya No 4. Jakarta Pusat
e-mail:orivaina@yahoo.com

ABSTRACT

This study aims to examine the development of 21st century competencies in the basic education curriculum. Life challenges the 21st century requires lifelong learning experiences so students have the competence to solve life's problems and make the right decisions. These required competencies are critical thinking and problem solving, creativity, communication, and collaboration developed through the implementation of the basic education curriculum. This research was conducted using a qualitative approach with data collection techniques carried out through documentation studies. The results show that the three concepts of 21st century education have been adapted by the Ministry of Education and Culture of the Republic of Indonesia to develop curriculum for basic education, namely Primary Schools (SD / MI) Junior High Schools (SMP / MTs). The three concepts are 21st century skills, scientific approach, and authentic assessment. Furthermore, the three concepts are adapted to develop education towards creative Indonesia in 2045. The term 21st century skills is paired with the term 21st century skills which consists of three categories, namely: foundational literacies paired with basic literacy, competencies paired with 21st century competencies consisting of four competencies (4C), and character qualities paired with character quality.

Keyword: 21 century, critical thinking, creativity, communication, collaboration

A. INTRODUCTION

According to Law No. 20 of 2003 concerning the National Education System, Article 14, states that basic education consists of Elementary Schools (SD) or Madrasah Ibtidaiyah (MI) and Junior High Schools (SMP) or Madrasah Tsanawiyah (MTs) or other similar forms. As part of primary education, elementary and junior high schools are the foundation or foundation for secondary education (Law No.20 / 2003, Article 17). As a basis for secondary education, elementary and junior high schools are certainly very important education units because the quality of education at the primary education level will determine the quality of education at the secondary education level.

In the 21st century, competition in various fields of life, especially education, is especially tight. We are faced with demands for the importance of quality human resources and being able to compete. Quality human resources, which are produced by quality education can be the main force to overcome all problems encountered. One of the ways taken is through improving the quality of education. At present, education is in the age or period of knowledge (knowledge age) with the acceleration of an extraordinary increase in knowledge. The accelerated increase in knowledge is supported by the application of digital media and technology called information super highway (Gates, 1996). Since the internet was introduced commercially in the world in the early 1970s, information has become more rapidly distributed throughout the world. In this 21st century, education is increasingly important to ensure students have the skills to learn and innovate, the skills to use technology and information media, and can work, and survive by using skills for life (life skills).

Globally, the digitalization era is predicted to eliminate around 1 - 1.5 billion jobs during 2015-2025 due to the replacement of human positions with automatic machines (Gerd Leonhard, Futurist) and it is estimated that in the future, 65% of elementary school students in the world will working on jobs that have never existed today (US Department of Labor report). But on the other hand, the digitalization era has the potential to provide a net increase in labor to 2.1 million new jobs by 2025, there is also the potential to reduce carbon emissions by approximately 26 billion metric tons from three industries: electronics (15.8 billion), logistics (9 , 9 billion) and automotive (540 billion) from 2015-2025 (World Economic Forum). Opportunities and threats of the digital age in the 21st century need to be addressed appropriately by the world of education. The world of education, especially basic education, needs to prepare students to face the increasingly complex challenges of the 21st century. Education is not enough to only equip students with the knowledge and simple thought processes known so far, but also needs to prepare them to possess and be able to develop essential skills of the 21st century.

B. Methodology

This research uses a qualitative approach through the study of documentation. The method of data analysis is carried out through a literature study that examines (mainly) secondary data, both in the form of legislation, research results, assessment results, best practices and other references. While the data analysis approach can be done by examining primary data. Primary data can be obtained by: observing / observing, gathering discussion (Focus Group Discussion), interviewing, listening to the opinions of speakers or experts.

C. Results and Discussion

1. 21st Century Learning

Regarding 21st century competencies, several studies have been carried out including 21st century inventive thinking skills among primary students in Malaysia and Brunei (Abdullah & Osman, 2010). This research explains that the 21st century workplace now requires workers to master skills that are important in a knowledge-based society as well as new skills needed to move beyond the information era to the conceptual era. Therefore, to be successful in the 21st century students need to be equipped with inventive thinking skills consisting of the ability to adapt and manage complexity, self-direction, curiosity, creativity, risk taking and higher-level thinking. A Model of Critical Thinking as an Important Attribute for Success in the 21st Century (ŽivkoviĿ, 2016). This research explains that 21st Century Classes require students to face real-world problems that involve them in the skills of creativity, innovation, communication, collaboration, critical thinking and problem solving. in the 21st century, learning to memorize and memorize is no longer suitable for those who want meaningful new knowledge and understanding. What's most important is creating classrooms that encourage collaboration, open dialogue, and acceptance of diverse beliefs and perspectives. Students must be allowed to express their opinions openly, and educators can encourage critical thinking behaviors and attitudes through effective behavior modeling. Developing creativity in higher education for 21st century learners: A protocol for a scoping review (Egan, Maguire, Christophers, & Rooney, 2017). This research explains that creativity skills are needed for 21st century beginner learning in higher education. Fostering the 21st Century Skills through Scientific Literacy and Science Process Skills (Turiman, Omar, Daud, & Osman, 2012). This research explains that to overcome the challenges of the 21st century one in the science and technology sector, students need to be equipped with 21st Century Expertise to ensure their competitiveness in the globalization era. They are expected to master 21st Century skills only superior in their academic performance. Therefore, it is very important to incorporate 21st century skills into educational science. 21st Century expertise consists of four main domains namely digital age literacy, inventive thinking, effective communication, and high productivity. Management of a Technical University in the Context of Preparing Students for the 21st Century Careers in Science and Technology (Stukalina, 2017). This research explains that universities need to prepare students for 21st century careers in science and technology with collaborative learning. Teachers for the 21st century. Will emotional intelligence make the difference? (Turculeţ, 2015). This research explains that teachers for the 21st century are

teachers who will efficiently use the limbic system of students to overcome educational messages. Teachers for the 21st Century will change to standards and patterns. attitudes, traits or dispositions related to education and hence their level can be improved by special training programs. An ongoing teacher training program must include emotional development. What Teacher Knowledge Matters in Effectively Developing Critical Thinkers in the 21st Century Curriculum? (Ab Kadir, 2017). This research explains that as the main agent of change in education reform, teachers are seen as central to making changes. The teacher's knowledge in learning critical thinking must be developed explicitly and systematically.

The curriculum that applies in 21st Century education and skills is an interdisciplinary, project-based and research-based curriculum. In addition, curriculum content also seeks to incorporate Higher Order Thinking Skills, technology and multimedia, 21st century expertise and skills, and to use authentic assessments. Through the curriculum, the ability of teachers is directed explicitly at mastering the context of core subjects and 21st century themes (core subjects and themes of 21st century teaching). Furthermore, the design and curriculum development focuses on providing opportunities to apply 21st century skills in all content areas, both core subjects and themes, and for competency-based learning approaches. A curriculum model with a competency-based learning approach is needed in the future with the hope that it will be able to equip students to face the challenges of their future lives independently, critically, rationally and creatively. The competencies developed in the curriculum are directed to provide life skills in an era of globalization that is full of change, opposition, uncertainty, uncertainty and complexity in life.

In an effort to foster individual capacity through meaningful learning (individual capacity through meaningful learning), the curriculum model in the 21st century seeks to activate innovative learning methods that integrate the use of supporting technology, inquiry based learning and problem solving based. and higher order thinking skills. It is hoped that the design and development of the curriculum to prepare for education in the 21st century will be able to encourage the integration of community resources outside the boundaries of the classroom and school environment. As we all know that Education is basically an effort to develop people who have the characteristics and traits that are needed both by themselves as individuals and by the community. According to S. Hamid Hasan (2000) said that the understanding and the process of self-development in the classroom, school environment and other environments is largely determined by the basic knowledge and personality that is formed by the culture that exists in the community where the student is located.

Based on the reasons stated above, it is clear that 21st century learning skills to practice students' critical thinking skills and problem solving are very important to develop. In other words, some of the main skills in the 21st century are as follows. 1) Creativity and Innovation. Humans who will succeed in the 21st century are creative people and have a variety of ideas. So, in this creative dimension, the teacher must be creative. It no longer only expects the ability of students at the level of describing something, but how students are able to develop, implement, and convey new ideas to others; being open and responsive to new and different perspectives; 2) Critical Thinking and Problem Solving. What is meant here are two kinds of problems, problems that are academic and authentic. Academic problems are of course problems related to the realm of cognition they live. The problem of authentication is more the problem that they often encounter everyday around them. Students are required to be able to use their abilities to try to solve the problems they face independently, students also have the ability to compile and express, analyze, and solve problems; 3) Communication. In the 21st century, students who are able to survive are those who can communicate in various ways, both written and verbal. Students are required to understand, manage, and create effective communication in various forms and contents orally, in writing, and in multimedia. Students are given the opportunity to use their abilities to express their ideas, both when discussing with friends and when solving problems from their teacher. Students should no longer be anti-ICT, they must be familiar with technological communication. Likewise the teacher; and 4) Collaboration. As it turns out, life in the 21st century no longer depends on competition. Indeed, successful people in this century are people who can work together or collaborate with various interests. Students must be able to ability in group collaboration and leadership; adapt to various roles and responsibilities; work productively with others; put empathy in its place; respect for different perspectives. Students also carry out personal responsibility and personal flexibility, at work and in community relations; set and achieve high standards and goals for yourself and other people.

The National Education Association (NEA) has provided guidance for educators with four C (Communication, Collaboration, Critical Thinking and creativity) in Preparing 21st Century Students for a Global Society (Johnson, 1995). In this research the 21st Century Competency Development Concept, 4C is redefined to be critical thinking and problem solving (critical thinking and problem solving), creativity and innovation (communication and innovation), communication (communication), and collaboration (collaboration). The description of the four competencies is as follows.

1) Critical thinking and problem solving

Critical thinking is the desire to find out through the process of analyzing system thinking and evaluating a situation to make decisions through ideas, evidence, reasons, and information in an effort to solve a problem. The development of critical thinking is done by giving reasons effectively, using systems thinking, making judgments and decisions, and solving problems. Critical thinking and problem solving are characterized by:

a) Give reasons effectively by using various ways of reasoning (inductive and deductive) in accordance with the existing situation;
b) Using systems thinking by analyzing the parts (subsystems) that interact with each other to produce a complex and holistic overall system;
c) Analyze and assess evidence, reasons, statements, and beliefs effectively;
d) Analyze and evaluate the main alternative choices from the standpoint;
e) Reflecting critical learning experiences and processes;
f) Infer and look for relationships between information and arguments;
g) Interpreting information and drawing conclusions based on the best analysis;
h) Solve a variety of unusual problems, both conventional and innovative ways;
i) Identifying and asking questions that can explain various perspectives that lead to the best solution; and
j) Questioning what is observed and trying to give answers in their own words

2) Creativity and Innovation

Creativity and innovation are fluency and flexibility in thinking and expressing thoughts, as well as the ability to modify (elaborate) or create something new (originality) in the form of ideas and real work. Innovation is a new invention through application, synthesis, re-interpretation, in the form of ideas and concrete work of creativity and innovation can be characterized by creative thinking, creative work, and innovation. Creativity and innovation are characterized by:

a) Using a variety of techniques to create new ideas and real works (originality) as evidence;
b) Collaborating, defining, analyzing, and evaluating his own ideas to improve and maximize creative efforts;
c) Develop, implement, and communicate new ideas effectively to others;
d) Opening up and being responsive to diverse perspectives;
e) Demonstrate originality at work and understand the limitations of adopting new ideas;
f) See failure as an opportunity to learn, understand creativity and innovation is a long process of success; and

g) Expand creative ideas to make real and positive contributions to innovative fields.

3) Collaboration

Collaboration is the ability to work in teams to achieve common goals, including the ability to build partnerships and consensus, and in preventing and managing conflict. Collaboration competencies are characterized by:

a) Demonstrate the ability to work together effectively and with mutual respect.
b) Demonstrate flexibility and desire to be someone who likes to help others in making important agreements to achieve common goals.
c) Sharing shared responsibility for joint work and valuing individual contributions made by each group member.

4) Communication

The ability to absorb, convey, and connect information and ideas in various modes of language (oral, written, nonverbal (kinesthetic), and visual) using a variety of media and technology. Communication competence is characterized by:

a) listening effectively to gather information;
b) reading effectively then understanding and interpreting;
c) process information effectively to convey ideas, including knowledge, values, attitudes, and intentions;
d) express thoughts and ideas effectively using verbal, written, nonverbal (kinesthetic) and visual communication skills in various forms and contexts;
e) use communication for various purposes (eg to inform, order, motivate and persuade);
f) using a variety of media and technologies including diverse representations, knowing how to consider effectiveness and assess their impact; and
g) communicating effectively in multiple environments (including multilingual and multicultural).

Furthermore, in the P21 framework (Partnership for 21st century skills, www.P21.org) it is explained that students must master the skills, knowledge, and expertise to succeed in work and life. One important thing that guarantees the success of students is the ability to combine subject matter content with real problems from other fields of science.

2. 21 st Century Assessment

In terms of assessment and evaluation, 21st century skills and abilities support the balance of assessment, including testing of high quality standards along with effective formative and summative assessments. In a more specific context, this assessment emphasizes useful

feedback on student performance integrated into daily learning. Meanwhile, related to the existence and application of technology in assessment, the balance of technology-based assessment, in this case formative and summative assessment which aims to measure the ability to master 21st century skills that are dynamic and growing,

21st century education makes it possible, and it is possible to expect the development of student work portfolios that demonstrate the mastery of 21st century skills to educators and prospective employers at work. Through this, at least it presents a balanced portfolio in order to assess the effectiveness of the education system in order to achieve high levels of student competence in 21st century skills. In its implementation the evaluation and assessment is directed at efforts to familiarize students learning and working with data, tools, and real-world experts they will encounter in college, work, and life, because it is attended to that students learn best when actively involved in solving problems. which means.

The use of the right type of assessment will greatly determine success in accessing information relating to the learning process. The choice of assessment method must be based on the target of the information to be achieved. In addition, an assessment is carried out to obtain data on learning that has taken place so that the data can be used as information to make policies in improving learning. The grading system must of course be aligned with 21st century skills that will enable students' future success and meet 21st century assessment principles.

1) Adapted to 21st century goals: assessment should be able to fulfill 21st century knowledge and skills so students can understand and apply in their lives.
2) Incorporating elements of adaptation and uncertainty: one of the characteristics of the 21st century's demands is being able to adapt to evolving circumstances and being able to take decisions and actions in situations where previous actions can stimulate unexpected reactions which in turn affect strategies and subsequent choices. Related to these uncertainties is important and is a new challenge for curriculum development and assessment.
3) Performance based. The essence of 21st Century skills is the need to integrate, synthesize and creativity to apply knowledge in new situations. As a result, 21st century assessments must require students to apply knowledge using critical thinking skills, problem solving, and analytical tasks throughout their education, so that we can help them hone these abilities.
4) Give added value to the learning process. Assessment should be able to provide opportunities for students to deepen their understanding through explanation and use of multiple representations.

5) Valid against 21st century goals. Assessments given to students should be able to help students to have 21st century skills, and assessment results must be generalizable and sensitive. Sensitive means that the results of the assessment are able to show the quality of the learning process. And test results can be generalized meaning they can be transferred to other real-life applications.
6) Generate actionable information and provide productive and useful feedback for all policy makers. And schools, administrators, policy makers, and teachers must be able to use assessment data to determine how to create better opportunities for student learning.
7) Build capacity for educators and students. Feedback from the results of the assessment can help students, teachers, administrators and other relevant parties to understand student performance and learning problems that can hinder student progress.
8) Become part of a comprehensive assessment system designed to support the improvement of learning at all levels of the education hierarchy.

There are several examples of assessments that have been used to measure 21st century skills, namely: 1) Primum. Primum, is a test used to assess decision making in a very specific context. It provides an assessment of the ability of medical practitioners to make medical diagnoses when faced with fictitious patients; 2) World Class Test. It is a development of new computer based tests of problem solving, in the fields of mathematics, design science, and technology. This test is intended for applications throughout the world; they are designed to make creative use of computer technology. Also, they are intended to set new standards in the design of assessments of students' thinking skills and ability to apply various techniques in solving new and unexpected problems; and 3) The VPA Project. The Virtual Performance Project utilizes innovations in technology and assessment to overcome the problem of measuring students' ability to conduct scientific investigations to solve a problem.

D. *Conclusion*

Education plays a very important and strategic role in building a knowledgeable society that has the skills: (1) technology and media literacy; (2) effective communication; (3) critical thinking; (4) solving problems; and (5) collaborating. In this 21st century, competition in various fields of life, including education, especially science education is very strict. We are faced with demands for the importance of quality human resources and being able to compete. Quality human resources, produced by quality education can be a major force to overcome the problems faced. One of the ways taken is through improving the quality of education.

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APLICATION OF PROBLEM BASED LEARNING MODEL IN TOURISM GEOGRAPHY LEARNING TO IMPROVE CREATIVE THINKING ABILITY FOR STUDENTS OF 2017 OF GEOGRAPHY EDUCATION DEPARTMENT

Sri Murtini, srimurtini@unesa.ac.id
Bambang Sigit Widodo, bambangsigit@unesa.ac.id
Rindawati, rindasuhardi@gmail.com
Anang Setyo Wibowo, anangsetyowibowo@gmail.com

ABSTRACT

The purpose of this research was to know improving creative thinking ability of students in 2017 of Geography Education Study Dept. S1 UNESA, which consist of 5 aspects, fluency, flexibility, originality, elaboration and evaluation. This research is Classroom Action Research, which has four phases, they are planning, acting, observing, and reflecting. Data of the research were collected by using observation sheet, test, questionare, and interview. The data were analyzed by qualitative descriptive method. The validity of data was verified through triangulation technique. The results showed the percentage of every aspect of creative thinking ability based test on a first cycle have not gain their targets; achievement of fluency aspect is 60,0%, flexibility aspect is 65,71%, originality aspect is 59,12%, elaboration aspect is 61,45% and evaluation aspect is 58,12%. The second cycle showed to increasing but there are aspects that have not reached the target. Fluency aspect is 73,0%, Flexibility aspect is 68,25%, Originality aspect is 70,65%, Elaboration aspect is 72,11%, and Evaluation aspects is 69, 43%. All aspects have not fulfill of the target yet, so the action continued to third cycle. The results achieved in the third cycle, Fluency aspects is 83.15%, Fluency aspect is 86,28%, originality aspect is 88,13%, elaboration is 86,37% and evaluation aspect is 81,88%. All aspects of creative thinking ability already outreach the target so the action was stopped. The conclusion of this research described that the Problem Based learning (PBL) can improve creative thinking ability in Tourism Geography Learning of students at Geography Education Dept. in FISH-UNESA.

Keyword: Problem Based Learning, Creative Thinking, learning.

A. Introduction

The ability of high-level thinking is crucial to the mental development and change of a person's mindset so that the learning process can succeed. One of the high-level thinking ability that can be used to solve a problem is creative thinking ability.

Creative thinking is an indicator of the highest learning achievement. Ghufron & Rini (2014:101) suggest that creative thinking ability play an important role in life because creativity is a reliable source of human resource strength to drive human progress in terms of search, sensing And discoveries in science and technology as well as in all areas of human business. Creative thinking ability are needed to develop and solve problems. Without this ability, human are disabled to overcome all of their problems as if they could not be progressed for life.

Creative thinking ability can improve understanding and sharpen the brain-related pure cognitive's part. When creative thinking ability evolve, it will engender ideas, find interconnected relationships, create and do imagination, and have a lot of perspective on things. Students who have high creative thinking ability are likely to feel challenged and interested to solve various problems in learning.

Tourism Geography Course learning phenomenon shows that learning activities still not maximized creative thinking ability. Meanwhile, creative thinking ability are necessary for mental development and mindset changes to improve their competence. Creative thinking in the learning of tourism geography always involves competence to create new ideas. The new

idea must be beneficial to theirself and others, such as the idea of a new effective way of learning. Continuous exercise is needed to have this creative thinking ability. Some creative thinking exercises in learning include problems to find different solutions and readings by familiarizing through debate or discussion (Sternberg, 1999).

The observation showed that the creative thinking ability of 2017 Geography Education Department UNESA students are still low. The results of observation through the test of creative thinking ability, showing the achievement aspects of fluency of 58.3%, flexibility aspect of 51.1%, originality aspect only 49.2%, elaboration aspect reached 38.9%, and the evaluation aspect reached 48.3%. The cause of the students' creative thinking ability, among others, is a learning model that has not empowered students' creative thinking ability, therefore required a learning model that can improve student creative thinking ability. One of the learning models that can be applied is Problem Based Learning (PBL).

The PBL is a study done by confronting the real problem so that individuals can compose their knowledge to solve problems and encourage creative thinking. Arends (2012:405) says a good problem should be real, random, collaborative, and meaningful. Padmavathy & Mareesh (2013:47), (Sumarmi, 2012) states that the PBL is a strategy that organizes instruction around problem-solving activities and allows individuals to think critically, present creative ideas and having good communication. Students are encouraged to speak varied ideas and provide an opportunity to interpret the phenomenon, hence this activity can accommodate aspects of fluency and flexibility.

The next step, students collects the appropriate information to get explanations and problem-solving, students can add the original idea in problem-solving, this activity will help students develop the originality aspect. Furthermore, students plan, prepare the report, and present it to others. In this activity, another student can add ideas to enrich the idea that has been presented, so that it can eventually develop elaboration aspect.

The evaluation aspect capability will appear in the PBL process of analysis phase and problem-solving evaluation, assisted by the lecturers, students consider the problem-solving that has been submitted based on their perspective. Therefore, the PBL engages students actively in discovering problems and expressing alternatives to their resolution. In the end students do not feel saturated because they are actively involved in learning.

This research purpose is to improve students's creative thinking ability that include five aspects of fluency, flexibility, originality, elaboration, and evaluation in 2017 Class A students on the subject of tourism geography, Education Department Geography, Faculty of Social Sciences and Law Universitas Negeri Surabaya through Problem Based Learning (PBL) model.

B. RESEARCH METHOD

This type of research come under Research Action Class as known as Penelitian Tindakan Kelas (PTK), which is a research that includes measures to improve the quality of the learning system and the practices contained therein, Suwandi (La Fala, 2012). The study was conducted in 2017 class A who put in 35 students on the tourism geography subject over three cycles. The study uses three data sources: 1) place and event 2) informant and 3) documents.

Data collection techniques using interactive methods (observation sheets, interviews) and non-interactive methods (poll, documentation, tests) in (Sutopo, 2002). Data validity using

triangulation techniques, namely triangulation methods and triangulation observer. Means, that similar data is excavated using different data collection methods (Sutopo 2002). While the technical analysis used is descriptive based on the observation and reflection results of each cycle.

Qualitative analytical techniques refer to the models of the Miles and Huberman Analyses (1992). The operational steps of the research used to follow the development of McTaggrat model by a spiral model that includes the planning, execution, observation, and reflection stages. Research can be discontinued when the average achievement of an indicator has reached a specified target of at least 75%.

C. RESULT AND DISCUSSION

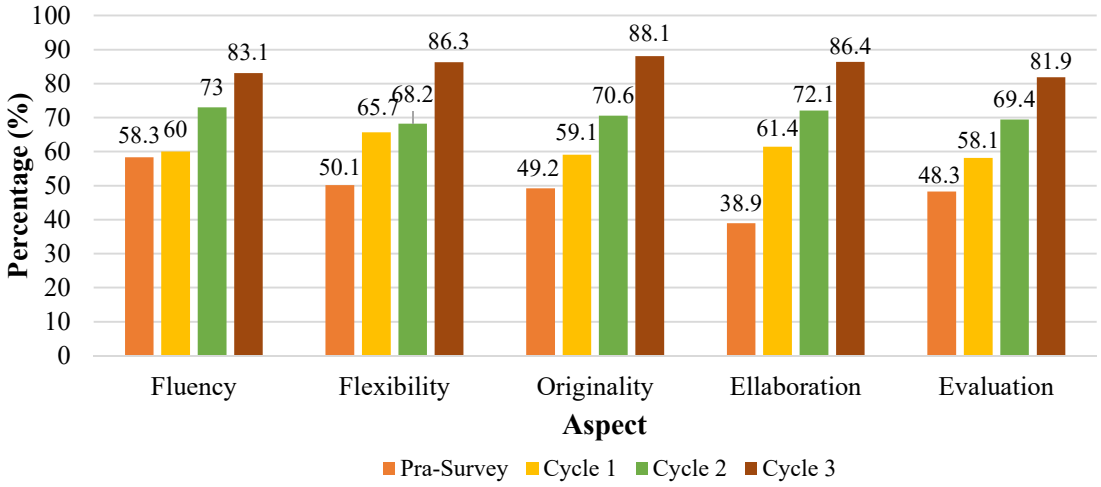
This PTK research will go through several stages of planning, in sequence there are planning materials, methods, and time per cycle. Cycle 1 was implemented on September 9th 2019, Cycle 2 of September 16th, and Cycle 3 of September 23rd 2019. All cycles use a discussion method, which is the material of each cycle uses two relevant articles from different journals.

The results on Cycle 1 shows that on the fluency aspect indicate a number of 60%, flexibility aspect of 65.7%, originality aspect of 59.1%, elaboration aspect of 61.4% and evaluation aspect of 58.1%. It means, there is an increase from the pra-survey, for the fluency of 1.7%, the flexibility of 15.6%, the originality of 9.9%, the elaboration of 22.5%, and the evaluation of 9.8%. The ability of creative thinking on the Cycle 1 reached 60, 9% value, but it has not fulfilled the research's minimum target furthermore Cycle 2 is required to do so.

In Cycle 2 showed an increase number from Cycle 2 for each aspect, as follows of fluency increased by 13% (73%), the flexibility by 2.5% (68.2%), the originality by 11.53% (70.6%), the elaboration by 10.7% (72.1%), and the evaluation by 11.3% (69.4). However, the gained value in this Cycle 2 (70.7%) has not fulfilled the specified minimum target, so it is still needed to continue Cycle 3.

In Cycle 3, all aspects shows an increase number for all aspects including of fluency by 10,1% (83,1%), the flexibility of 18,0% (86,3%), the originality by 17,5% (88,1%), the elaboration aspect of 14,3% (86,4%), and the evaluation by 12,4% (81,9%). In Cycle 3, creative thinking ability has reached a minimum target with 85,2% achievement value (based on **Graphic 1** below).

Graphic 1. Diagram of Creative Thinking Ability's Achievement in Pra-Survey, Cycle 1, Cycle 2, and Cycle 3



In **Graphic 1**, it appears that the PBL Model can improve creative thinking in tourism geography. Improvements can be seen in Cycle 1, Cycle 1 to Cycle 2, and Cycle 2 to Cycle 3. It also appears in all aspects of each cycle. After Cycle 3, this activity was disclosed as it meets the minimum target set of 75%. This increased ability are allied with Arends & Kilcher (2010:328), said that a problem-based learning model can improve performance and intelectual of high-level students.

The increase from Pra-Survey to Cycle 1 amounted to 11.7% with an average creative thinking ability at 49,7% value of Pra-Survey. In Cycle 1 to Cycle 2 about 9.8% for the increase with an average at 60,9% value of Cycle 1. In Cycle 2 to Cycle 3 increasing for 14.5% with an average at 70,7% value of Cycle 2. Meanwhile, the average creative thinking ability at Cycle III is 85,7%. Hence, the test results on all cycles in each aspect indicate some improvement. All five aspects by fluency of 24,8%, flexibility of 35,2%, originality of 38,9%, elaboration of 47,5% and evaluation of 33,6% goes up and reached into their achievement's limit after implementating the PBL Model.

The intercycle's increase shows that students have begun to dare to present their ideas, accustomed to answering questions in detail and complete as in the indicator of the creative thinking ability aspect. Arends & Kilcher (2010:328) states that the PBL Model can increase curiosity, imagination, and understanding. The real problems used in the PBL Model can attract interest and motivation. It is further said that the investigation of the PBL requires critical thinking ability and an open-ended situation that can eventually elicit creative thinking abilitiy.

The PBL Model with the discussion method is used to discuss two different articles on each cycle. Further, the discussion concludes by answering questions through withdrawal conclusions. The PBL Model provides an alternative to lecturers to monitoring and act as facilitator. Lecturers present a variety of data and information, facilitate discussions, ask questions, comments, responses and guide students to find conclusions. It appears that with the PBL Model, learning situation become conducive also students play an active role and positive interactions occur.

According to Potur and Barkul (2009), creative thinking is an individual's ability to use their intelligence uniquely. Through the analysis and evaluation stage of the problem-solving process, individuals develop the evaluation aspect. Eggen & Kauchak (2012:311), a phase in

implementing problem-based learning is reviewing and presenting problems, strategizing, implementing strategies, and discussing and evaluating results.

D. CONCLUSION

Based on the research results, it can be concluded that PBL Model can improve the creative thinking ability of 2017 Class A students on tourism geography subject by average 36% with the details on the aspect of fluency 24.8%, flexibility 35.2%, originality of 38.9%, elaboration of 47.5% and evaluation 33.6%.

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ANALYSIS OF SCIENCE TEACHERS' TEST ITEMS FOR MIDDLE SCHOOL STUDENTS BASED ON TAXONOMY OF BLOOM REVISION FRAMEWORK

N. Y. Rustaman[1], W. Liliawati[2], R. Efendi[2] and D. Rusdiana[2]

[1]Department of Biology Education, Universitas Pendidikan Indonesia
[2]Department of Physics Education, Universitas Pendidikan Indonesia

E-mail: winny@upi.edu

ABSTRACT

The evaluation/assessment held by the teachers is aimed to moitor, evaluate proess, learning progression, and improvement of students' learning outcomes continuously. The evaluation planned by tehe teachrs usualy in the form of Test items. The test made by the teachers represent their ability in understanding the evauation/assessment. The focus of this study is analysing science test items by science teachers in middle schools by using framework of Cognitive Bloom Revision taxonomy. The documentation study used in this study are test on competence test and daily science tests used by teachers in conducting evaluation/assessment. The participants are science teachers from middle schools in different grades (VII, VIII, IX). The results of the test distribution in measuring higher order thinking skills are only on C3 (applying) and C4 (analysing), no c5 and C6 at al. The dominant test items are lower thinking skills on factual and conceptual. In conclusion, teachers' understanding about test as part of assessment is still poor, and need to be improved in constructing higher order thinking skills.

Keyword: Taxonomy of Bloom Revision, science teachers, knowledge dimension, cognitive process dimension.

A. Introduction

Evaluation is a process of information collection and analysis to measure the students learning outcomes (Kemendikbud, 2017). The learning outcomes of students are carried out by the teachers including knowledge, skils, and affective aspects. The assessment to measure students achievement and mastery learning, asessmen on affective aspects to grasp descriptive information about their behaviour, whereas the assessment for skils to measure their ability in applying knowledge in conducing cedetatin tasks Popham, 2009). This learning outcome measured by the teachers is aimed to monitor and evaluate the learning process, learning progression, and improvement of their learning outcome continuously (Griffin et al. 2011).

Evaluation Standard in Curriculum 2013 revision give the opportunity for development of evaluation instrument which measure higher order thinking skills. The instructional evaluation is expected to help the studnets to improve their higher order thinking skills (HOTS), as higher order thinking skills encourage students to think broadly and in depth about science subject (Brookhart, 2010; Lazear, 2004). HOTS oriented evaluation is not a new form of evaluation for teachers in assessment (Alkharusi, Kazeem, & Al-Musawai, 2011).

Knowledge assessment in Curriculum 2013 refers to taxonomy of Bloom revision (Anderson *et al.*, 2001). The assessment on knowledge usually measure content mastery of participants about factual, conceptual, procedural and metacognitive knowledge in various levels of thinking processes (C1-C6). The relationship between knowledge dimension and cognitive process dimension can be found in cognitive process for C1 up to C3 for all knowledge dimension, cognitive

process dimension for C1 up to C6 with factual knowledge tend in lower thinking skills, whilest C4 to C6 for knowledge dimension (conceptual, procedural and metacognitive) are the categories for higher thinking skills.

Previous studies found that the gap of Indonesian students and their colleague from other developed countries lie mostly on their ability levels to think (TIMSS and PIRLS International Study Center, 2016; Mullis & Martin, 2013). Data TIMSS 2007 shows that only one percent of the Indonesian participant can think higher order level id est in information processing, make generalization, solving non routine problems, and make conclusion from data. Meanwhile the students from Taiwan, Korea, Japan, and Singapore have 40% achievement in the same ability aspects (TIMSS and Pearl Intenational Study centre, 2016; Mullis & Martin, 2013; Rustaman & Liliawaty, 2017). On the contrary, 78% of Indonesian students have low order thinking skills, whilest in other countries only 15%. The main factor that is responsible upon Indonesian students' weaknesses in TIMSS is the instructional process was memorizing oriented and drilling (Rustaman & Liliawaty, 2017). Such instructional practice was conditioned among others by the assessment of learning which was implemented just for lower thinking skills level (Rustaman & Liliawati, 2017). Meanwhile in high achiever countries in TIMSS and PISA evaluated reasoning ability and problem solving, so as to encourage the growth of higher reasoning ability.

Previous research findings (Mullis & Martin, 2013; Rustaman & Liliawati, 2017) focused their research on the results analysis Indonesia students in TIMSS analysis results, how are the test made by teachers nowadays? Do the knowledge assessment made by the teachers have already measure higer order thinking skills? As this study is aimed to analyse instrument in knowledge assessment at middle school in terms of taxonomy on Bloom Revision framework. Have the knowledge assessment made by science teachers already measured higher order thinking skills?

B. RESEARCH METHOD

Documentary study was used in this research to analyze the instruments made and used by science teachers to measure their students' concept mastery. Collected documents id est the instrument to measure students competence on variety of science subject (Physics, biology, chemistry) from seventh, eighth and ninth grades in middle schools. The instrument documents were gathered from a number of science teachers (n=23) in middle schools in Indonesia, consisted of daily tests, summative tests, mid-term tests, final tests, and competence tests. Firstly the 2013 curriculum in new version was analyzed, especially about the graduate competence standard (SKL or Standar Kompetensi Lulusan (permendikbud no 20 tahun 2016) and Basic Competencies on science maor/content of 7th, eighth, ninth grades (permendikbud no 24 tahun 2016). Secondly, preparing and checking the completeness of the document from each teacher covering data resource, test items and worksheet. Thirdly, checking and classifying each test tems based on taxonomy Bloom Revision framework for knowledge and cognitive process dimensions. Fourthly, arranging and analyzing data from classificatory results. Finally, analyzed data was described quantitatively.

In order to classify the test items based on taxonomy Bloom revision framework (Anderson et al., 2001), that are from knowledge and cognitive process dimensions, it should be confirmed about those aspects. The knowledge dimension consists of factual, conceptual, pro cedural and metacognitive knowledge. Factual knowledge consists of basic elements that students should familiar with. Conceptual knowledge consists of schemes, mental models, or theory implicitly and explicitly stated in different cognitive psychological models. Procedural knowledge relates with how manipulative acts happened ar conducted. They frequently takes the form of series of action or activities in sequent, consists of capability, algoritm, technique, and methods or procedure. Metacognitive knowledge relates to awareness in general. The emphasize on awareness and responsibility forknowldge and their own thoughts/thinking.

Cognitive process dimension in Taxonomy Bloom revision framework (Anderson *et al.*, 2001), consists of: knowing (C1), understanding (C2), applying (C3), analyzing (C4), evaluating (C5), and creating (C6). Test items on higher order thinking skills measure ability on analyzing (C4), evaluating (C5), and creating (C6). The choosing of working verbs to construct the indicators should not be clozed in the categorization of working verbs but mostly influenzed by the thinking process needed to

answer the questions given. For examples the verbs " determine" can be in C2 and C3 aspects, but can also be in C5 (evaluating), which related to making decision which be inserted by thinking process in analysing the informations and then determining best decision. Besides, determine can also been categorized into C6 (create) whenever it demands the construction of new strategy for new problems.

C. Result and Discussion

Core Competence (KI) of Science for Junior high school is understanding and applying (Permendikbud No. 35 Tahun 2018), factual, conceptual and procedural knowlwdge. Whereas based on the formulation of Basic Competence (KD), it was found that a number of KD demand higher cognitive process competences, whether in grades IX, VIII or VII. For example in sem I of grade VII: analysing temperature, expansion, calor and calor transfer and its application in daily lifes, including stability of temperature in human being and animals. Meanwhile in Biology context in semester 2 grade VII, it was found that the basic competence "analysing the environment pollution process and its effect towards ecosystem".

Based on the study toward test items made by science teachers, it was found that the results as shown in Table 1. It can be seen in the table that the ratio of the higher order thinking skills test items is still low compared to the total test items, especially on physical science and chemistry test items. The dominant distribution f lower thinking skills (C1 and C2, Conceptual), very little on test items that measured C3 and C4, no C5 nor C6 et al.

Table 1 Comparison of test item quality based on Taxonomy of Cognitive Bloom Revision

COGNITIVE PROCESS Dimension	Physical Sciences f (%)			Life Sciences f (%)			Chemistry f (%)		
	KNOWLEDGE Dimension								
	F	**C**	**P**	**F**	**C**	**P**	**F**	**C**	**P**
***Remember* (C1)**	4 (2.37)	24 (14.20)	-	7 (3.32)	52 (24.65)	-	9 (34.62)	9 (34.62)	-
***Understand* (C2)**	25 (14.79)	75 (44.38)	-	44 (20.85)	72 (34.12)	-	-	3 (11.54)	-
***Apply* (C3)**	8 (4.73)	3 (1.78)	-	4 (1.90)	23 (10.90)	-	2 (11.54)	-	1 (3.84)
***Analyze* (C4)**	-	2 (1,18)	-	4 (1.90)	5 (2.36)	-	2 (11.54)	-	-
***Evaluate* (C5)**	-	-	-	-	-	-	-	-	-
***Create* (C6)**	-	-	-	-	-	-	-	-	-

Note: f= frequency; (%)= percentage; F=Factual; C= Conceptual; P= Procedural

From the cognitive process criteria, test items on physics made by science teachers indicate that nearly all of the test items dominated by conceptual (C1 and C2). Test items on Biology or life sciences have questions that asking confirmation, comparison, differences, classification and related to a number of concept with terms or scientific concepts. The same condition is found in that test items on Science test items made by teachers mostly is dominated by conceptual test items (C1 and C2). Test items on factual are also found in Biology, as some of them involve pictuyre or photographs been asked as parts of the picture/photigraphs. Very rare test items on factual and procedural knowledge. A number of chemistry test items consist of factual knowledge, either C1 (*remember*), C2 (*understand*), or C4 (*analyze*).

Examples of test items made by Chemistry on C4-factual:

13. Please notice the table showing the results of an experiment, and then make the conclusion!

Names of Matter	The changes of Lakmus paper	
	Red lakmus	
A	Red	A

B	Blue	B
C	Red	C

Conclusions:
The characteristics of A seems ……..
The characteristics of B seems ……..
The characteristics of C seems ……..

14. Please notice the table showing the experiment results on pH measuring below.

No	Names of Liquid	pH
1	Ultra milk	6
2	Red Fanta	6
3	Promag	12
4	"Teh Kotak"	8
5	Detergent	13
6	Pulfy Orange	5
7	Shampoo	9
8	Air Kemasan	6

Based on the data in the table above, the liquid with acid is. . . .and the base one is . . . . …….....
……..

Example of science teacher's test item in chemistry on C3-procedural:
4. In order to increase the pH value of soda water is by adding . . . ..
   a. acid
   b. carbon dioxide gas
   c. aquadest
   d. citric acid

Examples of C2 and C4 test items conceptual in terms of biology concept in latin terminology.
Ovarium is the place where . . . takes place.
a. fertilisation
b. implantation
c. infant development
d. ovum maturing

The above test item is C2 as it needs not siple understanding, (the place for fertilization different from place for infant development, as well as different from place for ovum maturing, and has conceptual knowledge in the form of latin terminologies.

The correct statement about the number of chromosome in spermatogonium and spermatozoa are . .
a. spermatogonium is diploid, spermatozoa is haploid
b. spermatogonium is haploid, spermatozoa is diploid
c. spermatogonium is diploid, spermatozoa is not diploid
d. spermatogonium is haploid, spermatozoa is not haploid

The above test item, is conceptual and based on latin terminology. The Concept is abstract and difficult to imagine (haploid, diploid).

The implication of those conditions among others are: (1) the test items are more dominated by conceptual type test items from lower order thinking skills, especially the conceot related terminology, nearly all of them derived from latin terms or latinized terms, meanwhile test items related to factual knowledge, as most of them use picture s. (2). There is still less test items on procedural knowledge releted to steps or sequence as part of sequential works from science concept,

as usually procedural activities in the test items. Most of the test can be answered when they understand thewhat information means in the test items. The test items have the tendency not concept burdened to be memorized, but consists of a number of information to be analysed within science as their context (TIMSS & PIRLS international Sudy Center, 2016; Mullis & Martin, 2013). There are not many science teachers understand the procedure to make test items on scientific skills as parts of scientific process and/or scientific methods as components of the nature of science. (3) The limitation of certain cognitive process in test items made by science teachers (low level order thinking skills: C1, C2), and restricted to knowing and applying (also C3), is interpreted as the curriculum demand on understanding and applying. (4) As we see from the gttest items construct in general, most of science teacher have not understood of its essesnce of higher order thinking skills absed on their constructs. When we compare the science test items made by science teachers in general, most of the test items are closely realted to concepts or knowledge. Whereas the test items in International study (TIMSS, PISA) about assessment in science, tend have different type/form and characteristics. In the multiple choice type, the MC test items in International assessment has different characteristic from regular MC test items. There are a number of information in the form of table or figure, understanding of text accompanied by pictures). Those test items can be answered whenever the respondents understand the essensel of the information by making used of it to answer the test items. Therefore, there is really faondational differences of the test items construction. Those tests tend not neen burdanened by concpt that shoulb e remembered, instead it consists a number of information to be analysed using science as its context (TIMSS and Pearl Intenatioanl study center , 2016; Mullis and Martin, 2013).

From the research result, it was found that there is a gap between the test items made by science teachers and test items should be achieved in the 2013 curriculum new version. Each type of test items made by science teachers after being analyzed its charateristics and its construction, it can be concluded that teachers' understanding about core-comptence and basic competence for science major is on KI-3 for knowledge. They have prepared test items on C1, C2 and C3 (even though not in balance proportion). Even some test items made by science teachers demonstrate that they are in C4 (some factual and conceptual). Nevertheless based on KD demands in KD-4 (for scientific skils), in general they have not understood the meaning of scientific skills and scientific approach in science instruction, instead of just following 5Ms orvother type (IBL, CTL, PBL, PjBL). Nearly no science test items that measure scientific skills. Most of the assessment related to scientific skills was developed in practical work (observation, lab work, outdoor), but not been measured authentically (task-rubrics, science process ksills test items, higher order thinking skills test items). It is due to teachers' understanding about assessment/evaluations are still low. They have difficulty in preparing the indicators, in constructing test item, and in conducting assessment in affective aspects by using variety type of technique (Kemendikbud, 2017). About 60% of teacher-respondents stated that they have not planned, conducted, analyzed, reported and made use of evaluation/assessment results properly (Kemendikbud, 2017). Besides, they do not have enough self-confidence in conducting assessment on ksills, as they do not really understand how to plan the instrument and rubrics for psikomotoric skills (Kemendikbud, 2017), so it is badly needed to equip the teachers with competencies to make higher order thinking skills (Nahadi, 20009).

D. Summary

This research is aimed to analyse the instrument developed by science teachers from Blooms point of view. It resulted in the distribution of higher order thinking skills are low, only in C3 and C4, no C5 and C6 a*t all* The results mostly are in the coverage of C1 and C2 factual and conceptual aspects. The teachers have difficulties in compehending the meaning of scientific skills and approach, so it needs equipped them through training for educators in conducting assessmen using many techninueqe on knowledge, skills and affective evaluation/assessment, as well as raising motivation and self efficacy and self efficacy in onducting assessment/evaluatiom.

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THE IMPLEMENTATION OF MARITIME CURRICULUM IN INDONESIA

Sri Hidayati[1], Ishak Abdulhak[1], Dinn Wahyudin[1]

(sri_hdyt@yahoo.com, ishak.abdulhak@yahoo.com, din_wahyudin@yahoo.com)

ABSTRACT

The curriculum in primary and secondary education in Indonesia is developed with the principle of diversification, which is based on local needs, schools characteristic, and student needs. Maritime curriculum has been developed based on local need. The curriculum was developed in the framework of a national program to achieve the vision of Indonesia as a world maritime center. Implementation has been limited in 34 provinces since 2017. Implementation can be done through 4 (four) implementation models suggested in the implementation guidelines. The research objective is to see how far the implementation is in the schools. This research uses qualitative methods with documentation and interview study techniques. The schools samples are 18 schools. The results of the study shows that: (1) only a view school put the maritime curriculum on their schools vision and mission, (2) all schools implement the curriculum as a context of subjects, (3) all schools implement the curriculum as an subject enrichment, (4) only one school implement as a local content subject, (5) a schools implement the curriculum as an extracurricular activities, and (6) all schools implement the curriculum as a school culture. Based on the findings, it can be concluded that we still have to make an effort so that the maritime curriculum can be implemented properly to achieve the national goals.

Keywords: curriculum, maritime, evaluation, implementation

A. Introduction

Indonesia is a maritime nation. The Unitary State of the Republic of Indonesia is a large island nation. Indonesia's maritime glory in the past has been proven and become a part of history. This can be traced from the history of Indonesian civilization from time to time (Strategic Plan of the Coordinating Ministry for Maritime Affairs in 2015 - 2019). The government's goal to make Indonesia a global maritime axis requires prerequisites to be assisted, among other reliable and trained human resources. This can be done through maritime education and training. The Maritime Curriculum as part of the Indonesian Maritime Policy has been developed and implemented in piloting schools in all provinces. The implementation program in the school curriculum is crucial for success.

B. Research Methode

This research uses a qualitative approach through the study of documentation. The method of data analysis is done through document studies, interviews, and observations. Primary data analysis is done by examining secondary data from data inventory results, matched with the results of interviews, and observations in schools. Sources of data in the form of curriculum education units, principals, and direct observation in schools. The number of schools observed was 18 junior high schools from 18 provinces.

C. Result and Discussion

Indonesian Marine Policy

The Indonesian people live and develop in the islands along the equator, a strategic position that crosses between two large oceans, the Indian Ocean and the Pacific Ocean, and between two continents, the Asian Continent and the Australian Continent. In addition, the Indonesian nation also has a rich variety of natural resources, both on land and at sea. The location and geographical shape of Indonesia and its abundant natural resources have made Indonesia's position very unique in the international world, especially in the field of marine law (50 Years of the Juanda Declaration, Indonesian Territorial History, Collection of Papers, Directorate of Historical Geography, 2007: Djuanda Declaration in Historical Perspective , Hasjim Djalal).

The geographical characteristics of Indonesia, which has the number of 17,504 islands and the second longest coastline in the world and its socioeconomic conditions which are in the crossing of two continents, namely Asia and Australia, and two oceans, namely the Pacific Ocean and Indian Ocean, places Indonesia in an important and strategic position in global level. With the third largest area of tropical forest in the world, 18% of the world's coral reefs, 23% of the world's mangrove forests and 3 million hectares of seagrass beds (http://www.wwf.or.id/?10741/Deforestasi;http://lipi.go.id/lipimedia/konservasiterumbu-karang-indonesia-mendesak/8489), Indonesia is rich in food sources for marine life. With this condition, Indonesia has a great potential to influence political stability, the economy and regional environmental security.

Indonesia is also in a cross between economic and political power. Geoeconomically and geopolitically, Indonesia needs to play an important and strategic role by optimally utilizing marine, coastal and small island resources for the benefit and progress of the nation. As the only country that is able to expand its sovereignty and sovereign rights, Indonesia is the largest archipelago in the world that has international recognition without military force. Indonesia, which has full sovereignty over 3.2 million km2 of territorial waters and sovereign rights over some 2.6 million km2 in Indonesia's Exclusive Economic Zone, is a center of high biodiversity and provides other environmental services functions. The international community must sail through the territory of Indonesia's sovereignty and sovereign rights for the purposes of navigation, communication, planting and laying of fiber optic cables, gas

pipelines, trading various commodity goods, manufacturing, and exporting energy and services. The sea, coast and small islands of Indonesia also provide beauty and protection for the community from disasters and habitats for other living things.

This very rich marine potential has not been utilized optimally, but ironically in parts of Indonesia's marine and coastal areas it has been damaged to varying degrees. Based on 2013 One Map of Indonesia data, the area of Indonesia's coral reefs is 2.5 million hectares. However, based on the exposure of the LIPI Oceanographic Research Center it is known that coral reefs in 93 regions and 1,259 locations in the study conducted from 1993 to 2015, only about 32 percent were in good and very good condition, the rest were in bad and bad conditions (LIPI, 2016). This damage impacts on the loss of certain marine biota habitats and increases the risk of disasters in coastal areas, such as abrasion and tidal flooding. This condition is exacerbated by the large number of fish theft by foreign fishermen who use advanced technology resulting in huge state losses (Pusluh KKP, 2015).

This damage to marine resources is caused by the ignorance and / or indifference of the community to the preservation of these marine resources as indicated by activities such as destructive fishing (poisonous poisoning and bombs) and over-cutting of mangrove forests for economic activities. This can happen because the level of awareness of the people is still low, maritime knowledge and information is limited, education is still terrestrial biased, and people has limited limited knowledge in marine field. This condition has to be a serious attention for all elements of society and the government, both central and regional.

The government's goal to make Indonesia the world's maritime axis requires prerequisites that must be met, including knowledgable and skilled human resources. This effort can be attaint through maritime education and training. This is necessary because of the challenges ahead in the fulfillment of skilled and professional workers in the maritime field in the face of the industry 4.0 era. Unfortunately our workforce profile in 2017 recorded 60.08% of the national workforce only graduated from elementary and junior high school. In addition, to develop Indonesia as a global maritime axis, it is necessary to build maritime and maritime culture in the community through education and training (Ministry of Maritime Affairs Strategic Plan).

Indonesia's development program which is reflected in NAWA CITA (Nine Priority Agenda of Government) and Maritime Policy of Indonesia again gives full attention to

maritime development (maritime-oriented), after 69 years of development of Indonesian-oriented land. Maritime civilization became the axis of Indonesia's development pace. This reflects the government's desire to regain the glory of maritime civilization in the past that was extinct.

Presidential Regulation of the Republic of Indonesia Number 16 Year 2017 regarding Maritime Policy Indonesia has mandated the Indonesian people to direct our educational compass to education about marine. This is indicated in the marine policy that requires the existence of a special curriculum on maritime affairs and is carried out to improve the quality of human resources in the maritime field. The Primary and Secondary Education Maritime Curriculum has been compiled jointly by the Ministry of Education and Culture in this case the Puskurbuk, Balitbang together with the Ministry of Maritime Affairs, and is used as a reference by schools in compiling a maritime content school curriculum.

Maritime Curriculum

The curriculum is a set of plans and arrangements regarding the objectives, content and learning materials as well as the methods used to guide the implementation of learning activities to achieve certain educational goals (USPN No. 23 Year 2003). The maritime curriculum is an educational curriculum that is based on maritime historical insights, maritime cultural values, and maritime potential to instill a love of the motherland and the soul of a state defending maritime character in order to build superior and competitive Indonesian people towards achieving the glory of Indonesia as a nation and maritime nation independent, advanced, strong, and based on national interests.

The Primary and Secondary Education Maritime Curriculum which has been established by the Ministry of Education and Culture in 2017 aims at all Indonesian students to have a minimum ability in maritime field so that they have sufficient knowledge about the Indonesian maritime, guarding, loving, exploiting, preserving, and pursuing maritime affairs. Specific objectives of the curriculum are: a) having an attitude of loving the motherland and having the spirit of defending the country with a maritime character that is resilient, critical thinking, leadership spirited, responsible, and adaptive, b). understand and apply science and technology and maritime insight in the use and management of maritime potential on an ongoing basis; and c). understand maritime history and preserve Indonesian maritime culture. The maritime curriculum at SMP / MTs (Class VII to IX) aims to make students: a) have a

sense of pride as a maritime nation by knowing the history of the archipelago maritime kingdom, as well as sea transportation and maritime culture, b) having a sense of belonging and caring for environmental sustainability coast and sea in the context of sustainable development, c) having knowledge of coastal and marine ecosystems and natural phenomena that occur, d) growing creativity and entrepreneurial spirit by having knowledge about the potential and utilization of marine resources for fisheries, commerce and maritime services and technology and navigation of the ships used, e) growing social life and nationalism by having knowledge of the social, economic and maritime cultural dynamics of coastal communities and small islands; and f) developing maritime character and participating in preserving maritime culture.

The curriculum is structured based on the philosophy adopted by the 2013 Curriculum that every students has a potential as well as students as heirs to the nation's sublime cultures (Regulation of the Minister of Education and Culture (Permendikbud) No. 58 of 2014, the Basic Framework and Structure of the SMP/MTs Curriculum). The maritime curriculum is based on historical insights, cultural values, and maritime potential to instill a love of the motherland and statesman spirit with maritime character in order to develop superior and competitive Indonesian people (Puskurbuk, 2017).

The curriculum content is designed according to the objectives to be achieved. The content is part of the curriculum component that is structured to achieve curriculum goals. According to Tyler (1949) and Giles (in Ornstein and Hunkins, 1998) Components of subject content relate to material in the form of science or product of knowledge or scientific processes, which will be taught at a particular type and level of schooling. The content or material has breadth and depth in accordance with the scientific field. The contents also relate to scientific thought patterns (discipline mind) that must be mastered by students. Each subject has its own ontology and epistemology which are different from other subjects. The subject is simply a name for the organization of learning materials which has similarities. This component has the scope and sequence in accordance with the level and continuous class. The contents of the Maritime Curriculum consist of 5 (five) unit, namely 1) Maritime Resources, 2). Geomaritime and Ocean Dynamics, 3). Sea Transportation and Maritime Industry, 4). Maritime History, Culture and Innovation, and 5. Maritime Geopolitics, Law and Security (Puskurbuk, 2017).

Curriculum Implementation and Evaluation

Curriculum implementation is the most important part in a curriculum cycle or curriculum engineering (Beauchamp, 1975). The meaning of implementation found in the Oxford Advance Learner Dictionary is written that implementation is the application of something that has an effect or impact. That understanding is the general understanding. While the definition of implementation in the curriculum context of one of the experts who stated by Miller and Seller (1985), which defines the word implementation using three approaches, namely first, implementation is defined as an activity, then implementation is defined as an attempt to increase interaction between the developer's teacher and fellow teacher itself. Then, implementation is also interpreted as a separate entity from the curriculum component. Saylor and Alexander (in Miller and Seller, 1985) formulated the definition of implementation as a process of applying curriculum plans in the form of activities that involve interactions between teachers and students in the context of the school environment. According to Fullan and Pomfret (in Marsh, 2004) the term implementation is the use of curriculum, syllabus, or other planning in the form of practice. Hasan (2007) states that in the context of the curriculum dimension, implementation is a process dimension. The process dimension is implementation as a continuation of a number of plans that have been designed and documented. Ornstein and Hunkins (1998), also said the same thing that "successful curriculum implementation results from careful planning, which focuses on three factors: people, programs, and process". Therefore, aspects of planning, teachers, and students have a vital function in curriculum implementation. The implementation of the Maritime Curriculum has been limited to schools that are fostered by the Coordinating Ministry of Maritime Affairs, as well as working with the main units in the Ministry of Education and Culture in 34 Provinces, at each level only one school is designated.

Maritime curriculum content is an competencies that must be mastered by students. The curriculum content consists of two parts, namely the dimensions of the level of thinking ability and the dimension of knowledge. In this case the contents of the maritime curriculum can be as study material or as Subjects (Mapel) namely Local Content Subjects. As aubject content, maritime content can be implemented in existing subjects (Permendikbud No. 79 of 2014).

To find out to what extent Indonesian maritime policy in the context of the curriculum has been implemented, an evaluation of the vision and mission that has been prepared by the school and its implementation has been carried out. This limited implementation is intended so that the government can see the visibility or the implementative level of curriculum documents implemented by the education unit. By using the experience of limited implementation, it will become the basis for further policies. To find out the implementation of the curriculum, curriculum evaluation is carried out.

In curriculum engineering conceptualized by Beauchamp (1975) evaluation is an activity carried out after curriculum implementation phase. A Curriculum evaluation is assess the implementing of curriculum policy or program. This evaluation is asses all curriculum dimensions and curriculum components and their interrelationships and usually measure the effectiveness of the implementation of the policy or program in order to achieve the stated goals. This view is in line with some of the concepts and definitions of evaluation expressed by the following experts. According to Ali (2014), effectiveness is something that must be assessed from a program or policy, carried out through evaluation activities. Effectiveness is measured starting from the aspects of planning, implementation, and results. Oliva and Gordon (2013), revealed that "evaluation is the process of making judgment". This opinion is in line with the opinion of Worthen and Sanders (in Hasan, 2009), namely the evaluation is done by collecting data or information in the context of decision making.

The Maritime Curriculum Evaluation aims to find out the extent of the idea dimension in this case the Indonesian Maritime Policy, which was launched by the President and has been formulated in the Maritime Curriculum, has been implemented in the schools in this case in junior high school. Evaluation is carried out on the implementation model carried out by the schools. There are 4 models of implementation of the maritime curriculum, namely 1) becoming a context Subject, 2) enrichment of Subject, 3) being an extracurricular activity, 4) becoming a separate subject, and 5) habituation through school culture. Between model 1 (one) and number 2 (two) combined into 1 model, namely Contextualization.

In addition to the five ways of implementation, an evaluation was made of the school's vision and mission statement. The vision and mission of the school is an important aspect in managing the school curriculum. Vision as defined by Charlton (1993) is a picture, goal or target of the future is realistic and credible. Davies and Ellison (1991) define a mission to be

how an organization including a school goes about achieving its goal. The existence of a vision for the organization is absolutely necessary because with the vision, the organization can plan for future conditions. It has been proven in the fact that successful organizations at the world level have a clear vision of what they want to achieve in the future. In this globalization era, the role of educational institutions is increasingly demanded to provide management services and professional services to the government and society. This is partly due to the increasing interest and needs of the community towards education.

From the results of the evaluation, from 18 schools the Environmental Awareness became the school's vision and mission, but only as many as 4 (four) schools wrote Maritime as the school's Vision and Mission. The number is very small when compared to the entire school designated as a piloting school. This shows that maritime perspective have not yet become the focus of curriculum management in most schools designated as piloting schools. The inclusion of maritime vision and mission has not yet been write on the school curriculum document. The explicit statement of the maritime vision might be caused by the school having included it in the vision of the environmental Awareness. Schools claim that maritime is part of the environment, so maritime is part of environmental education that is integrated in all activities in the school. However, making maritime as a vision set by the school will have positive implications for activities in the school. If it is not explicitly written then the school does not make it the focus of the content of the education carried out at school. The development of vision and mission is a part of the strategic management process. The process of strategic management is often described as a model that involves four basic elements: environmental scanning, strategy formulation, strategy implementation and evaluation and control. The development of vision and mission is a part of strategy formulation. This step not only includes the vision and mission development but also the specifications of strategic objectives and strategy development (Papulova, 2014). From these findings we can conclude that maritime policy have not been a clear direction for schools. This can affect the level of success of the Government's program.

The evaluation of implementation data in intracuricular activities on subjects shows that all schools implement it in several subjects, especially Science, Social Sciences, Language, Arts, and Crafts. Maritime content is directly related to the student's experience. However, the contents of the maritime curriculum are also relevant to other subjects, such as mathematics

and PPKn. This means that schools still claim that maritime content is only charged as content or knowledge content. While students live in an environment that is very close to the sea and coast. It is hoped that in implementing the curriculum, the surrounding environment becomes an authentic source of learning for the overall development of student competencies.

Implementation through extracurricular activities and school culture is chosen by all schools as a method of implementation. Most schools choose activities to make murals in schools or paint schools with maritime themes, clean up marine trash, travel to the sea, or fish eating activities as a method of implementation. This activity in implementing the curriculum can be chosen as a method of implementing the maritime curriculum. However, if it is related to the quality of learning, this activity still needs to be improved by emphasizing the aspects of caring, using it wisely, and providing motivation so that students can pursue future careers in fields related to maritime affairs. Extracurricular activities and school culture are only a way. The most important thing in extracurricular activities and school culture is building a student positive value and attitude.

The method of implementing Local Content Subjects was only chosen by one school, the school of the Hang Tuah Foundation. This is understandable because the Hang Tuah school is a school under the guidance of the TNI Angkatan Laut. For other schools, if local content is chosen as a stand-alone subject, then the need for educational resources as an implication of increasing the burden of learning local content is borne by the local government that stipulates (Article 8, Permendikbud No. 79 of 2014). This makes it difficult for schools to choose Local Content Maritime Subjects. Determination of Maritime Local Content as a Stand-alone Subject is the most appropriate choice for schools around the coastal area. Implementation of these Subjects will have a good impact on students because they will build competencies that are appropriate to their daily environment and will contribute to developing the country when they are adult. This choice will have a positive impact on the Indonesian nation to achieve its vision of development.

D. Conclusion

The successful implementation of maritime education in schools is an important indicator of the achievement of the development plans that have been set by the President. Evaluation of the Implementation of the maritime curriculum in 18 piloting schools provides data that the

curriculum has been implemented well. All schools have implemented it through the context of compulsory subjects, extracurricular, and school culture. However, schools have not fully included maritime as one of their visions and missions explicitly.

Thus, in order to better implement the curriculum, various improvement efforts need to be made so that it produces a good impact on development.

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STUDY ON IMPLEMENTATION OF EQUALITY EDUCATION STANDARDS PROGRAM IN COMMUNITY LEARNING CENTER (PKBM) IN SOUTH SUMATERA

Imron A Hakim[1], Evy RK Waty[2], Azizah Husin[3], Shomedran[4]

[1]Faculty of Teacher Training and Education, Sriwijaya University
imronahakim@gmail.com
[2]Faculty of Teacher Training and Education, Sriwijaya University
evyrkwaty@gmail.com
[3]Faculty of Teacher Training and Education, Sriwijaya University
Azizahhusin66@gmail.com
[4]Faculty of Teacher Training and Education, Sriwijaya University
Shomed16ut@gmail.com

Abstract

This study aims to describe and find out the implementation of standards in the implementation of equality education programs at the Center for Community Learning Center (PKBM) in South Sumatera in this case PKBM Bukit Sulap, Lubuk Linggau City. The Equality Education Program Implementation Standards refer to the National Education Standards which consists of eight standards, namely: 1) Graduates' Competency Standards; 2) Content Standards; 3) Process Standards; 4) Educator and Education Staff Standards; 5) Facilities and Infrastructure Standards; 6) Management Standards; 7) Financing Standards; and 8) Assessment Standards. The research method used in this research is descriptive qualitative. Data collection using interview, observation, and documentation techniques. Data analysis techniques in this study used data reduction techniques, data presentation and conclusion drawing with the validity of the study using triangulation techniques. The results of the study found that PKBM Bukit Sulap in general had implemented various components or items relating to the eight standards of implementing an equality education program, although there were still a number of items that had not been maximized in its application. It can be concluded that overall the implementation of the standard implementation of the program at PKBM Bukit Sulap is quite good with a variety of evidence that exists in each standard set. Therefore, in the future it is expected that managers will better understand and implement the standard of Equality Education program implementation in PKBM better because this is very important with the aim to guarantee and improve the quality of Non-formal Education in order to get better services as well.

Keywords: *Implementation, Program Implementation Standards, Equality Education, PKBM.*

A. Introduction

National Education as mandated in Law Number 20 of 2003, there are three channels of education, namely formal education channels, non-formal education channels and informal education channels. Non-formal education is organized and systematic activities outside the established schooling system, carried out independently or is an important part of broader activities that are intentionally carried out to serve certain students in achieving their learning goals (Djuju Sudjana: 2000, 22-23). Non-formal education as stated in article 26 paragraph 4, explained that non-formal education units consist of course institutions, training institutions, study groups, community learning centers, majelis taklim and similar educational units. Non-formal education includes life skills education, early childhood education, youth education, women's empowerment education, literacy education, vocational education and job training, equality education, and other education aimed at developing students' abilities.

The Non-formal Education Unit that is currently quite developing is the Community Learning Center (PKBM), which at the beginning of the pilot was established at the sub-district level and

then spread to each village or kelurahan. PKBM was established by the community, from the community and for the community. The main activity of PKBM is to educate the community through various out-of-school education program services. Where the founding of PKBM was inspired by the idea of a community learning center. UNESCO (1993) defines PKBM as an organized place of learning where people can learn. PKBM is an institution that can provide access to education so that the opportunity for people to get an education is wider.

As an institution established from, by and for the community, it needs to be improved and developed continuously in the direction of change. One of the demands for change that requires a rapid response in accordance with the dynamics of the development of community knowledge is to organize PKBM management so that it is empowered to carry out its functions optimally, flexibly and neutrally. To accommodate the diversity that exists and improve the quality of the process of education services in the community, educators and education staff under the guidance of the organizers of PKBM, must design standards of desired learning needs in a democratic, effective, efficient, and quality manner. The Community Learning Activity Center Data itself is known that in Indonesia there are 8,699 PKBM institutions as a whole, while for South Sumatra alone there are around 225 PKBM institutions (http://referensi.data.kemdikbud.go.id). For this reason, PKBM is demanded to continue to be able to develop programs that are in accordance with the needs of the community with a reference to implementation in accordance with standards set by the government.

The Directorate General of Non-formal and Informal Early Childhood Education in 2010 established a guideline for the formation and organization of PKBM, which contained a discussion on a standard of organizing PKBM activities. This guideline is expected to be a reference for people who want to form and establish PKBM, as well as a reference for PKBM managers in organizing non-formal and informal education programs or other parties involved in organizing, planning, implementing, and evaluating the implementation of PKBM in accordance with standards determined. Even though the standards for organizing PKBM activities have been drawn up, there are still PKBM managers who do not clearly know the existing standards and have not implemented them. In this case the researcher would like to know more about the implementation of standards for the implementation of Equality Education activities carried out by PKBM because the implementation of the standards for organizing PKBM activities is very important in improving the quality and services of Non-formal education in order to educate the nation's life.

B. RESEARCH METHODS

a. Research Approaches and Methods

The appropriate research approach used in this study is a qualitative approach with a qualitative descriptive method of the phenomenon of the activities of each program in the PKBM in this component eight national education standards.

b. Research Locations and Subjects

This research was conducted on the aspect of implementing eight standards for the implementation of Equality Education programs at PKBM located in Lubuk Linggau City precisely at PKBM Bukit Sulap. The choice of location is based on the interests of researchers and consideration of the distribution of PKBM in South Sumatra as well as other more objective considerations for examining the implementation of eight standards of organizing PKBM programs. As for the subjects of the research are the PKBM Managers or administrators, teaching staff / tutors, learning residents, and several community members as well as users of PKBM who are considered capable and in charge of providing the required research information. Retrieval of data sources in this study using purposive sampling technique.

c. Data Collection Techniques and Instruments

Data collection techniques used in this study are in accordance with the needs in data collection, while the techniques used are observation, interview (interview) and documentation study. Observations made by researchers to see naturally the activities carried out by research subjects. In this study observations were made by researchers to observe and record events that took place in accordance with the focus of the problem under study. In this study interviews were conducted directly with informants namely PKBM managers / administrators who were targeted by researchers, tutors / instructors, learning residents and local officials or the community involved in this program. The documentation study in this study was used to obtain a picture of the implementation of the standard implementation of the program at PKBM in South Sumatra.

C. RESULTS AND DISCUSSION

Based on research results that have been detailed in the description of research data, then a discussion is carried out by reviewing from a variety of relevant references, and described using a mindset based on knowledge, the discussion is carried out as follows:

d. Application of Competency Standards for Equality Education Graduates in the Bukit Sulap Lubuk Linggau PKBM Management

The management standard / implementation of the activity program in the PKBM unit refers to the National Education Standards stipulated in Government Regulation Number 32 of 2013 as a form of amendment to Government Regulation Number 19 of 2005 concerning National Education Standards and Government Regulation Number 17 of 2010 concerning Management and Implementation of Education as well as Other provisions in force. The

National Education Standards (SNP) state that Graduates Competency Standards (SKL) are the qualifications of graduates 'abilities that include knowledge, attitudes and skills that are used as a guideline for assessing students' graduation from the education unit. Graduates Competency Standards function as criteria in determining the graduation of students in each education unit, referrals for the preparation of other education standards, and are directions for improving the quality of education in a fundamental and holistic manner at the level of primary and secondary education, and are guidelines for assessing in determining the graduation of participants students which include competencies for all subjects, and include aspects of attitude, knowledge and skills.

Based on the research data that has been done by the researchers, it can be seen that in the implementation of equality education programs in its implementation in the management of Bukit Sulap PKBM, there are components of graduate competency standards consisting of core competencies, supporting competencies and other competencies. The main competencies in question include tutorial learning activities for equality education packages A, B and package C. Then in the management of PKBM Bukit Sulap the supporting competencies in question include emphasizing changes in attitudes and better behavior in this case the formulation of learning achievement Graduates Competency Standards . Then it was seen that PKBM Bukit Sulap already had a list of graduates with their respective competencies.

e. Implementation of Equality Education Content Standards in the Management of Bukit Sulap Lubuk Linggau PKBM

This section discusses and describes the application of standards for equality education program content in the management of PKBM Bukit Sulap. In the implementation of its management that the Bukit Sulap PKBM already has a curriculum and curriculum evaluation is carried out regularly. Then it has developed the curriculum content related to local potential with the involvement of citizens learning packages A, B and C. Some of the local content that is carried out include the making of mortar stones and the making of rings from agate. This is in line with, as stated in Article 77L paragraph 1 of Government Regulation Number 32 of 2013 concerning National Education Standards, explaining that:

> "Structure of non-formal education curriculum contains a life skills development program that includes functional skills, attitudes and professional personalities and independent entrepreneurial spirit, as well as competence in certain fields".

To achieve an educational goal an institution must have a curriculum in which regulates the curriculum structure, curriculum model and educational calendar. A set of educational plans and learning competencies and also has a curriculum evaluation. Evaluation can be interpreted as an assessment of the results that have been implemented. Basically, the

curriculum contains a set of plans and arrangements regarding competencies that are standardized to achieve goals.

Based on the findings in the field it can be concluded that the Bukit Sulap PKBM has various curriculum components consisting of curriculum structure, curriculum models, educational calendars, curriculum content and curriculum development that elevates local local potential in learning local content in the curriculum. Then in the implementation of the PKBM curriculum evaluation a curriculum meeting is held by the designated Team.

f. Implementation of Equality Education Process Standards in the Management of Bukit Sulap Lubuk Linggau PKBM

Process standards are national education standards relating to the implementation of learning in an educational unit including the Equality Education Program. The standard component of the process in PKBM consists of planning in the form of a syllabus, learning implementation plan, learning objectives, indicators, teaching materials, methods, learning resources, assessment of learning outcomes, implementing learning processes that are based on life skills and learning in accordance with regional characteristics and developing culture reading, writing and arithmetic.

Meanwhile according to PP No. 32 of 2013, Article 1 paragraph (7) referred to as a standard process is a criterion regarding the implementation of learning in an educational unit to achieve Graduates Competency Standards.

The research findings show that PKBM Bukit SUlap seeks to apply standard components of the process consisting of planning in the form of syllabus, Learning Implementation Plan (RPP), assessment of learning outcomes, applying learning processes based on life skills and learning in accordance with regional characteristics and developing the culture of reading, writing and arithmetic. Based on the research findings and theoretical studies above, it can be concluded that the implementation of standard process components in the management of Bukit Sulap PKBM has run quite well.

g. Implementation of Education and Education Standards for Equality Education program in the Management of Bukit Sulap Lubuk Linggau PKBM

Educators and education personnel are very influential components in efforts to educate the nation's life and improve the quality of Indonesian people. As said by Sudarwan Danim (2009: 30) states that:

> "Standard educators and education personnel are criteria for pre-service education and physical and mental worthiness, as well as education in the office. Competence standards for educators and education staff are statements about the knowledge, skills and attitudes required to carry out specific tasks / jobs in accordance with the criteria set for a PTK-PNF ".

Based on the findings of the research that PKBM Bukit Sulap in recruiting teachers has fulfilled the requirements / standards, namely educators with minimum A qualification for high school diploma / equivalent C / equivalent, educator with minimum package B diploma D2, and educator C minimum minimum S1 degree. As for education staff, they must have a high school diploma / equivalent and can operate a computer. This condition can be seen from the condition of documents owned by the institution, that so far the recruitment process has begun to run with an open system. If you look at the data on the ownership of educators and education staff, the Bukit Sulap PKBM institution has fulfilled the standards intended in the description above. On the other hand, the education staff and tutors are also included in various training and education activities to improve their abilities and competencies so they can work professionally. As according to E. Mulyasa (2004: 37-38), competence is a combination of knowledge, skills, values and attitudes that are reflected in the habits of thinking and acting. In the teaching system, competencies are used to describe professional abilities, namely the ability to demonstrate knowledge and conceptualization at a higher level. This competency can be obtained through education, training and other experience according to the level of competence.

Whereas according to Law No. 14 of 2005 concerning Teachers and Lecturers, competence is a set of knowledge, skills and behaviors that must be possessed, internalized and mastered by the teacher or lecturer in carrying out professional tasks. If you look at the data obtained in relation to Educators and Education staff in the Bukit Sulat PKBM unit, it can be concluded that it is sufficient to meet the standards of educators and education personnel in accordance with government regulations with various data evidence outlined in the research findings. This is also very related to the competencies of the Education Personnel as described above.

h. Implementation of Facilities and Infrastructure Standards in Equality Education in the Management of Bukit Sulap Lubuk Linggau PKBM

The success of educational programs through the teaching and learning process is greatly influenced by many factors, one of which is the availability of adequate educational facilities and infrastructure and optimal management. Based on research data that have been upheld that the Bukit Sulap PKBM in its management already has adequate facilities and infrastructure, this is stated in the list of infrastructure facilities owned by the institution.

According to Government Regulation Number 32 of 2013 Article 1 paragraph (9) explains that the Standards for Facilities and Infrastructure are criteria regarding study rooms, places to exercise, places of worship, libraries, laboratories, workshops, playgrounds, places of creation and recreation and other learning resources, which needed to support the learning process, including the use of information and communication technology. Based on the

results of the study it can be concluded that PKBM Bukit Sulap already has complete and adequate facilities and infrastructure to support teaching and learning activities in the Equality education program.

i. **Implementation of Equality Education Management Standards in the Management of Bukit Sulap Lubuk Linggau PKBM**

An institution must have good management with the aim of an institution that can survive with every problem and whatever conditions they experience, at PKBM Bukit Sulap itself has a pretty good management system such as with competent leadership and have good qualifications, organizing seen from the documentation and organizational structure, the implementation of the management of the education unit which is marked by the education calendar of the equality education program as well as supervision and reporting which are done every time with a copy to the local service.

Education Management Standards are national education standards related to planning, implementation and supervision of educational activities at the level of education units, districts / cities, or national in order to achieve the efficiency and effectiveness of education delivery (Sudarwan: 2009: 30). Management of the education unit is the responsibility of the head of the education unit.

According to PP No. 32 of 2013 Article 1 paragraph (10) explains that Management Standards are criteria regarding the planning, implementation and supervision of educational activities at the education unit, district / city, provincial, or national level in order to achieve the efficiency and effectiveness of education delivery. Meanwhile, according to Adisasmita (2011: 22) states that, "Management is not only carrying out an activity, but is a series of activities that include management functions, such as planning, implementation, and supervision to achieve goals effectively and efficiently."

From the description of the data and theory above, if seen from the results of the study that the Bukit Sulap PKBM institution already has a partnership MoU, community participation, superior production business ownership and aspects of supervision or supervision carried out so far are quite good. This has shown and sufficiently meets the elements of management or management of an institution / program.

j. Implementation of Equality Education Financing Standards in the Management of Bukit Sulap Lubuk Linggau PKBM

Funding in non-formal education programs has so far been a very urgent and general problem, including the Bukit Sulap Lubuk Linggau PKBM. Because this is related to financing or funding a program that is run, it is related to the source of the Fund to its users.

According to PP No. 32 of 2013 Pasat 1 paragraph (11) explains that the Financing Standards are criteria regarding the components and the magnitude of the operating costs of education units that are valid for one year.

From various explanations and data descriptions on the research findings, it can be seen that the institution in general has implemented and fulfilled the financing standards quite well. There is documentation and has various financing components that are clear, for example there is a list of funding sources, expenditures, records and notes and various KAS books also owned by the Bukit Sulap PKBM institution. It can be concluded that in general this standard is quite well implemented.

k. Implementation of Equality Education Assessment Standards in the Management of Bukit Sulap Lubuk Linggau PKBM

Assessment is as an evaluation tool of every institution or program carried out by PKBM and in this assessment is a success, both academic success and success from the achievement aspects of the PKBM itself. In its implementation the institute already has a grading guide, assessment instruments, assessment documents and graduates as well as various achievement championships that have been achieved, various graduation lists of students, participants taking the exam and other supporting evidence.

From the description of the research findings, in general, the implementation of the equivalence education assessment standards in the Bukit Sulap PKBM has run quite well. It can be seen that the institution already has instruments in the assessment, has carried out the assessment process and has achieved various championship achievements as a form of appraisal application. This implementation needs to be improved and developed in accordance with existing demands in order to provide maximum service for the implementation of equality education in non-formal education units or outside school education.

D. CONCLUSIONS

From the results of the research and discussion data described above, in general it can be concluded that it is sufficiently good and fulfills the elements of implementation of the 8 National Education Standards as part of the Program Implementation Standards for PKBM units in implementing equality education programs. The implementation standards referred to are (1) Graduates Competency Standards, (2) Content Standards, (3) Process Standards, (4) Educators and Education Personnel Standards, (5) Facilities and Infrastructure Standards, (6) Management Standards, (7) Financing Standards and (8) Assessment Standards.

The implementation of each indicator or item in all of these standards is quite good to be implemented by the Bukit Sulap Lubuk Linggau PKBM unit, although there are still a few that

are incomplete and not yet optimal in their implementation. The components of the SKL formulation, curriculum, completeness of learning, facilities and infrastructure, list and qualifications of education staff and tutors, a fairly good management system with appropriate HR qualifications, there is a clear source of funding with expenditure records, and completeness of assessment instruments carried out in the program equality education. So it can be concluded that the Bukit Sulap PKBM has implemented 8 Standards of implementation of the program quite well. This is certainly very influential on the services of equality education programs that are run. With the implementation of the standard implementation of this program, it is hoped that the institution will be able to improve the quality of education and programs carried out because there is a standardization in every element of the program implementation.

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DEVELOPMENT OF COMMUNITY READING GARDEN MODEL (TBM) BASED ON CREATIVE ECONOMY IN OGAN ILIR

Yanti Karmila Nengsih[1], Mahyumi Rantina[2], Vina Amalia Suganda M[3], Mega Nurrizalia[4]
Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sriwijaya
yantikn@fkip.unsri.ac.id, ayumahyumi@gmail.com, vinaamalia@fkip.unsri.ac.id, mnurrizalia@gmail.com

ABSTRAK: Penelitian ini bertujuan untuk mengembangkan produk berupa Pengembangan Model Taman Bacaan Masyarakat (TBM) Berbasis Ekonomi Kreatif di Ogan Ilir. Penelitian pengembangan ini dilakukan dengan mempedomani langkah pengembangan model ADDIE (*Analyze, Design, Development, Implementation, and Evaluation*). Subyek uji coba penelitian terdiri dari (1) ahli, dan (2) sasaran pengguna produk, yaitu masyarakat biasa, yang diambil dengan menggunakan metode *purposive sampling*, sehingga diperoleh subyek uji coba penelitian, yaitu 2 orang ahli, dan 4 orang masyarakat. Penelitian ini dilakukan dengan mengujicoba produk penelitian sampai pada tahap uji kelompok kecil dan data yang diperoleh dianalisis secara deskriptif. Hasil penelitian menunjukkan bahwa: (1) model Taman Bacaan Masyarakat (TBM) berbasis Ekonomi Kreatif dengan menerapkan metode montessori secara tujuan dinilai layak untuk digunakan oleh masyarakat dalam meningkatkan minat baca dan kreatifitas masyarakat (2) tingkat keterpakaian model Taman Bacaan Masyarakat (TBM) berbasis Ekonomi Kreatif dinilai sangat tinggi untuk digunakan oleh masyarakat. Berdasarkan hasil penelitian tersebut, secara umum dapat disimpulkan bahwa produk penelitian yang dihasilkan dinyatakan layak dan dapat dipakai untuk membantu masyarakat dalam rangka meningkatkan minat baca masyarakat dan meningkatkan kreatifitas masyarakat dalam bidang keterampilan ekonomi kreatif di Ogan Ilir. Dengan demikian produk hasil penelitian ini dapat direkomendasikan untuk diperkenalkan dan digunakan oleh masyarakat di Ogan Ilir.

Kata Kunci: Model Taman Bacaan Masyarakat, Metode Montessori, Literasi, Ekonomi Kreatif

ABSTRACT: the Function of the research to develop a product in the form of Development Creative Economy-Based Community Reading Park (TBM) in Ogan Ilir. This is a developmental research was carried out guiding steps of developing the ADDIE model (Analyze, Design, Development, Implementation, and Evaluation). The research trial subjects consisted of (1) experts, and (2) user target product, namely ordinary people, which were taken using a purposive sampling method, in order to obtain research trial subjects, namely 2 experts, and 4 people. This research was conducted by testing the research product to the small group test stage and the data obtained were analyzed descriptively. The results of the study show that: (1) Creative Economy based Community Reading Garden model (TBM) by applying the montessori method is aimed appropriately for use by the community in increasing interest in reading and community creativity (2) level of use of the Community Based Reading Garden (TBM) model Creative Economy is considered very high for community use. Based on the results of these studies, it can generally be concluded that the research product produced is declared to be feasible and can be used to help the community in order to increase public interest in reading and enhance community creativity in the field of creative economic skills in Ogan Ilir. Research the product recommended to socialitation and used people in Ogan Ilir.

Keywords: Community Reading Garden Model, Montessori Method, Literacy, Creative Economy

A. PRELIMINARY

Education is a conscious and planned effort to make changes for the better. Education is very important in improving the quality of human resources. To obtain education, usually the community learns through schools, campuses, tutoring, and similar institutions. However, not all people can get an even and proper education, there are still many of them who have not received the same right to obtain education. This arises for a reason, namely the family economy, internal school or personal psychic of someone who does not want to go to school and study.

It has become a reality that the demands of the times in the era of globalization, humans are required to be skilled and have competitiveness. The effects of globalization also have an impact on the world of education felt by the people of Indonesia. The open unemployment rate in August 2018 was 6.87 million people or 5.13%. BPS Chief

Suhariyanto said, when viewed according to the highest education, the percentage of unemployed graduates of Vocational High School (SMK) was 8.92%. As for elementary school education and below the rate of 2.67%, then junior high school (SMP) 5.18%, University 6.31%, senior high school (SMA) 7.19%, and Diploma I-III of 7.92 % (bps.go.id).

Efforts to improve the quality of human resources in the context of competition in the era of globalization, then education must be developed and improved. To be able to compete requires quality human resources, energetic, intelligent, and skilled in their fields, so as to win the competition in the field of education. In accordance with the mandate of Law No. 20 of 2003 article 13 concerning the National Education System, the education track is divided into three channels namely formal education, non-formal education and informal education which can complement each other. These three types of education function to develop capabilities and shape the dignified character and civilization of the nation in the context of intellectual life of the nation. Through these three types of education it is hoped that the potential of students will develop and become a nation of Indonesia that believes and is devoted to God Almighty.

Non-formal education (non-formal education) also plays a role in creating quality human resources through education units, namely formal education, informal education, and non-formal education. Out-of-school education according to Combs in (Joesoef 1992: 5) is all organized activities that are carried out outside the formal education system, both alone and as part of clear activities intended to provide services to specific target students in achieving learning goals.

Non-formal education plays a role in improving the quality of human resources, one of which is through the Community Reading Gardens (TBM) program which has been widely used in various regions. Community reading parks should strive to utilize resources, both personal and material, effectively and efficiently to support the achievement of Indonesia's educational goals, namely to educate the nation's children and not see the social stratification of the community. In order to realize the goals of education, various parks began to appear, e-books and other sophisticated libraries.

However, the facts are reversed proving that interest in reading Indonesian people is still relatively low. Based on data from the Central Statistics Agency (BPS), in 2006, there were 40.26% of the population over the age of 10 listening to the radio, 85.86% watching TV, and 23.46% reading the newspaper. Then in 2009, the population listening to the radio was 23.50%, watching TV was 90.27%, and reading the newspaper was 18.94%. Finally in 2012 showed that the population who listened to the radio was 18.57%, watched TV amounted to 91.68%, and those who read the newspaper amounted to 17.66%. (Sartono, in www.bps.go.id).

According to the Ministry of Education and Culture data in 2017 the number of Community Reading Gardens (TBM) in Ogan Ilir is 2 namely Teaching and Sriwijaya Reading. In practice, the two TBMs have just implemented literacy (literacy) activities. Therefore, the author wants to develop a model of Community Reading Gardens (TBM) based on the creative economy, where in the application of the TBM model that is designed it will apply the Montessori method which is divided into several centers namely literacy centers, economic centers and arts centers. It aims to increase interest in reading and foster community creativity. Which at the present time every human being is required to have the skills to be able to compete in the era of globalization. The importance of developing TBM based on the Creative Economy, as a forum for people ranging from early age to old age to develop skills, potentials and talents owned by those who already have expertise or skills or who are just learning to acquire skills. So that all communities are empowered and historically economically free from illiteracy.

Based on the statement above, this study intends to develop a learning center product model in the form of a creative economy-based Community Reading Park (TBM). Thus, the TBM model developed can assist the community in developing learning activities in the form of literacy activities, entrepreneurial skills, and the arts.

B. RESEARCH METHODOLOGY

This research is a type of research and development or often also called Research and Development (R&D). According to Sugiyono (2012: 407) research and development are research methods used to produce certain

products, and test the effectiveness of these products. Research and development is a research approach that produces new products or perfects existing products (Nana Syaodih Sukmadinata, 2006: 169).

In conducting research and development, there are several methods used, namely descriptive, evaluative and experimental methods. Descriptive research methods are used in initial research to collect data about existing conditions. Evaluative methods are used to evaluate the process of testing a product's development, and experimental methods are used to test the feasibility and usability of the product produced.

It can be concluded, research and development is a method for producing a particular product or perfecting an existing product and testing the feasibility of the product. In this study, researchers wanted to conduct research and development of a creative economy-based Community Reading Garden (TBM) model. The feasibility level of the TBM model based on the creative economy is known through validation by content or content experts, validation by linguists and trial usage by community members.

This research is located at Indralaya Ogan Ilir. This research will be conducted for 12 months starting from the preparation of proposals, conducting research, research results and publication of research results, namely January to December 2019 with the time of data collection in August - November 2019.

The development procedures applied in this study follow the steps of development according to the ADDIE model which includes Analysis, Design, Development, Implementation, and Evaluation. The product trial will be conducted by two experts namely material or content experts and linguists. The product trial will be conducted on a small group of several community members. The research instrument used was a questionnaire. This study uses descriptive data analysis with one variable, namely the quality of the creative economy-based TBM model with good TBM model criteria.

C. RESEARCH RESULT

1. Presentation of Development Data Results

Presentation of development data presented in this section guides the ADDIE pattern, namely (1) the analysis phase, (2) the design phase, (3) the development phase, (4) the implementation phase, and (5) the evaluation phase.

a. Analysis phase

The Creative Economy-based Community Reading Park (TBM) model in Ogan Ilir was developed based on observable conditions in the field relating to (a) analysis of community needs, and (b) implementation of TBM

1) Analysis of learning needs of citizens
2) Implementation of creative economy-based Community Reading Gardens (TBM) in Ogan Ilir

b. The design phase of the creative economy-based Community Reading Garden (TBM) model
c. Development stage

This development phase is carried out through three types of activities namely development of research products, development of research instruments, and product revisions as described below, starting from developing research products, developing research instruments in the form of a validation questionnaire of development models by 2 (two) experts and involving the community.

Product revision. Validation data is collected based on an assessment questionnaire given to 2 (two) experts. Data collection for the expert validation stage was carried out on October 20 - November 5, 2019. Product trials will be conducted in small groups, namely several community members in the path of the Mas Bunga complex, Ogan Ilir. The research instrument used was a questionnaire. This study uses descriptive data analysis with one variable, namely the quality of the creative economy-based Taman Bacaan Masyarakat (TBM) model

d. Implementation

The feasibility test used uses two stages, namely the stage of the feasibility test theoretically involving experts (expert evaluations) who are experts in their fields. While the empirical feasibility test involves the community around the place of product development (small scale test)

1) Theoretical Product Feasibility Test

The evaluation of this product is done by showing the initial product in the form of a creative economy based Taman Bacaan Community (TBM) guidebook. Observation sheet in the form of a questionnaire that contains questions related to the product, including: Display guidelines for the use of the TBM model, design a creative economy-based Community Reading Park (TBM), display the implementation of activities in TBM, and follow up on the use of TBM for the community. Material experts and media experts concluded that overall the produl was suitable for use by the community in literacy and creative economy activities so that the product could be used in small group trials.

2) Small Group Trial

This stage was carried out after the product model of the Taman Bacaan Masyarakat (TBM) that had been developed was evaluated by material experts and media design experts. Researchers revised the product based on input from material experts and media design experts. This trial was conducted to obtain direct input from respondents regarding products that have been developed, with respondents totaling 7 people. In this small group trial respondents also provided input in the form of strengths and weaknesses of the product that had been developed. This understanding result test uses a research instrument that is a list of questions by giving questions in the form of multiple choice as many as 10 questions.

Based on the small-scale test to test the feasibility and applicability of the creative economy-based Community Reading Garden (TBM) model, the conclusion is that (1) the creative economy-based Community Reading Garden (TBM) model, is considered to be very suitable for use by the community in literacy activities and creative economy, (2) the level of usage of the creative economy-based Community Reading Garden (TBM) model is considered very high for community use

Based on these results, it can generally be concluded that the research products produced are declared to be feasible and can be used to help the community in increasing literacy and creative economic activities.

2. Discussion

Based on the description and analysis of the data contained in the previous data presentation section, the following discussion of the research findings as a result of product development is presented.

The research products produced in this study include the creative economy-based Community Reading Park (TBM) model for the community. This product is named Cipta Cipta Mandiri Community Reading Park (TBM). In developing this product, the authors guide the steps contained in the ADDIE model, namely analysis, design, development, implementation, and evaluation. From the results presented in the development stage, it is known that the model that has been prepared has reached very feasible criteria by experts.

Research findings in order to determine the level of product usage illustrates that the TBM model for the community can be concluded high based on the assessment of the community involved in small-scale product trials.

3. Development Limitations

This research has been completed by the author carried out in accordance with the opportunities and capabilities. Various attempts have been made to achieve optimal results and have sought to follow the procedures and stages required as scientific work. But researchers realize that this research development still has many limitations. The limitations of this development are described as follows.

a. Respondents in this study, namely the community with the number and scope that is still limited to one location
b. Product development in research only reaches the aspect of usage, which only looks at the level of use for the community in literacy activities and creative economic activities.
c. The assessment of aspects of product use in this study was only tested on a small group in one location.

Researchers hope for further researchers that this research can be followed up by conducting experiments in field trials to see the effectiveness and contribution that can be made to literacy activities and the creative economy, so that the research products produced can be used by the public at large. Related to all the limitations of this

development, hopefully the research products produced will be useful and beneficial to the community and the development of non-formal education going forward.

D. CONCLUSION

Based on the analysis of product data, the results obtained on the product trial were carried out by two experts namely material experts and media design experts with a very feasible category to use. Furthermore, to find out the product usage the product cona test was conducted on several people so that the results of the usage level of the creative economy-based TBM model were considered very high for community use. Based on the results of these studies, it can generally be concluded that the research products produced are declared to be feasible and can be used to help the community in the context of literacy and creative economic activities.

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EVALUATION OF HIGH SCHOOL CURRICULUM IN CENTRAL JAVA

Yuli Utanto, utanto1979@mail.unnes.ac.id
Educational Curriculum and Technology Department of Semarang State University, Semarang, Indonesia.
Luluk Elyana, lulukelyana76@gmail.com
Ivet University, Semarang, Indonesia.

Abstract. This study evaluates the competence of high school (SMA) teachers in implementing the 2013 curriculum including aspects: KTSP documents, RPP documents, learning process and learning assessment. The evaluation was carried out for high school teachers who became Model Schools and Impact Schools in all Regencies/Cities in Central Java Province on a scale of 0-5. The results show the acquisition of various values. Evaluation of Education Unit Level Curriculum documents (KTSP) shows varieties of quantitative values. The lowest score obtained was 2.76 (Wonogiri Regency), while the highest achievement score was 3.95 (Jepara Regency and Klaten Regency). The average KTSP document obtained as an achievement in Central Java Province is 3.50. The evaluation of the Learning Implementation Plan (RPP) document shows a varied quantitative value. The lowest score obtained was 3.06 (Boyolali Regency), while the highest score was 3.97 (Jepara Regency). The average value of Syllabus documents and RPP obtained as achievements of Central Java Province is 3.69. Evaluation of the learning process shows quantitative values vary. The lowest score obtained was 2.52 (Pekalongan), while the highest score was 3.99 (Grobogan Regency). The average value of the Learning Process obtained as an achievement of Central Java Province is 3.57. Evaluation of learning assessment results shows varying levels of achievement. The lowest value obtained was 2.75 (Boyolali Regency), while the highest achievement value was 4.00 (Jepara Regency). The average value of the learning assessment obtained as an achievement in Central Java Province is 3.55. The competence of high school teachers in Central Java in implementing the 2013 curriculum still requires assistance and guidance so that competence increases.

Keywords: Curriculum evaluation, High school level, Central Java Province.

A. INTRODUCTION

Curriculum is – or should be – at the heart of educational practice. In many countries, the curriculum has become a central core of education policy, manifested in recent years in the development of new and innovative forms of national curriculum policy and a renewed emphasis on the important role of teachers as curriculum makers (Priestley & Philippou, 2019).Priestley & Philippou believe that education is a vital component in efforts to both create better and more cohesive societies, and to address the economic, social and environmental conditions that potentially destabilize modern societies.

In a recent discussion paper (OECD, 2018), has identified the important role of education in addressing a number of challenges. The first of these is identified as environmental. The second is economic. The third challenge is social. The development of "new curriculum" continues the trend of positioning education systems more widely, and curriculum in particular, as drivers of economic development and national competitiveness (Priestley & Biesta, 2013). The 'new curriculum' is characterized by a number of common features, albeit with local variation in different national contexts. A new focus on the centrality of the learner, accompanied by the development of active forms of pedagogy and a view of teachers as facilitators of learning (Sinnema & Aitken, 2013). Specifically for the Education curriculum in Indonesia, Law Number 20 of 2003 concerning the National Education System Article 1 point 19 explains, curriculum is a set of plans and arrangements regarding the objectives, content, and learning materials as well as the methods used to guide the implementation of learning activities for achieve certain educational goals.

In 2013, the Ministry of Education and Culture of the Republic of Indonesia has formulated an education policy on curriculum changes. Changes in the curriculum are reasonable and rational

in an effort to adjust students with changes that occur in the world. The government began to implement a new curriculum starting in the 2013/2014 school year and is targeted to be implemented in all education units in the 2019/2020 school year. The implementation of the 2013 curriculum is based on the thinking of future challenges namely the challenges of the 21st century marked by centuries of science, knowledge-based society and future competencies.

The preparation of the 2013 curriculum focuses on simplification, thematic-integrative with reference to the 2006 curriculum. In this case several problems were identified, including; curriculum content is still too dense, as indicated by the large number of subjects and materials whose breadth and degree of difficulty exceeds the level of the child's age development; not fully competency based yet in accordance with the demands of the functions and objectives of national education; competence has not holistically described the domain of attitude, skills and knowledge; the curriculum has not accommodated some of the competencies needed in accordance with the development needs (e.g. character education, active learning methodology, soft skills and hard skills balance, entrepreneurship); not sensitive and responsive yet to social changes that occur at the local, national, or global level; the learning process standards do not yet describe a detailed learning sequence so that opportunities for interpretation are diverse and lead to teacher-centered learning again; assessment standards have not led to competency-based assessments (processes and results) and have not explicitly demanded regular remediation; and KTSP need more detailed curriculum documents so as not to cause multiple interpretations. Changes to the curriculum in its implementation require the support of all relevant stakeholders; as is the case with supervision by school supervisors.

As an institution that carries a mandate as an institution that carries out the process of guaranteeing and mapping the quality of education in Indonesia, Central Java Education Quality Assurance Institute (LPMP) has developed instruments and implemented curriculum supervision since the introduction of the Competency Based Curriculum (KBK) in 2004, which then continued with the Education Unit Level Curriculum (KTSP) in 2006 until the entry into force of the 2013 Curriculum. Implementation model and curriculum supervision instruments have been developed by LPMP of Central Java so that it can help supervisors carry out academic supervision and managerial supervision to make it easier to implement. It also has a more effective role in helping education units and greater benefits in improving the quality of learning.

This research was conducted by utilizing curriculum supervision instruments that have been developed by LPMP of Central Java as a data collection tool, so that the validity of the instrument has a high degree of trust. This evaluation research was carried out by taking a sample of 70 high schools in all regencies / cities in Central Java Province. Of the 70 high schools that became the study sample consisted of 35 high schools that became Model Schools which implementing the Internal Quality Assurance System (SPMI) and 35 high schools that became the SPMI Impact Schools.

B. METHOD

This evaluation research was conducted by survey method using instruments that have been compiled by LPMP of Central Java to high school teachers whose school become SPMI Model Schools and Impact Schools in all Regencies / Cities in Central Java Province. The survey was conducted from August to November 2018. Data analysis was based on respondents' answers to open questions through a questionnaire that was followed up by in-depth interviews. A list of questions was sent to as many as 70 high schools during this time period and 100% of respondents answered as expected. Based on information from respondents, researchers conducted in-depth

interviews with 70 respondents consisting of 35 high school teachers from the SPMI model school and 35 high school teachers from the Impact school to follow up on the written answers they had sent previously. Information gathering from respondents was carried out in each high school education unit, both schools models and impact schools which are supervised by school supervisors with a sample of 2 (two) high school levels in each district / city of Central Java Province.

C. RESULT AND DISCUSSION

Data and information related to the portrait of high school teacher competencies both in model schools and impact schools in each City/Regency in Central Java Province in implementing the 2013 curriculum which includes aspects of: KTSP documents, RPP documents, learning and assessment of learning the researchers present as follows:

C.1. Education Unit Level Curriculum Documents

The KTSP document as a whole is divided into three indicators, namely: school curriculum (9 components), curriculum preparation and management mechanism (4 components) and curriculum evaluation (6 components). Each indicator is further divided into several components and sub-components. (more clearly and completely, indicators, components and sub-components can be seen in the attached supervision instrument). The values obtained related to the KTSP document of high school level based on the results of data analysis are presented in the following table.

Table 1
Data Analysis Result of High School Level KTSP Documents of Each City/Regency Based on the Province Average Achievement

No.	Reg./City	KTSP Document	Note	No	Regency/City	KTSP Document	Note
1	Banjarnegara	2,78	K	19	Pemalang	3,71	B
2	Banyumas	3,73	B	20	Purbalingga	3,91	AB
3	Batang	3,33	K	21	Purworejo	3,53	C
4	Blora	3,53	C	22	Rembang	3,48	K
5	Boyolali	2,98	K	23	Semarang	2,81	K
6	Brebes	3,26	K	24	Sragen	3,79	B
7	Cilacap	3,58	C	25	Sukoharjo	3,40	K
8	Demak	3,49	K	26	Tegal	3,15	C
9	Grobogan	3,72	B	27	Temanggung	3,51	C
10	Jepara	3,95	AB	28	Wonogiri	2,76	K
11	Karanganyar	3,81	B	29	Wonosobo	3,93	AB
12	Kebumen	3,68	C	30	Magelang City	3,42	K
13	Kendal	3,58	C	31	Pekalongan City	2,95	K
14	Klaten	3,95	AB	32	Salatiga	3,45	K
15	Kudus	3,39	K	33	Semarang City	3,76	B
16	Magelang	3,83	B	34	Surakarta	3,33	K
17	Pati	3,80	B	35	Tegal City	3,49	K
18	Pekalongan	3,80	B		**Central Jva**	3,50	

Based on the data in table 1, it shows that from 35 regencies/cities in Central Java Province the quantitative value of KTSP documents varies. The lowest value obtained was 2.76 (Wonogiri Regency), while the highest achievement value was 3.95 (Jepara Regency and Klaten Regency). While the average obtained as an achievement of Central Java Province is 3.50. The predicate scale obtained is lacking (K), sufficient (C), good (B) and very good (AB). For the predicate of

lacking (K), the recommendation given is that teachers need improvement in evaluating the RPP through IHT and mentoring. For sufficient (C) predicate, the recommendation given is the need to increase evaluation of book documents 1,2 and 3 as well as the involvement of all parties in carrying out the evaluation through FGD. For good (B) predicate, the recommendation given is the need to strengthen in the preparation of KTSP documents, need to analyze the results of the assessment, need to socialize the program for the preparation of the program in the coming year. For a very good (AB) predicate, the recommendation given is the need for development in the preparation of KTSP documents, all components have met the requirements, the results of the BK program evaluation need to be disseminated to all parties.

C.2. Document of Syllabus and Learning Implementation Plans

The overall syllabus and Learning Implementation Plan (RPP) documents are divided into eight indicators, namely: syllabus development (3 components), RPP development (5 components), learning objectives (2 components), learning material (1 component), learning methods (3 components), media, tools and learning resources (4 components), learning steps (5 components) and assessment (2 components). Each indicator is further divided into several components and sub-components. (more clearly and completely, indicators, components and sub-components can be seen in the attached supervision instrument). The scores obtained related to the syllabus and high school level RPP document based on the results of data analysis can be seen in the following table.

Table 2
Results of Data Analysis of Syllabus and Learning Implementation Plans Documents for High School Level in Each Regency/City Based on Provincial Average Achievements

No.	Reg./City	Syllabus and RPP Documents	Note	No.	Reg./City	Syllabus and RPP Documents	Note
1	Banjarnegara	3,77	B	19	Pemalang	3,40	K
2	Banyumas	3,77	B	20	Purbalingga	3,88	B
3	Batang	3,91	AB	21	Purworejo	3,83	B
4	Blora	3,91	AB	22	Rembang	3,78	B
5	Boyolali	3,06	K	23	Semarang	3,29	K
6	Brebes	3,64	C	24	Sragen	3,55	C
7	Cilacap	3,87	B	25	Sukoharjo	3,74	B
8	Demak	3,66	C	26	Tegal	3,60	C
9	Grobogan	3,92	AB	27	Temanggung	3,78	B
10	Jepara	3,97	AB	28	Wonogiri	3,46	K
11	Karanganyar	3,83	B	29	Wonosobo	3,89	B
12	Kebumen	3,55	C	30	Magelang City	3,64	C
13	Kendal	3,94	AB	31	Pekalongan City	3,19	K
14	Klaten	3,91	AB	32	Salatiga	3,36	K
15	Kudus	3,59	C	33	Semarang City	3,79	B
16	Magelang	3,78	B	34	Surakarta	3,86	B
17	Pati	3,58	C	35	Tegal City	3,82	B
18	Pekalongan	3,51	C		**Central Java**	3,69	

Based on the data in table 2, it shows that from 35 regencies/cities in Central Java Province the quantitative scores of syllabus documents and lesson plans varies. The lowest score obtained was 3.06 (Boyolali Regency), while the highest achievement score was 3.97 (Jepara Regency). While the average obtained as an achievement of Central Java Province is 3.69. The predicate

scale obtained is lacking (K), sufficient (C), good (B) and very good (AB). For the predicate of lacking (K), then the recommendations given are that the teacher needs improvement in the preparation of the lesson plan, especially in determining the steps of learning and assessment. For predicate of sufficient (C), the recommendation given is that they need to improve in preparing lesson plans, assessments to achieve KI-2 (social attitudes) using observation, self-assessment, peer-to-peer and journal assessment techniques. For predicate of good (B), the recommendations given are the need to strengthen in preparing lesson plans, strengthening character education (PPK); literacy, and 21st century skills (4C) need to be considered. For predicate of very good (AB), the recommendation given is that the need to develop teacher competence in the preparation of syllabus and lesson plans, especially in the design of learning steps.

C.3. Learning

Overall learning is divided into four indicators, namely: preliminary activities (5 components), core activities (13 components), closing activities (6 components) and conformity with RPP (1 component). Each indicator is further divided into several components and sub-components. (more clearly and completely, indicators, components and sub-components can be seen in the attached supervision instrument). The values obtained relating to high school level learning based on the results of data analysis can be presented in the following table.

Table 3
Analysis Results of Learning Data for Senior High Schools in Each Regency/City Based on Provincial Average Achievements

No	Reg./City	Learning	Note	No.	Reg./City	Learning	Note
1	Banjarnegara	2,84	K	19	Pemalang	3,26	K
2	Banyumas	3,77	B	20	Purbalingga	3,95	AB
3	Batang	3,40	K	21	Purworejo	3,83	B
4	Blora	3,92	AB	22	Rembang	3,68	C
5	Boyolali	2,56	K	23	Semarang	3,68	C
6	Brebes	3,59	C	24	Sragen	3,73	B
7	Cilacap	3,42	K	25	Sukoharjo	3,58	C
8	Demak	3,83	B	26	Tegal	3,53	C
9	Grobogan	3,99	AB	27	Temanggung	3,81	B
10	Jepara	3,88	B	28	Wonogiri	3,49	K
11	Karanganyar	3,82	B	29	Wonosobo	3,69	C
12	Kebumen	3,16	K	30	Magelang City	3,61	C
13	Kendal	3,89	B	31	Pekalongan City	2,52	K
14	Klaten	3,95	AB	32	Salatiga	3,18	K
15	Kudus	3,80	B	33	Semarang City	3,82	B
16	Magelang	3,57	C	34	Surakarta	3,67	C
17	Pati	3,79	B	35	Tegal City	3,60	C
18	Pekalongan	3,12	K		**Central Java**	3,57	

Based on table 3 data it is known that from 35 regencies/cities of Central Java Province the quantitative score of learning varies. The lowest score obtained was 2.52 (Pekalongan City), while the highest score was 3.99 (Grobogan Regency). While the average obtained as an achievement of Central Java Province is 3.57. The predicate scale obtained is lacking (K), sufficient (C), good (B) and very good (AB). For the predicate of lacking (K), the recommendation given is that the teacher needs to improve in doing reflection and assessment and submit a plan of learning activities for the next meeting. For sufficient (C) predicate, the recommendation given is that the teacher needs to increase in the implementation of learning, both at the preliminary, core and closing stages. For

good (B) predicate, the recommendation given is that teachers need to be strengthened in the implementation of learning, both at the preliminary stage, the core and closing activities. For the very good (AB) predicate, then the recommendation given is that the teacher needs to develop in applying various learning methods according to the characteristics of the learners and KD learned and develop their competence in terms of the use of language in the learning process.

C.4. Learning Assessment

Overall learning assessment is divided into five indicators, namely: planning (2 components), assessment instruments (3 components), implementation (3 components), analysis and follow-up (3 components) and reporting (2 components). Each indicator is further divided into several components and sub-components. (more clearly and completely, indicators, components and sub-components can be seen in the attached supervision instrument). The score obtained related to the evaluation of high school learning based on the results of data analysis can be presented in the following table.

Table 4
Analysis Result of High School Level Learning Assessment Data of Each Regency/City Based on Provisional Average Achievements

No.	Reg./City	Assessment	Note	No.	Reg./City	Assessment	Note
1	Banjarnegara	2,81	K	19	Pemalang	3,35	K
2	Banyumas	3,68	C	20	Purbalingga	3,72	B
3	Batang	3,50	K	21	Purworejo	3,84	B
4	Blora	3,97	AB	22	Rembang	3,78	B
5	Boyolali	2,75	K	23	Semarang	3,25	K
6	Brebes	3,33	K	24	Sragen	3,68	C
7	Cilacap	3,90	B	25	Sukoharjo	3,35	K
8	Demak	3,58	C	26	Tegal	3,73	B
9	Grobogan	3,72	B	27	Temanggung	3,88	B
10	Jepara	4,00	AB	28	Wonogiri	2,88	K
11	Karanganyar	3,95	AB	29	Wonosobo	3,45	K
12	Kebumen	3,57	C	30	Magelang City	3,53	C
13	Kendal	3,93	AB	31	Pekalongan City	3,07	K
14	Klaten	3,93	AB	32	Salatiga	2,99	K
15	Kudus	3,42	K	33	Semarang City	3,43	K
16	Magelang	3,73	B	34	Surakarta	3,90	B
17	Pati	3,73	B	35	Kota Tegal City	3,25	K
18	Pekalongan	3,73	B		**Central Java**	3,55	

Based on table 4 data, it is known that from 35 districts/cities in Central Java Province the quantitative score of learning assessment varies. The lowest score obtained was 2.75 (Boyolali Regency), while the highest achievement score was 4.00 (Jepara Regency). While the average obtained as an achievement of Central Java Province is 3.55. The predicate scale obtained is lacking (K), sufficient (C), good (B) and very good (AB). For the predicate of lacking (K), the recommendation given is that teachers need to improve their competence in implementing learning assessments, especially improvements in planning, preparing assessment instruments, conducting assessments, and in compiling reports on learning assessment results through IHT (In House Training). For sufficient (C) predicate, the recommendation given is that teachers still need improvement in preparing assessment plans for the achievement of students' competencies and in

assessing aspects of skills in accordance with the planned instruments, using instruments that are prepared and outlined in the assessment document through IHT. For good (B) predicate, the recommendation given is that teachers need to strengthen their competence in implementing learning assessment, specifically increasing competence in assessment planning, compiling assessment instruments, and in conducting analysis and follow-up of learning assessment results through IHT (In House Training). For a very good (AB) predicate, the recommendation given is that the teacher needs to develop a document for the preparation and implementation of a follow-up program according to the results of the learning analysis.

D. CONCLUSION

Regencies/Cities where the score of the teachers' KTSP documents is still below the average of provinces with low predicate, the teacher needs an improvement program in the preparation of KTSP and RPP documents through in-house training and mentoring programs. Regencies/cities that have received sufficient predicate, need an increase in evaluation of book documents 1,2 and 3 and the involvement of all parties in carrying out the evaluation through focused discussion. Regencies/Cities that have received a good predicate, require strengthening in the preparation of KTSP documents, analysis of assessment results, and socialization program for program arrangement in the coming year. Regencies/Cities that have received very good predicate, require development in the preparation of KTSP documents, all components have met the requirements, the results of the evaluation of teacher career guidance programs need to be disseminated to all parties.

Regencies/Cities whose score of the teachers' RPP documents are still below the provincial average with a predicate lacking, requires improvements in the preparation of the lesson plans, especially in determining learning and assessment steps. For those who get sufficient predicate, it requires improvement in preparing lesson plans, assessments to achieve KI-2 (social attitude) using observation assessment techniques, self-assessment, peer-to-peer evaluation and assessment journals. For those who get the good predicate, it requires strengthening in preparing lesson plans, strengthening character education (PPK), literacy, and 21st century skills (4C). for those who get a very good predicate, it requires the development of teacher competencies in the preparation of syllabus and lesson plans, especially in the design of learning steps.

Regencies/Cities whose acquisition scores are still below the provincial average so that they receive a predicate of lacking, then it requires improvement in doing reflection and assessment and submit a plan of learning activities for the next meeting. For those who get a predicate of sufficient, it requires an increase in the implementation of learning, both at the preliminary stage, core and closing activities. For those who get a good predicate, it requires reinforcement in the implementation of learning, both at the preliminary stage, core and closing activities. For those who get the predicate of very good, it requires development in applying various learning methods according to the characteristics of the learners and basic competences learned and developing competencies in terms of the use of language in the learning process.

Regencies/Cities whose score are still below the provincial average so that they receive a predicate of lacking, then teachers need to improve their competence in implementing learning assessments, especially improvements in planning, preparing assessment instruments, conducting assessments, and in preparing reports on learning assessment results through IHT. For those who have received the predicate of sufficient, it is necessary to increase in compiling an assessment plan for the achievement of students' competencies and in assessing the aspects of skills according to the planned instrument, using the instruments compiled in the assessment document through IHT. For those who received the predicate of good, it is necessary to strengthen their competence

in the implementation of assessment of learning, especially increasing competence in planning assessment, preparing assessment instruments, and in conducting analysis and do the follow-up to the learning assessment results. For those who received a very good predicate, it is necessary to develop a document to compile and implement a follow-up program according to the results of the learning analysis.

Based on the conclusions that researchers can formulate above, the overall recommendations that can be given are, for schools, they need to facilitate teachers to improve competence in the preparation of KTSP, Syllabus and RPP documents, implementation of learning and assessment design. For education/government authorities, they need to provide support for schools to improve competence in the preparation of KTSP, Syllabus and RPP documents, implementation of learning and assessment design. For LPMP, it is necessary to conduct quality assurance for schools to improve competence in the preparation of KTSP, Syllabus and RPP documents, implementation of learning and assessment design.

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ANALYSIS OF DIGITAL GAMES FOR EARLY CHILDHOOD DEVELOPMENT

Suprih Widodo, supri@upi.edu
Nur Azizah, nurazizahbks@student.upi.edu
Nahrowi Adjie, nahrowiadjie@upi.edu
Universitas Pendidikan Indonesia Kampus Purwakarta, Jl. Veteran No 8 Purwakarta

ABSTRACT

This study aims to analyze 30 digital games for early childhood. Started by explanation about the game, weakness, strength, and suitability of games with the age level of the child. The research method used is a type of descriptive research with qualitative and quantitative research approaches. The qualitative data in this research is related to the description of game applications described, including the developers, the aspects of child development, strength and weakness and the story of the game. The quantitative data in this study were the application size and application rating in PlayStore which states user satisfaction to the applications that have been played. The study shows that in general, the quality of 30 digital game applications for childs in PlayStore has good quality, and have a good potency to develop several aspects in early childhood development. In the terms of appearance, the average digital game that has been analyzed has a good and attractive graphic design for early childhood. Character design, color and composition can provide stimulation for child to attract interest in playing the game. Some of the most common deficiencies arising from the applications are the presence of advertisements that tend to interfere in the game or that the player should have to pay for some specific feature, and the availability of another kinds of languages but beside English. From the rank perspective, those digital game rank shows an average score of 4 which is very good, with an average application size of 20MB, but there was no relationship between the size application and the player satisfaction.

Keywords: 21st century learning, digital games, early childhood.

A. INTRODUCTION

Entering the beginning of the era industrial revolution 4.0 technology is developing rapidly. Starting from mechanical technology, analog electronics and what is developing now is digital technology. Individuals who are born after adopting digital technology are called digital generation (Fardiah, 2017). The advanced digital technology of the future is making a big difference to the world. Various groups have facilitated access to information in various ways and can enjoy the facilities of digital technology freely and in a controlled manner.

Indonesia is ready to live in the digital era. Indonesia's readiness is seen in the internet connections that existed in the 4G era with Electronic Information and Transactions (ITE). In 2008 the internet-based digital world made all the activities of its inhabitants become unlimited space and time. Development of various applications development according to the production of smart phones with an operating system (OS) that provides comfort and convenience for its users.

According to the e-Marketer survey company, gadget users have increased significantly in Indonesia and are predicted to enter the top four largest gadget users in the world in 2016 (Koran Tempo, 2015) In addition, Indonesia is on the list of 10 countries with the most smartphone sales in the world, with 46 million sales and 39.8 million new users (Iskandar in Setiawan, 2017).

The digital age must be taken seriously, mastering, and controlling technology properly so that the digital age brings benefits to life. All groups must be understood with the digital era in terms of both benefits and conditions. Children are no exception. Children are individuals who are developing. Children at the age of 0-6 years or called early childhood are individuals who are in the fastest growth and development, both physically and mentally (Putra, Nugroho & Puspitarini, 2016). Natural needs and priority activities they must play. Play is a fun activity and has intrinsic value in children (Wiyani & Barnawi, 2012). By playing, children gain a variety of knowledge that can develop various aspects such as cognitive, social, emotional, motor, art, and language. Children also doing Physical activities such as: rolling, jumping, sliding, spinning, walking and running are believed to be a means of stimulating the sensitivity and sensory system for early childhood (Khasanah, Prasetyo, & Rakhmawati, 2012)

The digital generation likes playing with gadgets more than playing with friends. The use of gadgets among young children, can be used as a learning tool or media and open features that can help in the learning process of children. Children will be focused on positive activities and get two benefits at once, namely learning to play through. Gadgets have various applications, one of which is games. Games is one of the applications used to play.

The positive impact of using games applications includes children being able to recognize computer technology, learning and accustomed to following directions and rules, practicing to solve problems and logic, training motor nerves and spatial skills, establishing communication between children and parents when playing together, and providing entertainment for child. In fact, patients suffering from certain diseases can make game play as a healing therapy (Henry, 2011). Beside that, game could affect not just the entertainment industry but also the

government and corporate organizations that could benefit from the training, simulation, and education opportunities that serious games provide (Zyda, 2005).

In addition to positive effects, games also have negative impacts that we must know and minimize. These negative effects include eye health in children that triggers poor vision, impaired physical development due to infrequent physical activity, social development, problems with children sleep patterns, brain development related to the use of digital media, difficulty concentrating, decreased learning achievement and can delay language development in children. besides that children can also be addicted to the use of gadgets. A research also found that exposure to violent video games increases physiological arousal and aggression-related thoughts and feelings, playing violent video games also decreases prosocial behavior (Anderson & Bushman, 2001).

After describing the negative impact of using digital technology, we as parent or closest people cannot forbid children to play. Fadilillah revealed that play is a very important activity for children, because when we forbid children to play there will be impacts that arise such as deadening a child heart, disrupting his intelligence and damaging the rhythm of his life. If the needs of play in children are not met, the development process in children will be disrupted. we can do is to assist children (Fadilillah, 2017). Parents must know the functions and effects of using digital media, directing children to use digital media devices clearly and no less important is to choose positive gaming applications for children.

Based on the description above, we need knowledge for parents and the general public about what games are good for children and not good for children to play. Therefore the author wants to analyze digital games in early childhood by examining 50 games based on Android and iOS.

Research Method

This research was conducted from April to June 2018 at the UPI Campus in Purwakarta, West Java. This study research used a type of descriptive research with qualitative and quantitative research approaches. Researchers want to

analyze more deeply about digital games for early childhood. In this analysis research will analyze 30 android based games.

The instrument used in this study was the observation technique with the Ceklish Instrument. Observation in a study is defined as focusing on an object by involving all the senses to obtain data (Aedi, 2010). The instruments used in observation can be in the form of observation guidelines, tests, questionnaires, picture recordings, and voice recordings. Observer are the main role in using observation techniques. Observer must be observant in observing such as staring at events, movements or processes. Observing is not an easy job because human are influenced by their interests and tendencies. In the process of observation the observer must be objective in both words and observations.

Result and Discussion

Based on the results of exploration, games for young children are easily accessible in the playstore and are generally offered free (although in the end there is offered to switch to pro games). Free games usually contain a lot of advertisements if the device used is connected to internet. Whereas games without ads usually only provide a few levels of the game to be played for free. To increase the level of the game, users must pay. Here are the games for children under review:

Tabel 1. Digital Game Description

No	Game Name	OS	Age	Rating	Developer	Cost
1	World of Peppa Pig	Android	3+	35MB 4,0*	Entertainment One	Free
2	Garden Game for Kids	Android	3+	26MB 4,3*	Bubadu	Free, contains add, in app purchase
3	Animals Puzzle For Kids	Android	3+	30MB 4,2*	RTL DISNEY Fernsehen GmbH & Co. Kg	Free, contains add, in app purchase
4	BLOCK PUZZLE	Android	3+	14MB 4,4*	Hua Weiwei	Contain Ads
5	POLI JOB GAME	Android	3+	85MB 4,2*	KIGLE	Free, contains add, in app purchase
6	Marbel	Android	3+	21MB	Educa Studio	Free

No	Game Name	OS	Age	Rating	Developer	Cost
	Alphabet			4,2*		download/Pay for Next Level
7	Baby Panda's Farm	Android	3+	60MB 4,6*	Babybus Kid Games	Contain Ads
8	Baby Panda Chef	Android	3+	4,1* 22MB	Babybus Kid Games	Contain Ads
9	Kidzooly – Preschool Learning Rhymes & Activities	Android	3+	4,4* 42MB	Kidszooly	In app purchase
10	Game Kids 4	Android	3+	4,3* 38MB	pescAPPs	Contain Ads
11	PRESCHOOL	Android	3+	4,1* 42MB	Spongeminds	Free, contains add, in app purchase
12	Game Anak Edukasi Hewan Laut	Android	3+	4,2* 18MB	Bamboo Cannon Studio	Contain Ads
13	Fireman Kids	Android	3+	4,4* 39MB	Bubadu	Free, contains add, in app purchase
14	Learning Colours	Android	3+	45* 28MB	GoKids	Free, contains add, in app purchase
15	Marbel Warna	Android	3+	4,2* 10MB	Educa Studio	Free, contains add, in app purchase
16	My Talking Pinocchio	Android	3+	4,1* 37MB	DigitalEagle	Free, contains add, in app purchase
17	Baby Touch Sounds	Android	3+	4,0* 24MB	Apps Quiz	Free, contains add, in app purchase
18	Secil (serial belajar si kecil) warna	Android	3+	4,3* 11MB	Solite Kids	Contains Ads
19	ABC Spelling	Android	3+	4,6* 29	RV AppsStudios	Free
20	GEA (Game Edukasi Anak) PAUD	Android	3+	43* 15MB	SekarMedia	Contains Ads
21	Baby Puzzle	Android	3+	4,3* 19MB	AppQuiz	Contains Ads, in app purchases
22	Kapten	Android	3+	4,6*	BabyBus Kids	Contains Ads

No	Game Name	OS	Age	Rating	Developer	Cost
	Bersih-Bersih Baby Panda			58MB	Games	
23	Magic Kinder	Android	3+	43* 217MB	Ferrero Trading Lus S.A	Free
24	FR Paket Edukasi Anak	Android	3+	3,4* 14MB	FR Media Edukasi	Contains Ads
25	Preschool ABC Free	Android	3+	3,8* 24MB	Sound House LLC	Contains Ads
26	Cooking Fever	Android	3+	4,5* 82MB	Nordcurrent Arcade	Contains Ads, in app purchases
27	Alphabet Puzzles for Toddler	Android	3+	3,7* 12MB	Edubuzzkids	Contains Ads, in app purchases
28	Drawing Vehicles	Android	3+	4,6* 8,5MB	UVTechnoLab	Contains Ads
29	ABC Kids	Android	3+	4,5* 28MB	RV AppStudio	Free
30	All in 1	Android	3+	4,2* 5,0 MB	RC Multimedia	Contains Ads

1. Preschool

The name of the game is PresSchool games. This is an educational game which is intended for early childhood before entering elementary school or is often called pre-school. In this game there are several parts of the game, such as the game to recognize letters and not only introduce letters but fine motor skills children are also trained by imitating existing letters and then from the letter will come out a word for example "A for Aple" and so on.

Then there are various kinds of puzzles, there are animal, flower and other puzzles. Ranging from simple puzzles to difficult. There are also familiar objects such as fruit, animals, dates, shapes, environment and others. There is also a game to recognize the color of children can color pictures and make pictures to hone the child's creativity in drawing.

The advantages of this game are as follows:

1. This game is appropriate and in accordance with early childhood learning is not too difficult but also not too easy.
2. This game contains pictures and sounds that are good and clearly attract the

attention of children.

3. Provide clear guidance.

4. Sound settings can be adjusted using the volume buttons.

The deficiency of this game are as follows:

1. This game level is only up to level three and it's not too difficult for children.

2. The sound is clear but the English voice is displayed.

3. To continue to a higher level requires additional costs.

4. Frequent appearance of less important ads.

5. Rewards given are less attractive because only the words "congratulation"

Conclusion these games actually provide very good learning for children but are inseparable from the shortcomings that make these games less competitive with other games.

Figure 12. Preschool Game User Interface

2. ABC Kids

ABD kids is a game application that can be used as education for early childhood, so children can learn while playing. This game is made by the developer of AppStudios RV, which has a more specialized concept in educating, studying children to recognize letters in English and associating, and introducing objects, fruits, animals in the environment around children. In this game there are no other game concepts that make it more focused in one discussion.

In this ABC Kids game children can develop aspects of cognitive development, learn children to know the letters in English, can distinguish letters from one another. In addition, even the language aspects can be seen clearly pronounced in the game that can be imitated by children. And also the development of fine motor aspects of children, when instructed to color letters, or pair letters with one another.

The advantages of this game are as follows:

1. Can develop aspects of cognitive development, language and fine motor skills in children.
2. Introducing various types of letters.
3. Introducing various colors, objects, and animals in the surrounding environment.
4. In game animation there is a form of rewards in the form of toys or expressions or behavior of the animated characters.
5. Interesting game with good features.

While the disadvantages of this game can only provide one concept discussion in the game. The point is to only focus on introducing letters, there should be other forms of game content that are educated for children.

Figure 1 User Interface Game ABC Kids

Discussion

Of the 35 games analyzed, it was generally developed by developers who have an interest in education. But there is no far-reaching analysis related to the

background or competence of the developer. Based on a review of the name of the developer has characteristics that indicate that the developer has an interest and focus in the field of education.

Almost all the games analyzed are graphic games and adverts are placed inside. If not, the application is an in app purchase, which contains items that must be paid if you want to play in full. This tends to irritate children when playing. Especially if these ads appear too often, players will tend to be upset. But this is very reasonable for developers to do, because every developer needs time, energy and thoughts that have been devoted to building a game. The developer will get income from these advertisements as income. For certain games without advertising, the developer will charge a price for prospective players.

Protection of children personal data in the analyzed game is quite guaranteed, this is because before installing the game on the player device must enter data such as email or social media accounts. As it is known that to create an email account and social media account, age verification is needed, so that it is not possible for early childhood. Therefore, protection of children data will remain safe as long as parents do not provide personal data when installing games.

In general the games marked with 3+ are suitable for children over the age of 3 years and in accordance with aspects of child development. The most prominent aspects in these games are physical aspects of fine motor and cognitive mathematics, science and language development. This finding shows that social emotional aspects, art is very rarely found.

Games that have been analyzed do not need other tools to play them. Players only need to download via Playstore and then install it without having to use a flashcard or worksheet. Some games that use spreadsheets are usually augmented reality or virtual reality games. For augented reality games are still possible to be played by children, but for virtual reality games for children should be avoided. In general, the game applications analyzed are only played by one person, not connected to the internet for collaboration with other children. The role of parents is still needed for children to achieve the goals of the game and provide time limits for children to provide opportunities for children to play outdoor, eat, sleep and other activities. All of these in line with a research result

suggest that instructional technologies should be used in early childhood inquiry education to (a) enrich and provide structure for problem contexts, (b) facilitate resource utilization, and (c) support cognitive and metacognitive processes. Examples of existing and hypothetical early childhood applications are provided as we elaborate on each role (Wang, Kinzie, McGuire, & Pan, 2010).

In terms of size, there are no game applications analyzed in this study that require a large size of storage space, an average size between MB, with a star rating above 4. Thus in general players who have downloaded and played applications are satisfied with the games that have been installed. Following are descriptive statistics related to the rating and size of the game that has been analyzed.

Table 2 Data Size and Application Ratings

No	Size (MB)	Rating (*)	No	Size (MB)	Rating (*)
1	35	4	16	37	4,1
2	26	4,3	17	24	4
3	30	4,2	18	11	4,3
4	14	4,4	19	29	4,6
5	85	4,2	20	15	4,3
6	21	4,2	21	15	4,6
7	60	4,6	22	19	4,3
8	22	4,1	23	217	4,3
9	42	4,4	24	14	3,4
10	38	4,3	25	24	3,8
11	42	4,1	26	82	4,5
12	18	4,2	27	12	3,7
13	39	4,4	28	8,5	4,6
14	28	4,5	29	28	4,5
15	10	4,2	30	5	4,2
Average	20	4,1			
Max	217	4,6			
Min	5	3,4			

Frequency distribution according to size is shown in the following diagram:

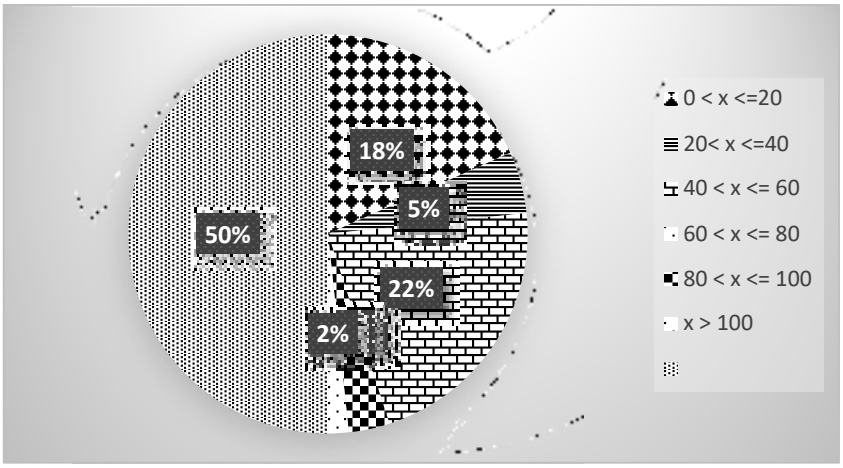

Figure 28. Application Size in MB

Based on the picture above, half of the randomly analyzed digital games for children are available in playstores measuring between 1-20 MB. While the smallest percentage of games for children are more than 100 MB in size. This is possible because to develop games for young children is not necessary to play a very complex game. Of the games analyzed, none of them developed all aspects of early childhood development, but only a few aspects, especially those related to fine motor and cognitive. Application developers will also consider the wishes of users who usually have this size consideration in installing applications. Although the current device is very possible to install a fairly large application, in Indonesia users are usually still thinking twice about installing a large application, because they have to download it, the price to pay and the space on the device to be used.

Figure 29 Frequency Rating of Application

The distribution of application ratings can be seen in Figure 29. Based on the pictures it appears that children's game application actually have a pretty good

rating. Of the 30 application analyzed, only 3 games, rated below 4 *. The highest ratings are 4.2 and 4.3 with the excellent category.

The correlation coefficient between application rating and game application size shows a score of 0.14, which means that the relationship between game application size is very low for game rating. Thus the application file size that shows the complexity of the application does not make game user satisfaction increases. This is shown by the drawing vehicles game which measures 8.5MB but has a satisfaction rating of 4.6 *, and Magic Kinder with a satisfaction rating of 4.3 *.

Conclution

After analyzing 30 applications for early childhood games that are circulating and are widely downloaded on Playstore, here are the conclusions the author conclude that, in general, the quality of 30 digital game applications in Play Store is of good quality, and aims to develop several aspects of early childhood development at once. The most developed aspect is the cognitive aspect, be it from mathematics or science, language. Problem solving ability is also the goal of several digital games that have been analyzed. In terms of appearance, the average digital game that has been analyzed has a good and attractive graphic design and is felt suitable for early childhood. Character design, color and composition can provide stimulation for children to attract interest in playing the game. Some of the most common deficiencies arising from the application are the presence of advertisements that tend to interfere in the game or have to pay, the availability of several kinds of languages. From the digital game rating, it shows an average score of 4, which is very good with an average application size of 20MB.

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THE ROLE OF LEARNING ACTIVITIES STUDIO (SKB) AS A UNIT OF NONFORMAL EDUCATION IN BUILDING THE QUALITY OF HUMAN RESOURCES

Didi Tahyudun[1], Imron A Hakim[2], Yanti Karmila Nengsih[3], Shomedran[4]

[1]Faculty of Teacher Training and Education, Sriwijaya University
diditahyuddin@fkip.unsri.ac.id
[2]Faculty of Teacher Training and Education, Sriwijaya University
imronahakim@gmail.com
[3]Faculty of Teacher Training and Education, Sriwijaya University
yantikarmila@gmail.com
[4]Faculty of Teacher Training and Education, Sriwijaya University
Shomed16ut@gmail.com

ABSTRACT

The basic purpose of this research is to find out and describe the role carried out by the Learning Activity Studio in building the quality of Human Resources, programs that are run as well as inhibiting and supporting factors in efforts to build the quality of Human Resources. This research uses a qualitative approach with descriptive methods by collecting data using interview, observation and documentation techniques. While the data analysis is done by data reduction techniques, data presentation and conclusion making and the validity of the study using triangulation techniques. The results of the research illustrate that the Banyuasin District Learning Activity Studio has carried out several roles with various program activities in building the quality of human resources including running education, training, skills, and community empowerment programs. Some inhibiting factors that occur are the surrounding social conditions that are less supportive and less enthusiastic about the activities carried out. While the supporting factors found include the availability of adequate facilities and supporting facilities, there is government support and a lot of cooperation with various community institutions. In the future, the Learning Activities Studio unit can be an example for other institutions that run non formal education programs and continue to improve performance by running various existing programs so as to realize quality and competitive human resources.

Keywords:
The Role of Studio Activities Learning, Nonformal Education, Quality of Human Resources.

A. Introduction

Human resources are the potential contained in human beings to realize their role as adaptive and transformative social beings who are able to manage themselves and all the potential contained in nature towards the achievement of the welfare of life in a balanced and sustainable order. Competent and quality human resources are needed to support productivity and activities so that the goals of the company or an organization can be achieved perfectly. HR is one of the key factors in economic reform, namely how to create quality, highly skilled and highly competitive human resources in global competition.

Hasibuan (2003: 204) states that human resources are the first and foremost element in every activity carried out. To achieve quality human resources quality a learning and learning process is needed. Through the learning process the community gradually acquires these abilities. With this learning process the ability/power is obtained from time to time. Thus it

can accumulate sufficient ability, to deliver their independence. Related to HR when viewed from the workforce figures in the city of Palembang it is known that the labor force participation rate is 62, 27 and the unemployment rate is 8, 20 (https://palembangkota.bps.go.id/publication). While the Banyuasin District 2018 work participation rate of 66.25 and the unemployment rate of 3.65 (https://banyuasin.bps.go.id/publication).

Educational unit outside of school education is a place of various learning activities needed by the community according to their needs with a community based education approach. Non-school educational institutions as a source of information contain various types of learning programs that are useful especially in improving abilities in the field of skills oriented to the development of local human resource potential through community-based education approaches to improve community knowledge, skills and attitudes in the economic, social and social fields. culture.

The role that is owned by out-of-school education units in the framework of developing human resources for the community, among others, is as a place for the implementation of learning activities in the community which of course has different characteristics, then a forum for active participation for community members in learning activities. In addition, non-school education units also have many roles in community empowerment efforts that need to be studied in more depth. With an in-depth study in the form of research, what role can the nonformal education unit have in formulating later in improving the quality of human resources.

Studio Learning Activities (SKB) is one of the education units outside of school education that provides educational services and skills to improve the quality of human resources. Various programs are carried out such as life education, equality education, youth education, Empowerment of women or other forms of education that can be accessed by the wider community. The existence of the SKB is very necessary for the community with the distribution of SKB in every Regency/City in the provinces in Indonesia, including in South Sumatra. This condition then makes researchers continue to conduct studies related to the role of non-school education education units in improving or building the quality of human resources. This condition needs to be seen and described the functions and tasks as well as the supporting and inhibiting factors of this SKB unit in performing the role of building the quality of human resources.

B. Research Methods

The research approach used in this study is a qualitative approach with a descriptive qualitative method of the phenomenon of the activities of each program in the Joint Decree in an effort to improve the quality of human resources. This research was conducted on aspects of the role of the Learning Activities Studio in southern Sumatra precisely in Banyuasin SKB.

The choice of location is based on the interests of researchers and the consideration of the distribution of SKB in South Sumatra and other more objective considerations for examining the role of the non-school Education units. As for the subjects of the research are the SKB Managers teacher / tutors / instructors and learning citizens or the community and partners from the SKB institutions. While taking data sources or samples in this study using purposive sampling techniques. The sample in this study is the Banyuasin SKB.

Data collection techniques used in this study are in accordance with the needs in data collection, while the techniques used are; observation, interview and study documentation. Observations made by researchers to see naturally the activities carried out by research subjects.

Data analysis conducted in this study is the analysis model of Miles and Huberman (in Sugiyono, 2010: 337). Activities in qualitative data analysis are carried out interactively and take place continuously until it is complete, so that the data is already saturated (even though added data sources cannot provide new information). Activities undertaken in data analysis are data reduction, data presentation and drawing conclusions.

C. Results and Discussion

A. Discussion of Research Results

1. The Role of the Banyuasin Joint Decree in Building the Quality of Human Resources

   The role of the Banyuasin Learning Activities Unit (SKB) in this case is implemented through the leadership of the institution in carrying out its duties to build the quality of Human Resources. The intended role is a concept of the duties of a leader in an organization with indicators of roles as individuals, the role of policy makers and the role in the delivery of programs or information. In the Banyuasin SKB, the head of the institution has the task and responsibility for the development, progress and operational activities in the SKB.

   As the personal role of the data collected, the chairperson of the SKB has carried out his role including controlling, coordinating, being responsible for activities and taking policies that are beneficial to existing institutions and human resources. Then in an effort to improve and build the quality of Human Resources, the SKB through existing leaders has made various efforts by carrying out work programs that benefit the community and fostered citizens in the Banyuasin SKB. This program can also be accessed by the community in an effort to provide knowledge and skills for them, so that in the future the community is more qualified and quality so that it is beneficial for life.

   The role of the SKB through the leadership as well as all the existing staffs so far has been carrying out a program of activities in this case grouped into three general aspects including knowledge-giving programs through teaching, training programs and

empowerment/ development programs. Seen from the education program in question is the equality and literacy education program and other forms of education. In the Banyuasin SKB there is an equality education program that continues to this day. This program is aimed at the general public who need knowledge and need further education, so that if they have continued their education they have the opportunity to get a more decent life.

Other roles of creating and running training programs include conducting training or sewing courses for community members. The training activities through this course are real efforts made in building the quality of human resources by providing skills and provisions for them when in the community, so that later the certificate received can be used to find work or open their own business with the skills they have. Other efforts to improve the quality of human resources include running community empowerment and development programs with the Vocational Village program, Entrepreneurship and Life Skills Program. This activity is very useful for the community so that later they get the knowledge and skills that are useful for them.

Related to these conditions as the statement of Dougherty & Pritchard (1985) in Bauer (2003) suggests that the relevance of a role will depend on the emphasis of that role by the assessors and observers on the product or outcome produced. In this case, the strategy and structure of the organization are also proven to influence the role and perception of the role or role perception. In brief, the data above can be concluded that there are many work programs carried out by the Joint Decree. This is the role that SKB Banyuasin has done in its efforts to build the quality of Human Resources. This work program has been carried out by the institution in an effort to provide understanding and skills of community members and residents learning the Banyuasin SKB unit.

2. Activity program at the Banyuasin Learning Activity Studio

   The existence of non-formal education is related to the existence of these educational institutions. One of the educational institutions is the Learning Activity Studio (SKB). The Learning Activity Studio (SKB) is a Non-formal Education Unit that carries the task of developing non-formal and informal models at the Regency / City level (Anonymous, 2013).

   In contrast to the Community Learning Activity Center (PKBM) which is a community-formed educational institution, which is managed and developed by the community itself, SKB is a government agency under the Education Office. The Joint Decree generally has the task of piloting non-formal education programs, developing learning materials for local content in accordance with the policies of the kabupaten / kota education office and the local potential of each region. The Minister of Education and Culture Decree of the Republic of Indonesia, Number 023 / O / 1997 states that the main task of the Joint

Decree "Carry out the making of pilots and control the quality of the implementation of Out-of-School Education programs, based on the technical policies of the Director General of Out-of-School Education, Youth and Sports". Some non-formal education programs that are generally implemented in the SKB include PAUD, Equality education program, life skills programs, and programs to improve the quality of non-formal education personnel.

Its role in realizing quality resources, SKB Banyuasin undertakes various programs of activities carried out with the target of the general public or the community around the institution as Human Resources who are the target of the program. The program is run continuously so that it really gets maximum results. The types of programs implemented in the Banyuasin SKB are quite diverse, each year there are several programs that are run. In an effort to build the quality of human resources, it is implemented through a program of activities needed and can be felt directly by the community. With the aim is that there will be changes for the community, especially relating to the level of quality and performance of the community.

The program is the first element that must exist for the creation of an activity. Several aspects of the program are made, mentioning that in each program the following are explained: 1) The objectives of the activities achieved, 2) Activities taken in achieving the objectives, 3) Rules to be followed and procedures to be passed, 4) Estimated budget needed 5) Implementation strategy. Through the program all plans are more organized and easier to operate.

If you see from the results of the research data that the Banyuasin Joint Decree runs a variety of programs in improving the quality of human resources, the intended program is distinguished in three aspects, namely the program relating to increasing knowledge, institutions and community empowerment. There are equality education programs, life skills education, entrepreneurship programs, vocational village programs, skills programs and so on. All these programs are carried out as a leadership effort and an institution in an effort to help improve the quality of human resources or the community participating in the programs offered. So that after completing the program the community activities are expected to obtain knowledge and skills that are useful for them in daily life or even useful for improving welfare by utilizing the skills acquired.

3. Supporting and inhibiting factors of Banyuasin SKB in building human resources quality.

   In this aspect, there are several supporting factors that are the excess of the Banyuasin SKB unit in carrying out its programs to build the quality of human resources. There is some support including adequate facilities and infrastructure, adequate community and local government support, adequate and competent Educators and Education Personnel in accordance with their qualifications, and the existence of Partner Institutions to establish

cooperation in implementing programs. With this support certainly affects the success of a program that is run.

On the other hand, the efforts made by the Banyuasin SKB institution in an effort to improve the quality of Human Resources are still obstacles that have been felt so far as there are still some people who do not welcome the programs offered, not all skills are demanded by the community even though it has been through a needs analysis the community, the majority of people still think Instantly, the marketing of the products of the units / groups has not been maximized so that the community does not yet believe, there is still a lack of interest in learning society especially in equality education programs and there are still people who do not feel the need for education or skills.

The Learning Activity Studio (SKB) has the task of carrying out a program of learning activities outside of school, youth and sports both for learning resources (tutors or facilitators) and for the community. In this connection the purpose of the function as stated in the Decree of the Minister of Education and Culture No. 023/0/1997 dated February 20, 1997. The main task of the Learning Activities Studio (SKB) is as a pilot and quality control of the implementation of educational programs outside of school, youth and sports.

It can be concluded that in the implementation of the Banyuasin SKB unit in carrying out various programs in an effort to build the quality of human resources there are still supporting and inhibiting factors. In general, these two factors can still be controlled by the institution. The inhibiting factor that has become an obstacle so far that is felt is that there are still many people who think instantaneously to progress or to prosper so that they are a little less enthusiastic about the presence of the programs offered. While the supporting factors so far in the Banyuasin SKB are really felt including the current facilities are very supportive, the government is very concerned and there is cooperation with partners in running the program.

4. Conclusions

From the results of the research data outlined, the researcher can conclude in general about the role of Banyuasin SKB in the effort to build or improve the quality of HR has been going well with a variety of existing documents. In detail the aspects studied can be summarized as follows:

a. The role of Banyuasin SKB

   The role of the Banyuasin SKB unit through the leadership in building the quality of human resources has been done quite well by bringing the SKB institution to carry out its role in the community. SKB institutions through the leadership in carrying out programs such as roles in decision making that are concerned with the needs of the

community. SKB in this case as a forum for community learning activities with programs that are run, certainly has a pretty good role to improve the quality of human life. As a center for community learning activities, SKB provides its role by providing programs such as training, courses, education, empowerment and development and other programs.

b. Activity program at the Banyuasin Learning Activity Studio

Like a professional institution, the Banyuasin Joint Decree has a systematic and structured work plan. The types of programs implemented in the Banyuasin SKB include PAUD programs and the like, basic literacy, independent business literacy, equality education, various courses, PKW programs, Vocational Villages, PKH programs for making jumps and reading garden programs or reading corners.

c. Supporting Factors and Obstacles to Banyuasin SKB in Building HR Quality

There are several supporting factors including adequate facilities and infrastructure, adequate community and local government support, adequate and competent Teachers and Education Personnel, and the existence of Partner Institutions to build cooperation in the implementation of the program. With this support certainly affects the success of a program that is run. But then there are still inhibiting factors that have been felt like there are some people who do not welcome the programs offered, not all skills are demanded by the community even though it has been through an analysis of community needs, the majority of people still think Instantly, marketing the products of the units/groups have not been maximized so that people do not yet believe, there is still a lack of community learning interest especially in equality education programs and there are still people who do not feel the need for education or skills.

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THE IMPACT OF GOVERNMENT POLICIES, PARENTAL EDUCATION AND FAMILY ECONOMY ON GER

Samsul Pahmi, samsul.pahmi@nusaputra.ac.id
Primary School Teacher Education Department
Nusa Putra University
Jl No.21, Cibolang Kaler, Kec. Cisaat, Sukabumi Regency, Jawa Barat 43155 Indonesia
Telp. (0266) 210594; Hp. 085771220842; samsul.pahmi@nusaputra.ac.id

ABSTRACT

Indonesia is still not free from the problem of dropout rates, the value of the Net Enrollment Rate (NER) and Gross Enrollment Rete (GER) is still low. Several studies show that government policies and family economic levels have a great influence on the success of education, but researcher believe that parents' level of understanding of education is an important factor in the success of education. This study aims to determine the Effects of Government Policy, Parental Education and Family Economy to the low GER. Secondary data in this study were obtained from CBS Indonesia and the Data and Statistics Ministry Center 2017 and 2018. Instruments used to collect primary data were questionnaires given to high school class XII students in schools that were set up as samples and interviews were conducted with principals, parents' representatives, and related agencies. Data analysis was performed through linear regression with the results of all independent variables having a significant influence on the increase in GER. The results of the study will be used as a basis for determining solutions that can be used by policy makers and related parties in improving GER at the regency, provincial and national levels.

Keywords: GER; Policy; Economy; Education.

A. INTRODUCTION

1.1 Aims and research domain

Education is recognized internationally as a fundamental right (Heymann J., Raub A., Cassola A., 2014). People's welfare and community development (MDGs) must be realized through improving access, quality and equality in all aspects of education (UNESCO, 2012a). In Indonesia, the GBHN has mandated a development orientation that previously focused on economic and industrial development which only made humans a supporting instrument, now slowly must be changed to make humans as subjects as well as objects, because completing higher education has a very good impact on improving health, occupations, and one's income (Bossuyt N., Gadeyne S., Deboosere P., Van Oyen H., 2004; Chevalier A., Feinstein L., 2006; Crimmins E.M., Saito Y., 2001; Goldman D.P., Smith J.P., 2002; KhangY.H., Lynch J.W., Kaplan G.A., 2004).

One of the final goals of the state must be to invest in education to improve the living standards of its citizens with the assumption that an educated workforce is better at creating, propagating and adopting

new technologies, so as to produce good growth (Fulya T., 2013; Mankiw N.G., Romer, D. and Weil, D.N., 1992). In recent years the Indonesian HDI has experienced an increase, from 68.9 in 2014 to 70.79 in 2017 AND 104,507 senior high school students throughout Indonesia dropped out of school (UNDP, 2017). This fact shows that the education program that has been run in Indonesia has not been going well. Thus government support in terms of policy will greatly help increase the level of education participation (UNDP, 2010; Oreopoulos, P., 2005).

Table 1 Provisions with the highest number of dropouts (The central bureau of statistics of Indonesia, 2018)

Numb.	Province	Total
1	West Java	22.270
2	East Java	15.565
3	Central Java	11.249
4	Banten	4.858
5	DKI Jakarta	3.940

From table 1 it can be concluded that there are problems in implementing the 9 year compulsory education program, especially in the provinces in the table with West Java being the largest contributor to dropout students during the 2016/2017 period. In several provisions, there are still many districts or cities that have a fairly low GER value, even in some findings districts or cities that are equipped with geographical distance have many GER levels that are quite far away.

In some studies, students who are constitutionally guaranteed to have primary and secondary education have significantly higher school participation (Heymann J., Raub A., Cassola A., 2014). Other research also shows that children with low socioeconomic mobility characteristics have fewer opportunities for schooling and that children from wealthier households have a greater likelihood of schooling (Brown D.S., 1999). Parental education was also allegedly able to increase school participation (Brown D.S., 1999).

Based on the facts and and some related research, researchers see an interrelated relationship between government policy, education and the economy with success in completing education. So this research is focused on analyzing the Effects of Government Policy, Parental Education and Family Economy on the Low Gross Enrollment Rate (GER) of the senior high school level.

2. MATERIALS AND METHODS

2.1 State of The Art

At the level of government policy, the need for population facilities in rural areas and the existence of regulations that require local governments to provide educational facilities for their citizens in a fair and balanced manner, can increase GER. The school aspect, namely the student teacher ratio and government policy, as well as aspects of regional characteristics, show the significance of GER and APS at all levels. This result becomes important for the government as a decision maker that both physical and non-physical development, in fact has a positive impact on development in the education sector. Those who are constitutionally guaranteed to have primary and secondary education have significantly higher NER (Heymann J., Raub A., Cassola A., 2014).

From the economic impact of related research, among others, shows (Gross Regional Domestic Product) GRDP has a positive and significant effect on the human development index, which means that GRDP will increase then HDI will also increase. In 2010, 71 million middle school-age youth did not receive formal education (UNESCO, 2012a). Ghana, Akyeampong et al. (2007) found that increasing education costs could reduce school participation rates for ages 13 and 16 years and ages 8 and 13 years. Jody Heymann (2014), found that school fees are one of the main obstacles to net enrollment rates and

gross participation, especially for children from low-income households. Children with low socioeconomic mobility characteristics have fewer opportunities to attend school and that children from richer households are more likely to enroll and stay in school (Brown K.H., et al,. 2002). As for parental education, the level of parental education has a significant influence on the opportunities of their children to get formal education (Brown D.S., 1999).

From these studies, the influence of economic levels and government policies must obtain a fairly broad assessment, the level of influence of parental education and government policy have not received a deeper assessment. So in this study, researchers wanted to know the collaboration of the influence of Government Policy, Parental Education and Family Economy on the low GER.

2.2 Framework

From these studies, the influence of economic levels and government policies have received quite extensive studies, but the influence of the level of education of parents and government policies have not received a deeper study. So in this study, researchers wanted to know the collaboration of the influence of Government Policy, Parental Education and Family Economy on the GER.

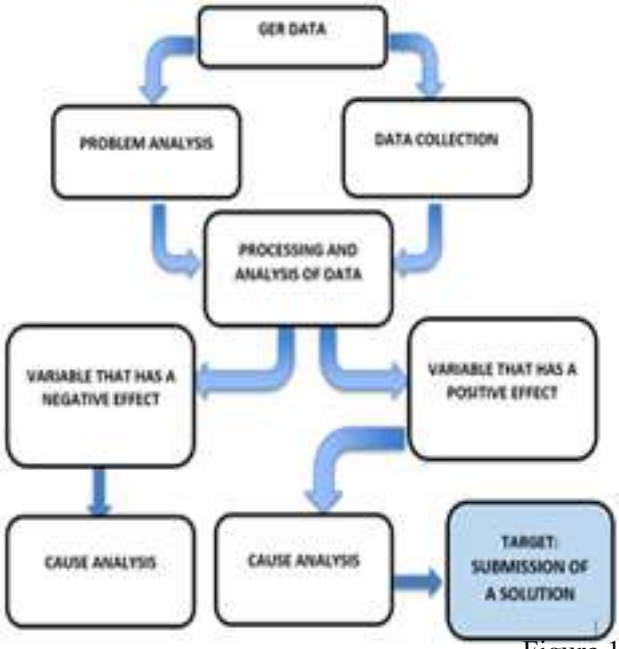


Figure 1. Framework

2.3 Method

2.3.1 Population and Sample

In this study took the population of all senior high school students. While the sample taken was third level students, school dropouts and parents in several areas that had a low level of school participation.

2.3.2 Research Data Collection Techniques

Some data collection techniques used in this study are as follows:

2.3.2.1 Documentation

In this case, data collection was conducted at CBS Indonesia (2017). Researchers collected secondary data on GER data on senior high school education.

2.3.2.2 Interview

Interviews were conducted with relevant government officials, parents and students. Interviews were conducted in person and through telecommunications media.

2.3.3.3 Questionnaire

In this study using a Likert scale questionnaire using two forms of question scale, namely the form of positive questions to measure positive scales, and the form of negative questions to measure negative scales. Positive questions are given a score of 4, 3, 2, and 1; while the negative question form is given a score of 1, 2, 3 and 4.

2.3.3 Instrument Testing Techniques

2.3.3.1 Test Validity Instrument Questionnaire.

The validity of the test is used to measure the validity of an evaluation tool. Validity measurement is done by finding the validity coefficient of each item using the Pearson product moment correlation formula. The validity criteria used as a reference are the criteria issued by the Department of Labor Administration and U.S. Employment Training (1999).

2.3.3.2 Questionnaire Instrument Reliability.

Reliability testing to determine the degree of reliability of evaluation tools. The formula used to find the reliability coefficient of the description form is known as the Alpha Formula. The reliability coefficient criteria according to Guilford (The Department of Labor Administration and U.S. Employment Training, 1999).

2.3.4 Data analysis

2.3.4.1 Questionnaire Data Analysis.

Quantitative data includes pretest and posttest data obtained after conducting research. Pretest and posttest data analysis was performed using SPSS 21.0 for Windows and SPSS Modeler.

2.3.4.2 Normality Test.

Data normality test aims to determine whether the data is normally distributed or not. This is to prove that the data used are normally distributed, the results of this analysis will then be compared with the critical value. The basis for decision making can be done based on probability (asympiotic significance), namely: If the probability is > 0.05 then the data is normally distributed.

2.3.4.3 Hypothesis Testing.

Two-means difference test aims to find out the significant difference between the average of the X variable against the Y variable from the results of the questionnaire, interview and secondary collection. By using t-test and testing criteria, namely: If the probability <0.05 then there are differences.

2.3.4.4 Coefficient of Determination

The coefficient of determination is a measure of Godness of Fit which explains whether the linear regression line matches the observational data. By using SPSS software, drawing conclusions to determine the percentage of the effect of variable X on Y refers to the value of Adjusted R Square x 100%.

2.3.4.5 Test F

F test is used to determine whether the independent variables simultaneously have a significant effect on the independent variables. The degree of trust used is 0.05. With the conclusion, if the value of sig. <0.05 then simultaneously variable X significantly influences the variable Y.

2.3.4.6 Multiple Linear Regression Test.

Regression Analysis is one of the data analysis techniques in statistics that is often used to review between several variables and predict a variable. Multiple linear regression is one hypothesis test to determine the effect of the independent variable (independent) on the fixed variable (dependent). The multiple regression equation used is:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + \cdots + b_nx_n + e$$

3. RESULTS

3.1 Data Analysis

3.1.1 Test Validity Instrument Questionnaire

The questionnaire that was tested on respondents was a questionnaire about the financial support of parents towards the sustainability of student education by 8 statements. The number of questionnaires was distributed as many as 120 questionnaires to parents of students who were still in school or who dropped out of school and as many as 89 respondents who gave responses. The low participation of respondents

occurred in the parents of students who dropped out of school as many as 16 out of 42 respondents who gave responses while for parents of students who were still in school there were as many as 73 out of 78 who gave responses. The data processing results of the trial instrument as shown in Table 2 below:

Table 2 Test Results of Questionnaire Validity

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	21.4516	16.989	.485	.809
2	21.0645	16.262	.576	.797
3	21.1935	16.361	.563	.799
4	21.0645	17.596	.424	.816
5	21.5161	17.325	.519	.806
6	21.5484	13.656	.692	.779
7	21.4839	15.258	.725	.775
8	21.1613	17.006	.391	.823

From the test results of the questionnaire with n = 89 and Df = 87 obtained r table = 0.208 it can be seen that the r count (Corrected Item-Total Correlation) is entirely greater than r table so according to the analysis that all items in the questionnaire are declared valid with criteria Validity level as in table 3 follows:

Table 3 Criteria for the Level of Validity of the Questionnaire

Numb. of Item	Validity Value	Interpretation
Item_1	0.485	Very Beneficial
tem_2	0.576	Very Beneficial
tem_3	0.563	Very Beneficial
tem_4	0.424	Very Beneficial
tem_5	0.519	Very Beneficial
tem_6	0.692	Very Beneficial
tem_7	0.725	Very Beneficial
tem_8	0.391	Very Beneficial

3.1.2 Questionnaire Instrument Reliability

The reliability test was carried out to determine the level of trustworthiness of the overall questionnaire instrument using the Cronbach Alpha formula with the help of SPSS. The reliability test in this study can be seen in table 4 with a reliability coefficient of 0.822 which shows that the questionnaire instrument has a good reliability value.

Table 4 Results of the Questionnaire Reliability Test

Cronbach's Alpha	N of Items
.822	8

3.1.3 Hypothesis Testing

To partially determine the effect of all variable X (Government Policy, Education Level and Economic Level of Parents) on Y variable (level of educational success), a t-test was conducted. From the results of tests conducted, it can be seen that the policy variables X1, X2 and X3 are 0.000, 0.019, 0.041, respectively. with a confidence level of 0.05 (95%) it can be concluded that the entire value of Sig. variable X <0.05 which means partially has a significant effect on the Y variable.

Table 5 Hypothesis Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	-.824	.283		-2.914	.005
X1	.193	.048	.484	4.018	.000
X2	.150	.062	.224	2.422	.019
X3	.306	.146	.234	2.095	.041

a. Dependent Variable: Y2

4.1.4 Determination coefficient

Determination Coefficient Test is a further step to find out the percentage of the effect of the independent variable on the dependent variable and the influence of other factors not examined on the dependent variable.

Table 6 Determination Coefficient Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.884[a]	.782	.771	2.84634

a. Predictors: (Constant), X3, X2, X1
b. Dependent Variable: Y1

In table 6 the coefficient of determination (R Square) value of 0.771 or (77.1%) is obtained. This shows that the percentage of influence of government policies, parental education and the economic level simultaneously has an effect of 77.1% on the success of children's education at the senior high school level. From these calculations it can also be calculated that there are still other factors involved in the success of education that are not included in this research variable with a percentage of 22.9%.

3.1.5 Test F

In the t test, the Hypothesis test shows that there is a significant influence between variable X on the Y variable partially / separately so that in the continuation of the F test it can be concluded that simultaneously the constant variable and variable X (X1, X2, X3) have an influence significant for the Y variable as shown in table 4.7 there is a Sig. at 95% confidence level is 0.000b <0.05.

Table 7 Anova Test Results F

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	74.373	3	24.791	46.875	.000[b]

Residual	30.675	58	.529		
Total	105.048	61			

b. Predictors: (Constant), X3, X2, X1

3.1.6 Multiple Linear Regression Test

Based on table 7, the regression formula can be obtained as follows:

From the multiple linear regression formula, it can be interpreted into several important parts, namely:

3.1.6.1. Constant (Constant)

The constant value is a value that is assumed to be a permanent effect which if all the independent variables (X1, X2, X3) do not support or have a value of zero (0) then it can be ascertained the value of the dependent variable (Y) is the constant value itself which is -0.824 ≈ - 1 Referring to the classification of data processing, namely: 0 = never attended senior high school (only until graduating junior high school / equivalent), 1 = class X, 2 = class XI and 3 = class XII, then the constant value -1 means that the child can be predicted only up to grade VIII junior high school.

3.1.6.2. Government Policy (X1) towards (Y)

The coefficient value of Government Policy for variable X1 is 0.193. This implies that each increase in value of one unit of Government Policy (from a maximum score of 7) then the variable (Y) will increase by 0.193. From the coefficient value can be calculated if the value of the Government Policy variable gets a maximum score of 7 then assuming the other variables do not support / have a value of 0 (zero) then the value of Y is in the range 0-1 means that the average student does not finish class X Senior high school which causes Government Policy variables can not stand alone on the success of completing Senior high school student education.

3.1.6.3. Parent Education (X2) towards (Y)

The coefficient value for the X2 variable is 0.150. This implies that each increase in the value of Parent Education one unit (from a maximum score of 7) then the variable (Y) will increase by 0.150. From the coefficient value can be calculated if the value of the Parent Education variable gets a maximum score of 7 then assuming the other variables do not support / value 0 (zero) then the Y value is in th range 0-1 meaning that the influence of Parent Education is the same as the effect of Government Policy, where students The estimated average is not until completing class X Senior high school which causes the Parent Education variable also cannot stand alone on the success of completing Senior high school student level education.

3.1.6.4. Family Economy (X3) against (Y)

The coefficient value for the X3 variable is 0, 306. This means that each increase in the value of Parent Education one unit (from a maximum score of 7) then the variable (Y) will rise by 0, 306. From the coefficient value can be calculated if the value of the Economic variable Families get a maximum score of 7, assuming the other variables do not support / have a value of 0 (zero) then the Y value is in the range 1-2 meaning the Family Economy variable is slightly better than the other variables and the student is predicted only to finish class XI Senior high school cause the Parent Education variable also cannot stand alone on the success of completing Senior high school student education.

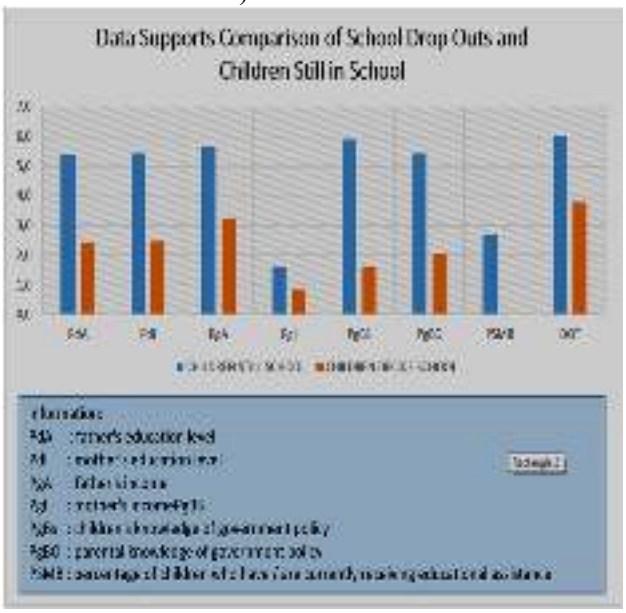
4. DISCUSSIONS

4.1 Discussion

4.1.1 General Conditions of Education in Indonesia

The Indonesian Ministry of Education's Data and Statistics Center Report for the 2017/2018 school year shows that 104,507 high school students have dropped out of school (Data Center and Education and Culture statistics, 2018) at the same time has decreased to 80.68 in 2018 where in 2017 the Indonesian GER for senior high school level is 82.84 with an average length of Indonesian study of 8.58 years or equivalent to VIII junior high school (The central bureau of statistics of Indonesia, 2018).

Data collection was carried out through questionnaires and interviews conducted with students who were still in school, students who had dropped out of school, parents of students who were both still in school and those who had dropped out of school, to representatives of teachers and school principals obtained the results as in graph 1. From graph 1 Interpretation of each item variable causing the success of children's education both aspects of government policy, parental education and family economic level shows that students who drop out of school have low carrying capacity of all aspects with an average score of 4.8 for children who are still in school and 2.1 for children who have dropped out of school (the ideal maximum score is 7).



Graph 1 Comparison of Supporting Factors for Senior High School Success

4.1.2 Effect of Government Policy on Gross Enrollment Rate (GER)

Based on the results of hypothesis testing for Government Policy variables it is known that there is a significant effect of the Government Policy Influence on Gross Enrollment Rate. Where an increase in budget matters, socialization and mechanisms for providing assistance in the education sector will have an impact on increasing gross enrollment rates at an equivalent level to senior high school, including physical and non-physical development by the government having a positive impact on improving outcomes in the education sector.

From the data collected in the study, it turns out that parents, especially students who have dropped out of school, do not really know about the existence of government assistance either through assistance in the form of money, scholarships or other types. This also goes straight with the average statement of parents of students who are still in school, showing that even though they receive assistance from the government financially, it is still far from enough for the overall cost of education due to various types of expenses such as: fees charged by schools which are quite expensive ; operational money such as clothing, transportation money, books and student allowances.

Several programs that have been implemented, both in the form of government assistance through KIP (Smart Indonesia Card) / PIP (Smart Indonesia Program) or other types of assistance for children who are still in school and the opening of Open Schools for children who have dropped out of school so far have shown no a positive trend towards an increase in the GER percentage, as evidenced in the CBS Indonesia report, has decreased compared to 2017, from 82.84 to 80.68 (The central bureau of statistics of Indonesia, 2018).

At the same time, the Indonesian NER value has not shown a significant increase, from 2017 to 2018 only increased by 0.30 (60.37-60.67) so that it can be concluded that more than a quarter of children aged 16-18 in Indonesia are not in school.

From the above description data based on the results of the questionnaire, surveys, interviews and secondary data sources show that government policies addressing the problem of school dropouts have not shown a trend of success, this is also directly proportional to the policy regarding students who are going to / are taking high school also have not yet demonstrated success significant.

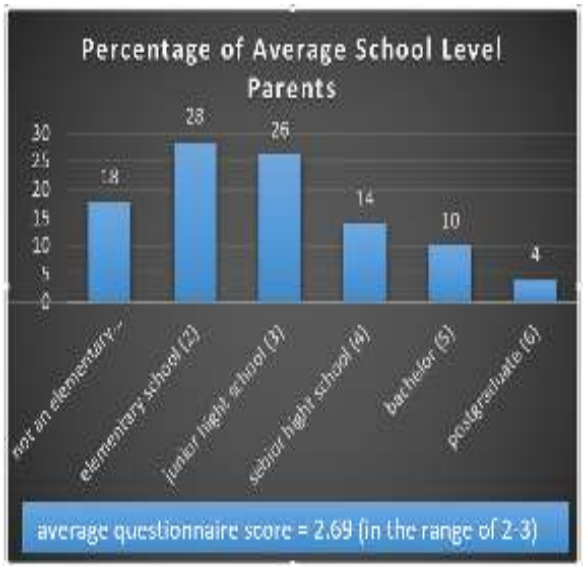
For the government policy sector, the results of this study found a number of crucial issues that should be of concern to the government given that the GER of senior high school percentage is still low, so the government must make efforts to accelerate the strategy. There are two basic findings in this research from the aspects of government policy towards GER namely: first, the ignorance of the community about policies through programs that are being or will be implemented by the government and second, the lack of benefit benefits felt by the community (parents and students).

These two things can be used as one of the focus included in the main focus of the development of a strategic plan to improve Indonesian education going forward. Education decentralization policy in the framework of regional autonomy must be strengthened, this can strengthen the synergy between the central government and the governments below and allegedly able to help overcome the problem of education (Ribot, Jesse, 2002).

4.1.3 Effects of Parental Education on Gross Enrollment Rate (GER)

Based on the results of hypothesis testing for Parental Education, it is known that there is a significant effect of Parent Education on gross enrollment rate (GER). Where the higher the education of parents will increase support for children's education so that it will directly increase the gross enrollment rate (GER).

Graph 2 shows the average education of parents of students who are still in school with students who drop out of school shows a significant difference, recorded an average questionnaire score of education for parents of children who are still in school 3.56 which ranges between classes X, XI and XII Senior high school while parents children who drop out of school have a score of 1.82 ie on average they have not completed primary school education.



Graph 2 Percentage of Average Old School Parents of Students.

This shows that parents have a vital role in the success of children's education. From the results of the parental support questionnaire, it shows that the higher the education of parents will show a number of positive things, including: a perception of the importance of better education values; increased financial support for education; and motivation and attention to every process of children's education goes better. In line with the results of other studies also showed the same results, namely parental support can improve student learning outcomes and achievement, among others: test scores, school grades, and children's behavior at school (Domina, Thurston, 2005).

The importance of parents 'education level as one of the success factors in children's education is one of the problems given the reality that occurred, where the findings of this study show the fact that the average education of students' parents has a score of 2.69 which means not completing junior high school / It is estimated that it is only up to grade VII or VIII Junior high school as in graph 2. In graph 2 also shows that the largest percentage is in elementary, junior high school and not in school with a total of 72% and only 28% have higher education than Junior High School. The findings in this study are not much different from the CBS Indonesia (2018), which is around the VIII grade of junior high school.

From the description of the aspects of parental education, researchers found two contradictory things, namely the influence of education which is very vital to the success of children's education with the problem of the reality of the average length of school that is still low.

4.1.4 Effect of Family Economic Level on Gross Enrollment Rate (GER)

From the results of statistical tests show that of the three variables studied, the influence of the Family Economic Level variable is the variable that has the greatest influence on the gross enrollment rate (GER). From the linear regression calculation shows the coefficient value of 0.306 so that if the family's economic level is at the maximum level, then even without the support of other variables, it is believed to be able to encourage the success of children in completing senior high school education. This is because the results of the questionnaire and interview respondents indicate that the average complaint of children and parents dropping out of school is due to the high costs incurred to complete education at the senior high school level, so financial support is a very dominant factor of other variables .

The magnitude of the influence of the family's economic level on the success of children's education is in line with research findings in several regions and even in other countries that find that the influence of the family's economic level influences student achievement and academic performance (Chandra, Ritu, and Shaikh Azimuddin, 2013; longinus Chukwudi, Odoh, 2017). From the results of research data collection and processing, the average monthly expenditure for senior high school children is around Rp. 623,000, this expenditure is only a monthly routine expenditure which includes pocket money and tuition fees. While for clothing, books and other incidental fees cannot be predicted, but it can be concluded that the routine expenditure of parents for one senior high school child is more than Rp. 623,000.

In Indonesia, the percentage of poverty is 9.82% with an average poverty line of Rp. 401,220 (per capita) (The central bureau of statistics of Indonesia, 2018). From the primary and secondary data of the study, it can be concluded that by referring to the routine expenditure of parents for one child of senior high school, it is certain that those included in 9.82% of poor families in Indonesia cannot meet the educational needs of children at the senior high school level even at the junior high school level.

From these data we can also conclude that many people who are not classified as poor are also unable to meet their children's education needs at the senior high school level because the gap between the poverty line and the monthly routine expenditure for one child at the senior high school level is still quite far away.

5. CONCLUSIONS

Based on the results of the analysis and discussion of the research it can be concluded that:

5.1 Government Policy, Parental Education Level and Family Economic Level have a positive and significant influence on the successful completion of senior high school education where the Family Economic Level has the most dominant influence among other variables;

5.2 Government policies so far have not shown a positive trend towards increasing the percentage of GER in Indonesia as evidenced by the number 82.84 in 2017 then dropped to 80.68 in 2018, at the same time government policies are also not able to have a major impact on students going to / still going to school at the senior high school level which is shown from the net enrollment rate (NER) result at 60.67. There are two basic findings in this study from the aspect of government policy towards GER, namely: first, community ignorance about policy through programs that are being or will be implemented by the government and second, the lack of benefit benefits felt by the community (parents and students);

5.3 Parental education shows a number of positive things, including: assumptions about the importance of better education values; increased financial support for education; and motivation and attention to every process of children's education goes better. In line with the results of other studies also showed the same

results, namely parental support can improve student learning outcomes and achievements, among others: test scores, school grades, and children's behavior at school. The main problem with this aspect is that the fact that the average level of schools is only up to VII or VIII junior high school;

5.4 The family's economic level is the most dominant aspect and has the most influence from other aspects; this aspect is the only aspect that can stand alone without the support of other aspects, so that if the family's economic level is at its maximum level, then even without the support of other variables, it is believed to be able to encourage the success of children in completing senior high school education. The fact of this aspect is that people who are not classified as poor (poverty line Rp. 401,220) are predicted to be unable to meet the educational needs of children at senior high school level (average expenditure per child Rp. 623,000 / month) because of the gap between the poverty line and routine monthly expenditure for one child at the senior high school level is still quite far away.

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UTILIZATION OF MOTION GRAPHIC VIDEO TO IMPROVE STUDENT ANALYSIS ABILITY

Taufik Yogaswara, yogaswarataufik@upi.edu
Cepi Riyana, cheppy@upi.edu
Agung Akbar, agungakbar@student.upi.edu

Program Studi Pengembangan Kurikulum, Sekolah Pascasarjana,
Universitas Pendidikan Indonesia

Abstract

The 21st century is a digital era marked by the development of technology and information. The development of technology and information has influenced many aspects in it, not least in the field of education, technology is one aspect and also an inseparable part of learning. Based on preliminary studies in several junior high schools in the city of Bandung, including in SMPN 51 Bandung, the level of students' analytical skills is low. One of the objectives of this research is being carried out to overcome the problem of learning by using graphic motion video media, to improve students' analytical skills in the field of comparison, organizing, and attributing. Watching motion graphics videos can attract the attention of the audience, by displaying interesting animations and also content that is easily understood by the audience. Therefore, the use of graphic motion video media is made as a carefully examined independent variable. In this study using quantitative research, the research design used is to use a nonequivalent control group. The technique for quoting this data uses a written test. Based on the results of the general hypothesis test through the independent sample t-test, it can be concluded that the level of analytical ability of students using video motion graphics increases a significant increase. Thus it can be denied that the use of motion graphics video media can improve students' analytical skills in learning social knowledge in class VIII at SMPN 51 Bandung.

Keywords: Media, Motion Graphics Video, Analytical Skills

A. INTRODUCTION

The 21st century is a digital era marked by the rapid development of technology and information. The development of technology and information is affecting all aspects of life, and education is no exception, where technology is an inseparable part of student life. The rapid development of the times accompanied by the development of technology is directly proportional to the development of problems that occur, while the problems that arise are increasingly complex and human resources are needed to be able to overcome these problems.

However, in reality various efforts to develop education in Indonesia until now have not given optimal results, even the opposite is true. An example of a problem that is currently warm is the social conflict that involves students in it, which culminates in bullying among students. In addition, problems that often occur in various regions in Indonesia are social conflicts between students and their teachers or their schools, which lead to violence. As well as the increasingly widespread fighting between students in the past few years became one of the worst moments in the history of education in Indonesia.

Based on the results of an interview with Mr. Dadang, who is one of the teachers of SMPN 51 Bandung, it is argued that education in Indonesia is indeed considered as something important, but in reality the effectiveness of learning seen now is still far from ideal. Because it is very easy to see the effectiveness of learning, namely by seeing students in analyzing and solving problems that exist in schools and in their neighborhoods. This means that, the majority of students in Indonesia in fact in solving problems at school and in the environment are still in the low category. The process of getting good analytical results can certainly be supported

by utilizing the high-level thinking abilities possessed by each student, because these two things are very closely related.

Ideal in the implementation of learning is always the occurrence of interaction between educators and students who are in the learning environment to take advantage of learning resources. Something can be said of good learning outcomes if it fulfills some of the following characteristics: (1) learning is realized, in other words that students feel that they are learning and motivations arise in themselves to have the expected knowledge and ultimately the stages in learning until the knowledge is owned by students permanently and fully realized. (2) learning outcomes are obtained by the process in advance, in this case the knowledge is obtained not by spontaneous, instant, but gradually. (3) learning requires interactions that are specifically human, in other words there is a two-way communication between the teacher and students. This shows that the learning process is a communication process, which means the process of delivering a message in it from someone (communicator) to someone or a group of people (communicant).

According Effendy (1992: 5) "communication is the process of delivering a message by someone to someone else to tell or to change attitudes, opinions or behavior, both verbally, or indirectly through the media". Based on the above understanding, it is clearly illustrated that the media is part of the communication process. Good or bad communication is supported by the use of instrument / media in the communication.

In the last few years, audio-visual media or what can be called video media is being widely applied in various information and communication delivery activities, such as in the entertainment sector, economics, and others. In its application to the world of education, video media has also been widely studied and produced positive results as well. As a study conducted by Ayuningrum (2012, p. 87) said that "The video learning media processing continental soup is very feasible and suitable for use as a source of learning for teachers and students in SMK Negeri 2 Godean". From this research I can conclude that video media has the feasibility to be applied as a medium for student learning. And Agustriana (2014, p. 8) in his research also said that "The use of video learning in SMA 1 Mempawah, is considered effective to increase the attractiveness and attention of students in learning, this can be known through increased student grades".

The most basic and most effective media used is audio visual media, which is the media for delivering messages through images or images that also have sound that explains the visualization exposure. One audio visual media that is of interest to students is motion graphic media. Therefore, the type of media used in this study for the experimental class is the Motion Graphic video media which is included in the animated video that moves with animation and attractive appearance, while in the control class uses video media, learning presentations including videos that feature presenters speaking, presenting material with di recorded by the camera.

Motion graphics are graphics used by video recordings or animation technology to create the illusion of motion or rotation and are usually combined with audio for use in multimedia projection. According to Sukarno (2016. p.4) in his online journal stating "motion graphic is a subset of multimedia that uses graphic elements and graphic design principles in the context of filmmaking or video production through animation or other film techniques". Modeling in motion graphics is called graphic design that we can see in the form of brochures, flyers, or banners. According to Hamalik in Kustandi and Sutjipto (2013, p.19) argues that ‘the use of instructional media in the teaching and learning process can arouse new desires and interests, arouse motivation and stimulation of learning activities, and even bring the psychological effects of students'.

B. RESEARCH METHODS

The research approach chosen for this research is a quantitative approach with the Quasi Experimental method (Quasi Experiment). The variables raised in the study consisted of two variables, namely the independent variable (not bound) and the dependent variable (bound). The independent variable (X) in this study is the use of motion graphic video media. Whereas the dependent variable is students' analytical skills on aspects of differentiating, organizing, and attributing. This study uses the Nonequivalent Control Group Design research design because to see the comparison of the results of a treatment without the need for groups that are really the same. Nonequivalent Control Group Design consists of two groups namely the experimental and control groups.

The population in this study were all VIII grade students of SMPN 51 Bandung, amounting to 356 and consisting of 11 classes. Then the sampling technique used in this study uses classroom random sampling techniques. Based on the sample of this study, the researcher used two class samples, namely class VIII 2 which amounted to 32 students and class VIII 3 which amounted to 32 students.

Based on the results of the calculation of the content validity test and the reliability test that was carried out it was found that the trial results were **valid** with **sufficient** correlation and the reliability criteria obtained the results of the instrument used **reliably** with a **high level** of reliability.

After analyzing the data, normality testing is then performed. Based on the results of the normality test in the experimental class and the control class, obtained data on the total gain, the aspect gain differentiates, the organizing aspect gain, and the gain attributable to the experimental class group from populations are **normally distributed.**

After finding out that the research data is normally distributed, it is continued with the homogeneity test. Based on homogeneity testing, the results obtained from the experimental class and the control class come from populations that have the **same variance (homogeneous).**

Based on the calculation of homogeneity test obtained data from the experimental class and the control class that the aspects of **differentiating**, **organizing** and **attributing** come from populations that have the **same variance (homogeneous).**

Next is hypothesis testing, which consists of general hypothesis testing and specific hypothesis testing on the aspects that have been determined.

In testing general hypotheses, it can be stated that the Motion Graphic video learning media is more effective in increasing students' analytical skills compared to Video Presentation media.

In testing the first specific hypothesis, it can be stated that the motion graphic video learning media is more effective in improving students' analytical skills compared to the video presentation media on the **differentiating aspects**.

In the second specific hypothesis testing, it can be stated that the motion graphic video learning media is more effective in improving students' analytical skills compared to the video presentation media on the **organizing aspect.**

In testing the third specific hypothesis, it can be stated that the motion graphic video learning media is no more effective in increasing students' analytical skills compared to the video presentation media on **attributing aspects.**

C. RESULT AND DISCUSSION

After processing the data, the pretest data obtained from the experimental class and the control class. Pretest scores in the experimental class totaling 32 students get a total score of

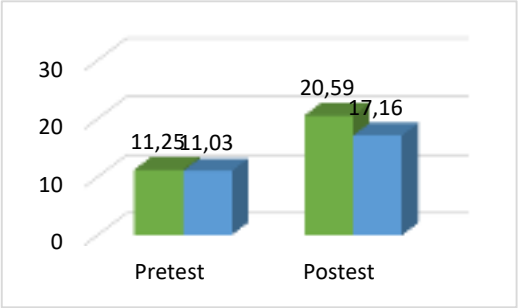
360. With these scores the average score in the experimental class is 11.25 with the highest score of 23 and the lowest score of 3. While the pretest score in the control class totaling 32 students get total score of 353. With the total score the average score in the control class is 11.03 with the highest score of 20 and the lowest score of 5.

Then the results of posttest data processing obtained from the experimental class and the control class obtained the following data. Posttest scores in the experimental class totaling 32 students get a total score of 659. With these scores the average score in the experimental class is 20.59 with the highest score of 30 and the lowest score of 13. While the posttest score in the control class totaling 32 students get a total score of 549. With this total score the average score in the control class is 17.16 with the highest score of 25 and the lowest score of 7.

Graph 1

Comparison of Average Pretest and Posttest Scores

Experimentation Class and Control Class



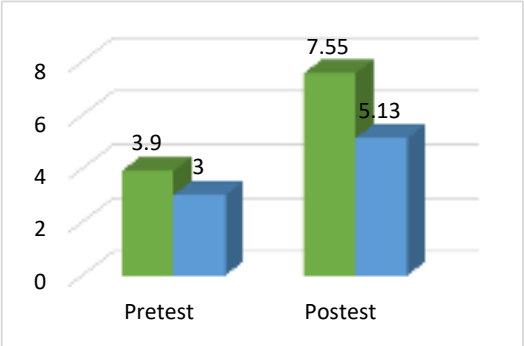
Based on graph 1 it can be concluded that the average score of pretest in the experimental class is higher compared to the control class, and the final result of the posttest average score in the experimental class is higher than the average of the control class.

The description of the study was specifically developed based on the aspect of analytical skills measured. Based on the first aspect, it is obtained that the results of data processing that there is an increase in the ability of analysis of students who use video media motion graphics is higher than students who use video media presentations on Social Sciences subjects. Can be seen from the post-test average score of students' ability to analyze aspects of differentiate higher than the average score of the pre-test.

Graph 2

Comparison of Average Pretest and Posttest Scores

Differentiate Aspects

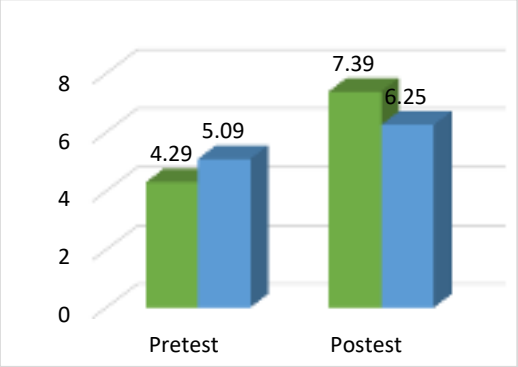


Based on the second aspect, the data obtained from the processing results shows that there is an increase in the analytical skills of students who use high motion graphic video media compared to students who use video presentation media on Social Sciences subjects. It can be seen from the post-test average score of the students' ability to analyze aspects of organizing higher than the pre-test average score.

Graph 3

Comparison of Average Pretest and Posttest Scores

Aspects Of Organizing

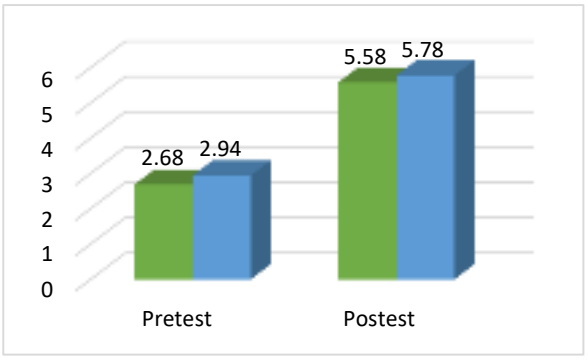


Based on the third aspect, the data obtained from the processing results shows that there is an increase in the analytical skills of students who use motion graphic video media, but the increase is lower compared to students who use video presentation media in Social Sciences subjects. Although the use of motion graphic video media is lower than the use of video presentations, it can be seen from the average post-test score that students' analytical ability to attribute is higher than the pre-test average score.

Graph 4

Comparison of Average Pretest and Posttest Scores

Attributing Aspects



Thus, it can be seen that the posttest average of the experimental class is higher than that of the control class, so it can be concluded that the use of motion graphic video media is more effective in improving students' analytical skills. Based on the results of data processing that has been carried out it provides evidence that the motion graphic video learning media is

more effective at improving students' analytical skills compared to the video presentation media.

Motion Graphic Video Media gives an interesting and not boring impression in class learning. In accordance with the statement of Kustandi and Sutjipto (2013, p.20) "the cognitive function of visual media is seen from research findings which reveal that visual symbols or images facilitate the achievement of goals to understand and remember information or messages contained in images".

Then the results of the average overall posttest from the aspect of organizing are higher than the average overall pretest score. The data becomes the basis used to conclude that the motion graphic video media is effective in increasing the ability to analyze aspects of organizing. The ability to organize is a process that involves identifying an element of communication, conditions, and recognizing the way the elements are arranged and forming an integrated information structure. In this process, it can produce an integrated and integrated relationship of each element of information. The ability to organize can build a systematic relationship between separate pieces of information and then put back together so that it becomes coherent and relevant information. Likewise in organizing a learning material, students are required to build systematic relationships from information so that it becomes complete knowledge.

The activity of organizing is often also called structuring, integrating, finding coherence, outlining, describing roles, and most often we are classifying based on criteria. These classifiers are assumed to be classifiers who understand the purpose of organizing information, namely for the retrieval process (Rahmah, 2012).

The fact shows that students' ability in organizing information is still low, it can be seen when students are asked to classify the factors that cause conflicts that occur in the environment around their homes. Therefore, through the motion graphic video media used in learning can bring students to be more detailed in identifying and processing information by calcifying it in advance according to the criteria of the material being studied. So that every knowledge obtained can be linked into a single unit in accordance with the criteria and become a strong source. Motion graphic video media is one of the benefits of technological advancements, students can learn anywhere and anytime by utilizing the results of technology. With the media, making learning more effective and efficient (Rusman, 2017).

Then, the overall average posttest results from the aspect of attributing are higher than the average overall pretest score. Although indeed when viewed from the gain value obtained is not too far different from the experimental class with the control class. However, this data is the basis used to conclude that the motion graphic video media is effective in increasing the ability of the attributing aspect analysis. The ability to attribute is the process of building / redesigning information after determining the main purpose of an information / lesson given by the teacher. Attributing is the highest analysis activity, because someone can be said to be able to master the ability to attribute when it can provide views or opinions in accordance with the information obtained. In other words attributing consists of the ability to understand and conclude.

The ability to attribute or is often referred to as the ability to conclude important in everyday life because every individual gets so much information, one of them through reading. Because every reading we read we should be able to conclude the contents or the essence of the reading. But the facts show that very few students have the ability to attribute, because they do not understand the material learned. Therefore through the motion graphic video media used in learning, students are required to look carefully at the content of the material that is visualized with the animation conveyed by the video.

Based on the results of the description that has been presented previously that by using motion graphic video media to improve students' analytical skills in the aspect of attributing,

so it can be concluded below by using video motion graphic media can improve the analysis ability of attributing aspects when compared before using video presentation media.

D. CONCLUSION

The general conclusion is that the motion graphic video learning media is effective for improving students' analytical skills in Social Sciences (IPS) at the junior high school level.

The specific conclusions of this research are as follows:

1) Motion grahpic video media is effective for enhancing students' analytical skills on differentiating aspects in Social Sciences (IPS) subjects at the Middle School level.

2) Motion graphic video media is effectively used to improve students' analytical skills on the aspect of organizing in Social Sciences (IPS) subjects at the junior high school level.

3) Motion graphic video media is effectively used to improve students' analytical skills on aspects of attributing in Social Sciences (IPS) subjects at the Middle School level.

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THE RELATIONSHIP OF TEACHERS' TEACHING ABILITY AND COGNITIVE DEVELOPMENT OF PAUD STUDENTS IN MEDAN PETISAH SUBDISTRICT, MEDAN CITY

1. Maria Sari Dewi Sembiring, mariasaridewisembiring@gmail.com
2. Dr. Ariefa Efianingrum, M.Si, efianingrum@uny.ac.id
Universitas Negeri Yogyakarta

mariasaridewisembiring@gmail.com, efianingrum@uny.ac.id

Abstract

This study aims to determine the relationship of teacher teaching abilities with cognitive development of PAUD students in Medan Petisah Subdistrict, Medan City. The research also aims to increase the teacher's insight in improving the performance of his profession to be more professional and effective to help the child's cognitive development to the fullest. The method used in this research is quantitative descriptive. The population in this study were all teachers and students who were in PAUD Medan Petisah District as many as 36 people. Sampling is done by total sampling, where because the total population is less than 100, then the entire population is made as a research sample. Data collection tools used were questionnaires, with simple linear regression data analysis techniques, t test, and determination test. Based on data processing with regression equation then obtained result is Y = 55.88 + 0,494x. This shows that the teacher's teaching ability has a significant relationship to the development of students, this is known from the calculation results obtained by the value of t arithmetic > t table is 16,201 > 1,688. Then Ho is rejected and Ha is accepted, meaning that there is a relationship between the teacher's teaching ability and the cognitive development of students in PAUD Medan Petisah District. While the amount of contribution obtained by the value of D = 67% means good or bad cognitive development of students by 67% and the remaining 33% is caused by other factors not included in this study.

Keywords: Teaching Ability, Student Development

A. INTRODUCTION

Early childhood education is an educational stage that can not be ignored because it also determines the child's growth and success. Through early childhood education educational stimuli are provided to help physical and spiritual growth and development so that children have readiness to enter further education, which is held on formal,channels non-formal, and informal.

Professionalism in the implementation of early childhood education is inseparable from teacher resources and early childhood education management. Both of components are very important to be studied more deeply, because it will have an impact on the quality of early childhood education.

Early childhood education is inseparable from teacher services. The teacher is a professional educator with the main task of educating, teaching, guiding, training, assessing and evaluating students in early childhood education, basic education and secondary education.

Based on the Basic Educators Data (Dapodik) as of May 2016 the number of PAUD institutions throughout Indonesia reached 187.242 institutions. It consisted of 86.221 kindergartens, 76.545 playgroups, 2.935 daycares, and PAUD Units 21,541 institutions. The distribution of PAUD institutions is in East Java Province with 36.894 institutions. Then followed by Central Java 27.033 institutions, West Java 25.516 institutions, North Sumatra 9.229 institutions, and South Sulawesi 6.704 institutions.

Meanwhile the number of PAUD educators and experts in Indonesia as of May 2016 was around 560.456 people. Consists of 18.943 junior high school graduates, 192.809 high school graduates, 343.033 undergraduate graduates (S1 / D4), and 5.671 people are postgraduate graduates (S2) experts and educators. When viewed from an educational background, 348.704 people had a school background education. While the remaining 211.752 people from non-education.

While from several PAUDs in Medan Petisah Subdistrict, there are 4 PAUDs where the teacher does not have the maximum teaching ability. These PAUDs consists of Melati Eskade PAUD, Cemerlang PAUD, Fajar PAUD, and Bunga Tanjung PAUD. There are 28 teachers and 116 students in the four PAUDs.

From the above data we can also note that the number of PAUD in Indonesia has begun to increase, this is because the community has begun to realize the importance of children's education from an early age. Likewise with the government which has begun to pay attention to the existence of PAUD institutions, this is evidenced by the issuance of the Minister of Education and Culture Regulation of the Republic of Indonesia Number 137 of 2014 concerning National Standards for Childhood Early Education. [1]

Early childhood education is a form of education that focuses on laying the foundation towards physical growth and development (coordination, fine and gross motor skills), intelligence (thinking power, creativity, emotional intelligence, spiritual intelligence), emotional side (attitude , behavior, and religion), language and communication, in accordance with the uniqueness and stages of development that are passed by early childhood. [2]

A newborn baby has approximately 100 billion brain cells during 9 months of pregnancy, at least every minute in brain growth produced 250 thousand brain cells. Infants who are 8 months old are thought to have billions of nerve cells in their brain. These nerve cells must be routinely stimulated and utilized in order to continue to grow in number. At the vulnerable age of 6 months when children start moving a lot, the accident rate can be reduced by as much as 80% if given self-stimulation. At the age of 3, these children will have an IQ of 10 to 20 points higher than those who have never been stimulated. At

the age of 12 years, children still get good achievements and by the age of 15 their intellectual level is increasing. This illustrates that early education has a very good long-term effect. Aamodt & Wang (2008: 71) [3] assert, "it is easier to form the brain at an early age than it is afterwards. But the possibility to change, improve and improve is always open ".

From the scientific basis above, it can be said that the need for education of children from the womb, because there are many brain cells that must be stimulated routinely so that in future child development can be excellent. Researchers at Baylor College of Medicine in Houston USA prove that children who are less stimulated by the brain are 30% smaller than children who getstimulation maximum. And in fact there are still many children who lack stimulation both in the family environment and in educational institutions such as PAUD. With the lack of children in providing stimulation on a regular basis, it will affect the development of the brain, so that children are less active and not fit in their growth.

Based on the description above, it is true that the teachers found in the field are not all professionals. As found in PAUD in Medan Petisah District, Medan, where there are 12 PAUD and 4 of them still have unprofessional teachers. The 4 PAUDs namely Melati Eskade PAUD, Cemerlang PAUD, Fajar PAUD, and Bunga Tanjung PAUD . Teachers at the Medan Petisah Kecamantan PAUD have also not received training related to the concepts and practical knowledge of PAUD, so they do not have training certification. This is because PAUD managers and teachers have not yet realized the importance of teacher professionalism in the cognitive development of PAUD children.

From the above problems, researchers realize the need to improve teacher teaching abilities in PAUD in order to provide learning that can help students in their development. Therefore we need teachers who provide stimulation to students. So that in the implementation of teacher education can help the cognitive development of students well.

B. RESEARCH METHOD

This type of research used in this research is quantitative descriptive, which is a scientific research technique that aims to obtain a clear and systematic picture of data and facts in the field, then conduct an analysis of the problems found and then concluded. This research was conducted at PAUD Medan Petisah District, Medan City. The reason the researchers chose PAUD in Medan Petisah Subdistrict, Medan City as the location of the study was because they had carried out previous observations.

Teaching ability is a special skill that must be possessed by the teacher, lecturer, or instructor in order to carry out teaching assignments effectively, efficiently and professionally. In real life, children are faced with problems that demand problem solving. Resolving a problem is a more complex step in the child. Before children are able to solve problems children need to have the ability to find ways to solve

them. In the cognitive development of children there are 5 classifications of cognitive domain objectives, namely intelligence, schemata, assimilation & accommodation, equilibration, interiorization.

Data collection techniques carried out in this study through questionnaires and documentation. The data analysis technique used in this study is data quantitative descriptive using the formula of product correlation of moment numbers coarse, Sudjana (2002: 369). [4]

C. RESULT AND DISCUSSION

The ability to teach teachers is how teachers can educate students well so that students can develop all the potential that exists within each of them in order to achieve national goals. Thus the teacher is required to be professional in his profession to help the cognitive development of students.

In order to develop cognitive skills in PAUD students who are very influential in these developments besides parents are teachers. Where is the age of paud children who are prone to regular stimulation needed to help the child's cognitive development so that they can grow into individuals who have excellent intelligence.

And in accordance with the things that have been explained above that if a teacher can carry out his profession professionally, children's cognitive development can be achieved well. Because with this professional attitude the teacher can not only stimulate students well but the teacher can also further develop the potential that exists in himself, so that he can become a better teacher.

Early childhood is an individual who is undergoing a process of development that is very fundamental for the next life and has a number of characteristics. This means that the development experience at an early age can have a lasting and long lasting effect so that it underlies the child's subsequent development process. [6]

Cognitive development in children means the occurrence of processes internally in the central nervous system when the child is thinking, develops gradually in line with the physical development and nerves in the central nervous system.

In helping cognitive development in children, teachers are required to have basic teaching abilities, in the basic teaching skills of teachers there are 9 skills that must be possessed by each teacher, namely the skills to ask questions, the skills of giving reinforcement, the skills to hold variations, the skills to explain, the skills to open and close lessons skills for guiding discussions, skills in using media and learning tools, class management skills and evaluation skills. [7]

D. CONCLUSION

Basically the teaching ability of teachers in PAUD Medan Petisah District is categorized as capable. This can be seen from the calculation which shows the average results of the whole item of variable X is 2.67.

As for the preeminent in this variable, namely the sub-variable management skills class that obtained an average score of 3.47 classified as very capable and sub-variables provide reinforcement to obtain the lowest average score of 2.69 classified as capable.

The cognitive development of students in PAUD Medan Petisah District has been classified as very capable, this can be seen from the calculation of variable Y (cognitive development of students) which shows the results of the overall average score of 3.30. This value indicates that the cognitive development of students in PAUD Medan Petisah District is included in the category of very capable. The leading sub-variable in this variable is a schemata with an average score of 3.30, which is classified as very capable.

In general there is a relationship between the ability to teach teachers with the cognitive development of students in PAUD Medan Petisah District. This is evidenced by the t test between variables X to Y is significant with the price of t count 16.201 is greater than t table of 1.688. This means that there is a relationship between variable X and Y variable. And to see how much the relationship between the teaching ability of teachers with the cognitive development of students in PAUD Medan Petisah District, the calculation is carried out with the determination of the variables X and Y, there is a relationship of 67%. And the remaining 33% is due to other factors not included in this study.

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MANAGEMENT OF CHARACTER EDUCATION IN LEARNING

1. Indriani Tri Hapsari, indrianitri.2018@student.uny.ac.id, indrianith@gmail.com
2. Ariefa Efianingrum, efianingrum@uny.ac.id
Universitas Negeri Yogyakarta

indrianitri.2018@student.uny.ac.id, indrianith@gmail.com, efianingrum@uny.ac.id

Entering the disruptive era, education is used as a vehicle for arising ethical and moral values in the personality of students through character education. Character education management can help realize the learning process in order that students can develop their potential actively and innovatively. This research aims to describe the management of character education in the learning process at State Senior High School in Jakarta. The management processes are planning, organizing, actuating, and controlling. This research uses a qualitative approach with descriptive method. Data collection techniques in this research were interviews, observation, and documentation with the principal, vice principal of curriculum, teachers, and students. Data analysis techniques include data reduction, data presentation, and drawing conclusions. The results of this research indicate that State Senior High School in Jakarta has implemented character education in learning. The application of character education at State Senior High School in Jakarta aims to develop character through which includes: (1) planning, which is carried out by integrating character values in preparing syllabi, lesson preparation plans (lesson plans), and teaching materials; (2) organizing, which is done by dividing authority and duties to the teacher to apply character values that are appropriate for each subject; (3) actuating, application of character education is carried out in learning activities that take place in class; and (4) controlling, by carrying out the process of monitoring, evaluating, and reporting the plan for achieving the goals set for corrective action for further improvement. Management of character education at State Senior High School in Jakarta is carried out to avoid the moral degradation of students which is rife and produce students who can integrate ethical and moral values in life.

Keywords: management, character education, learning, senior high school

A. INTRODUCTION

Education is recognized as an alternative solution in developing the potential and skills of students to become a generation that is ready to use and able to face all challenges related to social change in people's lives, because education in principle is guidance or leadership consciously by educators towards the physical and spiritual development of students toward the formation of the main personality. Personality is very important to be owned by the next generation of the nation in order to be able to instill ethical and moral values in learning because it can help students to navigate an increasingly complex life. Entering the disruptive era, education is used as a vehicle for planting ethical and moral values in the personality of students through character education.

Sojourner explained that good character is associated with positive behavior or attitude and virtue, as opposed to bad character associated with bad nature and negative behavior [1]. Lickona defines character education as a deliberate effort to cultivate virtue. Lickona also points out that since the days of Aristotle

and Socrates, character education has been an important part of the teaching and training of young teenagers. According to him, character education is an important mission in public schools like in America [2]. Also explained by Lovat, Clement, Dally, and Toomey that character education can increase student awareness and social interaction among peers in the school environment [3]. Berkowitz and Bier explain that effective character education must be included in the school curriculum [4]. This was supported by Damon who stated that morality cannot be ignored in the learning process in schools, because it is part of the structure and interests of the school [5]. Therefore, schools, educators, and staff have an important role in the formation and development of student character.

Character education is a holistic educational process that connects the moral dimension with the social realm in the lives of students as a foundation for the formation of a quality generation. Character education according to Lickona contains three main elements, namely knowing goodness, loving kindness, and doing good. That is, character refers to a series of knowledge, attitudes, and motivations, as well as behavior and skills [2]. In the application of character education in schools, all components or stakeholders must be involved, including the components of education itself, the contents of the curriculum, the learning and assessment process, the quality of relationships, the handling or management of subjects, school management, the implementation of activities or curricular activities, empowering infrastructure, financing, and the work ethic of all citizens and the school environment.

Character development can be integrated in all subjects and teaching and learning process [6]. As already explained that effective character education must be included in the learning curriculum. Education that is integrated in the learning process means introducing values, awareness of the importance of values, and internalizing values into the behavior of students through the learning process, both that take place inside and outside the classroom in all subjects [7].

So that the implementation of character education in learning in schools can be optimal, effective, and efficient, it requires effective and efficient management activities as well. Therefore, character education in schools is also closely related to school management or management. The intended management is how character education is adequately planned, implemented and controlled in educational activities in schools. George Terry argues that management is a distinct process consisting of planning, organizing, actuating, and controlling, performed to determine and accomplished stated objectives by the use of human beings and other resources. From this quote management affirms it as a process of planning, organizing, actuating, and controlling through people or other resources to realize goals. The process proposed by Terry is what is popularly known as POAC (planning, organizing, actuating, controlling) [8].

School management is one of the effective media in the application of character education in learning in schools. Thus, the management of character education in learning in State Senior High Schools is important to know and describe in order to provide information and input for all interested parties in the process of implementing character education.

B. RESEARCH METHODS

This research uses a qualitative approach with descriptive methods. A qualitative approach, that is research conducted on natural conditions or natural settings. The descriptive method is to describe or give an idea of the object under study [9]. This research was conducted at State Senior High Schools in Jakarta, which have implemented character education in the learning process. Researchers used data collection techniques in the form of observations, interviews, and documentary studies with principals, vice-principals in the curriculum, teachers, and students. This data collection technique is known as triangulation, which is a data collection technique that combines various existing data collection techniques and data sources. Through these three data collection techniques, researchers obtain information about planning, organizing, implementing, and supervising character education at State Senior High Schools in Jakarta. The analysis technique uses observation, interview, depth and documentation. Data analysis techniques using the theory of Miles and Huberman are data reduction, data presentation, and drawing conclusions [10].

C. RESULT AND DISCUSSION

Education in Indonesia is based on the Undang-Undang Dasar 1945. That was written in one of the objectives that existed at the opening of the Undang-Undang Dasar 1945, that is to educate the nation's life. According to Undang-Undang No. 20/2003 concerning the National Education System, education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by himself, society, nation, and country [11].

Graduates with good academic achievement and character can be produced by integrating character formation in the teaching and learning process in schools. Character development can be integrated in all subjects and teaching and learning processes, therefore teachers must prepare for character formation starting from planning, organizing, implementing, and monitoring or evaluation. Character development that is integrated in the teaching and learning process can be done in preliminary, core, and closing activities. The integration of character formation in the core activities of the teaching and learning process can be done in exploration, elaboration, and confirmation activities. That can cause the conditions of the learning environment to be better and academic presetation can also increase. Character education that is applied effectively in the learning process will have a strong impact on student development, such as a

series of behaviors, social competence, and academic achievement. Character education in learning is also carried out to avoid the moral degradation of students which is rife and produce students who can integrate ethical and moral values in life.

George Terry believes that management as a process of planning, organizing, implementing, and controlling through people or other resources to achieve goals. The process proposed by Terry is what is popularly known as POAC (planning, organizing, actuating, controlling). State Senior High School in Jakarta have carried out this process in implementing character education in learning. The process of planning, organizing, implementing, and evaluating is made to achieve the objectives of character education in learning implemented by the State Senior High School in Jakarta.

Preparation of character education planning needs to refer to the values to be achieved, objectives, forms of activities, materials, schedules, facilitators, related parties, approach to implementation, evaluation and facilities to support the implementation of character education programs in schools. School program and activity planning is carried out through the development and preparation of School Work Plans for the medium/long term and School Activity Plans and Budgets for the short and annual term [12]. According to the deputy headmaster of the curriculum, the process carried out in schools refers to regulations given by the government, one of which is by the Ministry of National Education. Based on these regulations, in the initial planning of character education in learning, the school will make School Work Plans and School Activity Plans and Budgets which include character education in it. The next process, in planning, is carried out by integrating character values in compiling the syllabus, lesson preparation plan, and teaching materials. The curriculum used in Indonesia is the Kurikulum 2013, where the curriculum already has characters that must be applied in learning. Kurikulum 2013 aims to change the attitude of learners to be more polite through the values of character education contained therein. Learning in the Kurikulum 2013 must develop the realm of attitudes, knowledge, and skills with a gradual acquisition trajectory. Kurikulum 2013 has four points, that are core competency 1 (KI 1) which contains religious values, KI 2 has social human values, KI 3 contains knowledge, and KI 4 contains the learning process. n KI 1 and KI 2 there is no material being taught but it becomes enthusiasm in every subject taught because both KI instilled strong character values.

Next is organizing, which is the process of organizing, allocating and distributing work, authority, and resources among members of the organization to achieve organizational goals. In this case, organizing is the division of authority and duties from the school to teachers who engage directly in the learning process in class to apply character values that are appropriate for each subject. Organizing is done by asking the teachers to apply character values in accordance with their respective subjects in the learning process.

Dasyim Budimasyah explained that character education programs in schools need to be developed based on the principle of continuity, integrated in all subjects and take place actively and pleasantly (active learning) [13]. As explained earlier that in the learning process consists of three stages of important activities, are introduction, core, and closing. In these three steps, the teacher facilitates students to practice targeted character values. In addition, teacher behavior throughout the learning process is a model of the implementation of values for students. So that the implementation of learning can facilitate students to practice the targeted character values, the teacher takes a number of steps. During the introduction, the teacher prepares students psychologically and physically to follow the learning process. The teacher also conveys the scope of the material and an explanation of the activity description and presents the character points to be developed according to the syllabus. At the core activity, the teacher conducts exploration activities by facilitating students to gain knowledge and skills, elaboration by giving students opportunities to acquire knowledge and skills, and confirmation by giving students feedback on the truth, worthiness, and skills acquired by the participants students.

Furthermore, cotrolling or evaluation is an effort to measure the achievement of an activity. Kambey argues, oversight aims to obtain input whether the implementation and results that have been achieved are in accordance with planning [14]. Koesoema stated that the target of character education evaluation consisted of program evaluation, structural evaluation, individual evaluation, and community evaluation [15]. In other words, the evaluation target is all programs that have been carried out, institutional structure for the improvement of systems and structures that frame the scope of individual responsibility, the students themselves based on established indicators and relationships between students and students, students and teachers, parents with teachers, or schools with the community. Controlling in the management of character education is carried out through a process of monitoring, assessment, and reporting of plans for the achievement of character education goals that have been set for corrective action for further improvement. For example, one of the goals of character education is to eliminate cheating behavior during school exams with predetermined strategies and ways. At the supervision stage, it will be seen how effective these strategies and methods are for eliminating cheating culture during school exams.

D. CONCLUSION

One of the goals of education in Indonesia is to educate the life of the nation. Education is also used as an alternative solution in developing the potential and skills of students to become a generation that is ready to use with a character personality. Character traits are very important for the next generation to be able to instill ethical and moral values in learning because they can help students navigate an increasingly complex life. Character building can be integrated in all subjects and teaching and learning process. As already explained that effective character education must be included in the learning curriculum. In order

for the implementation of character education in learning in schools to be optimal, effective, and efficient, effective and efficient management activities are also needed which include planning, organizing, actuating, and controlling.

State Senior High School teachers in Jakarta prepare character building starting from planning by integrating character values in preparing syllabi, lesson preparation plans (lesson plans), and teaching materials, organizing which is done by dividing authority and tasks to the teacher to implement character values in accordance with each subject, actuating by applying character education in learning activities that take place in class, and controlling or evaluation by carrying out the process of monitoring, assessing, and reporting plans for achieving the goals set for corrective action for further improvement. Character development that is integrated in the teaching and learning process can be done in preliminary, core, and closing activities. The integration of character formation in the core activities of the teaching and learning process can be done in exploration, elaboration, and confirmation activities. The management of character education in learning at State Senior High Schools in Jakarta is done to avoid the moral degradation of students that is rife and produce students who can integrate ethical and moral values in life.

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LEAF FLAKES FOR LEARNING ELECTRIC FIELDS IN HIGH SCHOOL

Cecep Rahmat, ceceprahmat2507@gmail.com
Bambang Heru Iswanto, bhi@unj.ac.id
Sunaryo, sunaryo@unj.ac.id
Master Program in Educational Physics, FMIPA, Universitas Negeri Jakarta,
Jl. Rawamangun Muka, Jakarta 3220

ABSTRACT

This study aims to develop an electrostatics practice device for learning fundamental physics in senior high schools. The device uses to demonstrate the existence of electric fields generated from electrical charges. In this device, the leaf flakes were used to visualize the lines of electric fields and electric flux as stated in the Gauss Law. The research was conducted by using ADDIE (Analyze, Design, Development, Implementation, and Evaluation) as a development research method. The reserachers use simple materials that are widely available around the school, so it can be easily obtained at low cost. Futhermore, the device only consists of wires, water tank, leaf flakes, and electrical potential generator. The potential generator can be arranged to work between 1.5 – 6.0 Volt. While wires are connected to the generator with different potentials, the leaf flakes are spread around the wires in the water tank. Distribution of leaf flakes will be self arranged to build the formations according to lines of electric fields generated by wires. The practice device can be equipped with a student worksheet. Based on the results of the validity of the expert, material score was measured for 97.08%, the expert media was accounted for 99.31% and the expert learning score was calculated for 95.57%. The effectiveness of device for physics learning has been examined in two classes of senior high school. The test result shows that the using of the device can gain the physics learning in the high school significantly.

Keywords: physics education, electric fileds, electrostatics

A. INTRODUCTORY

Education is always creates learning innovations [1]. The impact shown on the changes of curriculum that occured at the level of the education unit. Moreover, the implementation of the 2013 curriculum in physics at the high school level is in accordance with one of the goals of science education, namely educating students to be directly involved in obtaining scientific concepts with investigative or experimental activities, so that students can integrate knowledge, skills and attitudes to obtain the expected results [2]. However, there are several obstacles in the implementation of the 2013 curriculum including the limitations of the facilities, consequently, the curriculum is not yet optimal, this shortage will have an impact on the achievement of physics learning goals because the characteristics of physics lessons are the interrelationship between several concepts [3], material that is abstract, and mathematical equations that must be mastered by students [4]. As well as learning electric fields, so they need the facilities to support their study.

One way to overcome these problems is the teacher develops or makes his own supporting facilities for learning physics in the form of learning media. Learning media have an essential role in the scope of learning [5]. Its use is expected to make students easier to understand physics material [6]. Furthermore, learning by using media will be more effective and efficient, since the media has the potential to influence decision making in a short time [7], including props [8]. Teaching aids is one type of learning media as a substitute object that can be used in the learning process and contain or carry the concepts learned [5].

According to the survey results in several schools, the availability of teaching aids in schools is still inadequate with the number of students, about 70% of respondents state that students do not understand the study of static electricity, and around 60% state that there are no teaching aids for static electricity to help students to achieve competence, while 80 % of respondents stated that the teaching aids at school were still less effective and efficient which were used in the learning process including electric field props. Electric fields, including the concept of static electricity, learn how electrical charges that even in the rest position [9]. Based on a theoretical study of several references, teaching aids for the study of static electricity are still not much developed and are still at the stage of developing computer simulations, van de graff generators, and experimenting with paper. The working principle of all these devices is to show the jump of electric charge originating from the process of giving an electric charge, yet to the visualization of the motion of the charge that forms electric field lines according to Gauss's law.

In this research, a teaching aid for the teaching of static electricity will be developed at the senior secondary level. This study uses materials that are easily available to show electrical field lines by using leaf flakes. The basic principle of teaching aids that are developed is the visualization of motion of electric sharpening lines using leaf flakes as a simulation of the motion of an electric charge into an electric field in accordance with Gauss's rule of law. The purpose of this study is to develop teaching aids for learning electric fields as a learning medium that is valid, effective and practical.

B. RESEARCH METHOD

The research method used in this research is research and development, with reference to the development of models ADDIE (Analys, Design, Development, Implementation dan Evaluation) [10]. The ADDIE model was popularized in the 1900s by Reiser and Mollenda as a development model [11]. The first step is to analysis phase in order to obtain data on media needs (teaching aids), the condition of learning media at school, data on the availability of learning media and the use of teaching aids. This is undergone to determine the initial data for media development. The second stage is designing the shape and schematic of the circuit that will be used. Moreover, the third stage is to arrange components according to the design and to validate it to media experts, material experts, learning experts and students as users, validator input is used as a reference to revise the teaching aids, then a trial is conducted on students. Indicator test validation of teaching aids is based on guidelines for making teaching aids from the Ministry of Education and Culture [12]. The data obtained is processed using a Likert scale calculation with a range of points 1-4 as in table 1[13].

Tabel 1 Likert Scale

No.	Alternative Answer	Score
1.	Strongly Agree	4
2.	Agree	3
4.	Disagree	2
5	Strongly Disagree	1

The next step is the interpretation of scores calculated based on the differences in each item as formulated:

$$Scores\ Interpretation = \frac{\sum Earning\ Scores}{Maximum\ Scores} \times 100\%$$

The results of the study are then interpreted into categories to determine the quality of the learning media developed as shown on the table 2.

Table 2 Interpretation of Likert Scale

Range	Interpretation
0 % - 25 %	Very Bad

Range	Interpretation
26 % - 50 %	Bad
51 % - 75 %	Good
76 % - 100%	Very Good

To find out the effectiveness of teaching aids developed during learning, researchers used the Independent t-test in the experimental and control classes. The equation used is based on [14]:

$$t = \frac{M_1 - M_2}{\sqrt{\frac{SS_1 + SS_2}{n_1 + n_2 - 2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

C. RESEARCH AND DISCUSSION RESULTS

The results of this study are visual aids visualization of electric field lines that work by using an electric charge generator and leaf flakes for learning static electricity in high school, as shown in Figure 1. The teaching aids consist of several components, those are: electric charge generators, boxes trial, as well as some wire formed as needed. These components are stored in a storage box to be more practical. Leaf flakes are used to display the formation of electric field lines when the props are operated. Even the leaf flakes are easy to get around the school, but remember that the size of leaf flakes must be in the same size.

It is very simple to operate the teaching aids, first by attaching a wire to the experiment box then connecting to the electric generator. To see the formation of electric field lines, the oil must be put in the box until approximately the tip of the wire is submerged, sprinkle leaf flakes and then increase the generator voltage between 1.5 to 6 volts. Demonstration of electric field lines from two electric charges can be visualized using a two-point wire as shown in Figure 2.a, whereas for three electric charges using a three wire which can be set up the charge poles in Figure 2.b. Meanwhile, in Figure 2.c depicted the lines the electric field lines on the wire are parallel and lastly in Figure 2.d shown the electric field lines on the wire circle, the leaves will move by themselves forming visualization of the electric field lines. Through this activity, students can learn about the electric field that is pictured by visual aids directly.

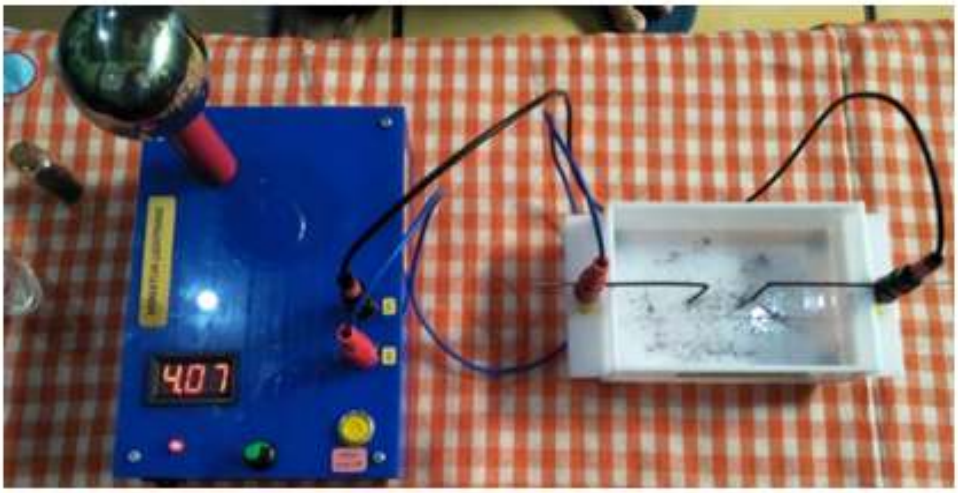

Figure 1 Generator and experimental box

Figure 2a. visualization of two charges

Figure 2b. three charge visualization

Figure 2c. visualization of parallel wire charges

Figure 2d. visualization of circle charges

The wire used is formed in a variety of ways, to depict the motion of electric charges when learning physics in class. Consequently, the learning activities can be varied in different activities. Electricity generator uses a DC voltage with a maximum input voltage of 6 volts. Aside from being an electric charge generator, the generator succeeded in demonstrating electric charge jumps between ± 0 - 2.5 cm on medium metal balls, metal discs, metal rods and double wires. The following table shows the results of the experiment by comparing the input voltages and the electic output.

Table 3 Comparison of input voltages with stepping electric output

No	Input DC	Media	Output
1.	1,5 – 6 volt	Metal balls	± 0 – 1 cm
2.	1,5 – 6 volt	Metal discs	± 0 – 1,5 cm
3.	1,5 – 6 volt	Metal rods	± 0 – 2,5 cm
4.	1,5 – 6 volt	Double wires	± 0 – 1 cm

The validation test is carried out by media experts, material experts and learning experts, and the results of the experts' assessment of the developed teaching aids can be seen in table 4:

Table 4 Results of validator ratings

No	Validator	Average Score	Interpretation
1	Media Expert	97,08	Very Good
2	Material Expert	99,31	Very Good

3	Learning Expert	95,57	Very Good
Average Score		97,32	Very Good

The expert test results in table 4 show that the teaching aids have very good quality as learning media, so it can be done in further tests.

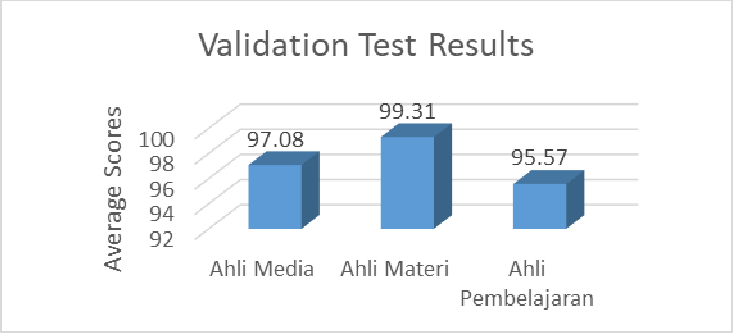

Figure 3 Graph Result by Expert Validation

The next step is examining the students, the results of the first try out on students is aimed to find out the assessment of the developed teaching aids, the average percentage of evaluations was 86.53% of the teaching aid, then it could be interpreted very well. The second test was conducted on 60 students consisting of 30 people from SMA Muhammadiyah 4 Jakarta class XII-IPA 1 and 30 people from SMAN 14 Jakarta class XII-IPA 3 which was divided into 5 groups for each classes. The teacher first explains the concept of teaching aids, about the procedures for using the teaching aids and demonstrating the symptoms exhibited by the teaching aids. Furthermore, students do the assessment of teaching aids by filling out questionnaires. The average score of the second trial evaluation is 89.79% and can be interpreted very well. The following table results the validation of props users:

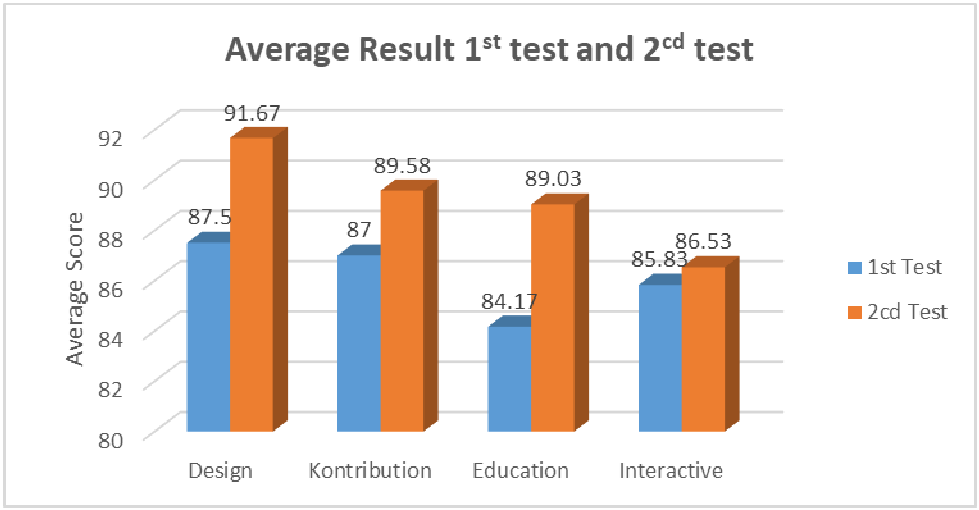

Figure 3.2 The graph of the average result scores of Test 1 and Test 2

The results of trials on students show props can be accepted and able to provide an understanding of the concept of the electric field. To see the effectiveness of teaching aids on learning, the t test was used and the result shown that the t-test is 2.81971 and the t-table is 1.66827 with a significance level of 0.05. According to these results, it is noticeable that t arithmetic> t table (t arithmetic 2.81971> t table 1.66827) and it means that H_0 is rejected and H_1 is accepted, so there is a significant influence of visual aids on learning static electricity in high school.

D. CONCLUSION

This research has succeeded in developing a teaching aid for learning electric fields in high school by using leaf flakes to demonstrate electric field lines. T-test results show there is a significant influence of the use of teaching aids in learning physics in high school.

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STRATEGY FOR IMPROVING QUALITY OF EDUCATION BY MEANS OF CURRICULUM DEVELOPMENT IN SENIOR HIGH SCHOOL

Dian Grace Puspita, diangresspuspita@gmail.com
Ariefa Efianingrum, efianingrum@uny.ac.id
Universitas Negeri Yogyakarta
diangresspuspita@gmail.com[1], efianingrum@uny.ac.id[2]

Abstract. On this disruptive millennial era, every human needs to be innovate, critical thinking and be creative. Such conditions require an increase in the quality of education which is expected to help students to think critically and can open their minds to develop their creativity and potential. Education improvement is related to the strategies implemented and what needs to be developed so that in achieving the expected quality, strategy and development have continuity and are so closely related. The study aimed to describe the strategy for improving quality of education by means of curriculum development in one of the private high schools in Yogyakarta. This research used a descriptive qualitative approach. Data collected used depth interview, observation and documentation with research informants Principal and Vice Principal of the curriculum section. The results of the study showed was that under the auspices of the agricultural foundation had special extracurricular activities. This school will focus on agriculture which is a development of the subjects of Craft and Entrepreneurship. For example in the form of processed foods that make every student able to innovation. The school also optimize the relationship between parents and the community with the school which was characterized by socialization and meetings to explain the results of curriculum development. Besides this school tried to continued developing the ability of teachers in teaching, continued trying to exist by actively providing information and capturing information through relationships with a various educators and education staff in various schools, including regarding the curriculum.

Keywords: Strategy, Curriculum Development, Quality Improvement, Senior High School

A. INDRODUCTION

Changes that occur in every aspect of community life change the community to develop and bring new things. Many factors affect a country or individual to continuously develop, one of which is the progress of science and technological development. It also becomes a challenge in education to adjust the changes that occur with the needs of future generations. Globalization also has a great impact on changes for education both in the curriculum and in the education system so that education practitioners continue to think of a good strategy and in accordance with the needs of schools to improve the quality of education. Quality education increases economic competitiveness, political vitality, and cultural

creativity, therefore every country always tries to improve the quality of its education, by also seeing that contemporary society is a factor in the progress of a country [1].

There are 4 (four) basic programs to improve the quality of education according to Bush & Coleman. As for the program include (a) Commitment to changes, where if the leader wants to apply quality then must have a commitment or determination to want to change (b) A clear understanding of existing conditions, which means that if there are failures that have been encountered in implementing these changes will be made an evaluation for the future so that they can be implemented clearly (c) A clear vision of the existing conditions, so if you want to make a change then it must be based on a vision of the challenges, needs, and opportunities to be faced in the future because the vision becomes a determinant to be used as a guide in implementing education quality programs (d) A clear plan, where there is clear planning in designing each strategy [2]. Every country has an educational standard. Indonesia as one example where has 8 (eight) educational standards.

Education must be decentralized in terms of budget and supervision, while continuing to focus on curriculum and standards . [3]. The curriculum as educational goals has a central role in the administration of education and teaching. It is the educator who is in charge of translating the written curriculum into teaching and learning activities.Students interest in critical thinking generally leads to self-efficacy or self-evaluation of one's competence to achieve the desired result [4]. In implementing the curriculum, educators are also expected to act as researchers and evaluators of the components of the curriculum and provide input for curriculum improvement if needed. From all of this it can be concluded that the purposes objectives, content, material methods and evaluation of learning outcomes are designed into an aducational program called curriculum.

Curriculum development becomes one of the benchmarks in education because it is able to provide direction for educators and students to carry out the learning process in accordance with current global competition. Suderajat who revealed that in essence the curriculum becomes a regulator and is responsible for activities in educational institutions both on schedule, the placement of teachers in the arrangement of infrastructure [5]. Therefore, curriculum development has become one of the alternatives in education to improve quality so that it can prepare each individual to create and innovate by themselves and they are able to deal with the current and future disruptive era. This school is one of the schools that is active in reforming quality schools by continuously striving to improve it's quality, marked by learning innovations such as extracurricular development through the subjects of Craft and Entrepreneurship.

B. RESEARCH METHOD

This research uses descriptive qualitative research, where researchers go directly to the field to conduct observations, interviews and documentation that tries to describe and interpret what is there [6]. This research is located in one of the private high schools in Yogyakarta with the subject of the research being the Head and Vice Principal of the curriculum section. The researcher chose this research location because this school used to have a lot of achievements and could be categorized as one of the advanced private schools but with some problems currently experiencing a decrease in quality so that it is less highlighted by the community, even though this school is still highly highlighted by the Office even always trying to again improve its quality.

Learning Craf and Entrepreneurship that is developing processed foods is a hallmark of this school, which aims to encourage every student to be creative and innovative. Thus, this research is important to re-introduce to the reader that this school has begun to rise again to continue to improve its quality by utilizing curriculum development. The source of this research data is information submitted by the research subject at the time of the study, actions taken by the research subject, and documents relating to quality improvement strategies through curriculum development. Next is data analysis which is a process of compiling data so that it can be interpreted and concluded. Research is focused on the strategies carried out by schools to improve quality through curriculum development. The analysis technique uses observation, interview, depth and documentation. Data analysis techniques using the theory of Miles and Huberman (1984), that is data reduction, data presentation, and drawing conclusions [6].

C. RESULT AND DISCUSSION

Strategy For Improving Quality Of Education By Means Of Curriculum Development In Senior High School

In essence the curriculum goals are the goals of each educational program that will be given to students so that the curriculum goals are an explanation of the results of the educational goals [7]. Every curriculum development has a goal. The aim of curriculum development is to order various teaching objectives systematically and logically with the hope that students can develop their skills and knowledge on an ongoing basis throughout the year [8]. Suparlan, defines curriculum development as the process of curriculum planning and preparation by curriculum developers and activities carried out so that curriculum results can be used as teaching materials and references used to achieve educational goals [9]. Forming the curriculum in this school has good procedures like in other schools. The curriculum development starts from the curriculum field then is socialized to the subject teachers to see if there is anything that needs to be added and revised according to the teaching methods and conditions

of the students then the curriculum is returned to the curriculum section team to be refined under the supervision and control of the Principal and then submitted to the Education of Departement for ratification.

This school has implemented a revised of 2013 curriculum and curriculum preparation is held every year. As is known the Ministry of Education and Culture of Indonesia has made improvements to the 2013 curriculum. Every improvement and development carried out by the government is aimed at producing a generation that has three competencies, that is attitudes, skills and knowledge.

[10] According to Dikbud Magazine edition 3, The are 4 (four) key points in these changes, that is:

1. Structuring the Competence of Spiritual and Social Attitudes

The revised of 2013 curriculum, emphasizes that the responsibility for tests and assessments that were originally required to be carried out by each subject teacher was revised to be only supported by Religious teachers (Spiritual Competencies) and caracter (Social Competencies). Subject teachers only need to include the report on the competency learning approach in related subjects.

2. Coherence of Core Competencies

Based on point one, there is also a continuous effect: Core Competencies become more coherent with Basic Competencies in subjects. With more coherent core competencies, there is a reduction in the burden for each subject teacher so that they can focus more on mastering material and competencies that are appropriate and subject-based, while continuing to insert character education in each learning.

3. Open Creative Space for Teachers

The next effect chain from point one and point two is that teachers become more flexible and free to design various approaches and teaching materials. Provision of creative space that makes the teacher has the right in the learning process to produce active learning. Cultivate and familiarize the 5 M thinking process (Observing, asking questions, gathering information, associating and communicating) for students supported by the education ecosystem in schools through active learning. The syllabus prepared by the government is one model to inspire. Syllabus development in accordance with the context and conditions of students can be developed by the teacher.

4. Students abilities are not limited by the taxonomy of thought processes

Before the revision of the 2013 curriculum, which adopted Bloom was restricted per level. At the elementary level only to understand, apply and study for junior high school, and create for high school. Now the taxonomy is fully implemented at all levels. So it is very possible for an elementary participant to develop high-level thinking skills in various categories of knowledge.

The revised of 2013 curriculum most related to this school is to open the creative space of teachers. The teacher is given the freedom to compile a syllabus as creatively as possible in accordance with the abilities of students and the conditions students need. In compiling the curriculum, the teacher

makes a learning enhancement plan by adjusting students' needs. With various backgrounds of students from various islands in this school there are various different characters so the teacher must be able to approach so that students feel comfortable and not bored in the learning process. The tight schedule requires the teacher to keep trying as much as possible to keep the students focused without isolating them so that the students stay in the mood. By doing so the curriculum also continues to strive to improve the professionalism of teachers in this school so that they remain enthusiastic in teaching.

This school has its own Curriculum Team in preparing its curriculum. According to Sutina, planning for improving quality in an educational institution is a plan formulated by the Principal together with a Special Team to achieve a common goal [11]. This is in line with the process carried out by this school where the curriculum team itself is the main team. The main team made an analysis together with the school principal, the student department deals with the disciplinary section and then the subject teacher as the compiler for the learning device plan and syllabus. Before the new school year the Curriculum Team developed a curriculum called Education Unit Level Curriculum which are often abbreviated as EULC . The main team made an analysis with the school principal, the students took care of the disciplinary section then the subject teacher as the compiler of the lesson plan and syllabus. Before the new school year the Curriculum Team developed a curriculum called the Education Unit level curriculum. EULC is a guide that contains what the school will do, both from the curriculum, then the government regulations that is used and its foundation, regular content and extracurricular activities, then attach the learning device plan and syllabus and according to the vice-principal this school, EULC is not the same as the 2006 curriculum.

Curriculum Development in this school goes through several stages, the first being analysis, validation, determination and endorsement. The analysis section by the school and input from the school committee. The draft that was obtained from the results of the analysis was then validated by the supervisor who contained the input. From the validation stage the school then revised it several times and made a deposit to the supervisor which was then taken to the recommendation section and the determination section. The recommendation by the supervisor is then determined by the school principal, Chair of the Committee. After that the EULC is deposited with the Department of education then it is approved, and the EULC is ready to be used after being approved. Every new school year the school also meets with parents to deliver programs such as curriculum, students and other fields.

The findings of a specific quality improvement strategy at the school through the curriculum are as follows:

1. Implementation of the 2013 Revised Curriculum

a. Specific Subjects

Private schools under the auspices of this agricultural foundation also run subjects like schools in general. In this school there are Craft and Entrepreneurship subjects which are often abbreviated as CAE. At CAE there are 4 (four) fields submitted, namely engineering, cultivation, processing and crafts. Uniquely, because this school is under an agricultural foundation, this school takes 2 sub-classes where cultivation class 1 (one), class 2 (two) and class 3 (three) study food processing. There is a difference between class 1 (satu) and class 2 (two) because previously in this school there was a local content of agriculture but now it is not allowed to add class hours because the load of class 1 (one) hours has reached the limit, so the curriculum section manages its management by dividing grade 1 in cultivation and class 2 (two) and 3 (three) food processing so that there are lessons that continue with agriculture. For class 1 (one) cultivation in semester 1 (one) of fruit plants and semester 2 (two) of vegetable cultivation, while in class 2 (two) and 3 (three) processing of plant-based food preservatives and animals.

In accordance with the interview, EULC at this school was given flexibility by the office which would later be validated by the supervisor. The school finally proposed a theme of development in agriculture. The problem is that school hours have reached 44 hours so that they cannot add more subjects while the foundation of this school does not want subjects related to agriculture to be abolished other than that this school has an MoU with one of the agricultural institutes in Yogyakarta to hold a research school related to agriculture , the hope students in this school can continue lectures at the Institute for 3 years or continue to continue school for 4 years the high school with 1 year be able to D1. This collaboration was held because some of the lecturers who were founders of the foundation teach at the Institute with an agricultural background. Thus this school is trying to continue to connect the curriculum in this school with the vision and mission of the foundation. In addition, the curriculum has its own rules so that after the school talks with supervisors, it is allowed to be integrated in the curriculum but the CAE curriculum may not be changed but developed into the extracurricular section.

b. Specific Extracurriculars

From this explanation, the school then draws on a conclusion where in the future this school will link class lessons with extracurricular activities. For example in the curriculum, the class is given a theory and the extracurricular is given a practice. The school has also held discussions with the foundation, which plans in the future this school extracurricular is no longer a theory and practice but the extracurricular is really full of agriculture, so it is not only part of CAE. It is thus planned with the aim that the foundation has the discretion, in terms of students also have the discretion to continue to deepen agricultural science. However, the obstacle of this school is the application of five working days. The school revealed that if the extracurriculars had a lot of hours there would be fatigue to the students so the school was trying to set the hours of study first. The solution to overcome obstacles if

students are bored in learning is that the school will continue to communicate and submit to the foundation to find solutions together, for example bringing assistants from the institute to fill in lessons, or bringing in institute students who have an MoU with the school to teach. This is the main point of the school's strategic plan to develop quality through the curriculum.

2. Strengthening the Human Resource / Curriculum Team as actors in implementing the curriculum

As it is known that the teacher has an important role in the learning process, the teacher is also very influential on the implementation of the existing curriculum. The Curriculum Team section continues to improve the professionalism of teachers at school. Managerial management is asking supervisors for help. The main curriculum team monitoring and encourages teachers to improve their abilities, so that the entire academic community at school is satisfied with the evaluation results from the supervisor. This school always tries to encourage each other among the community to improve the quality of the school. By trying to continue to exist through the meeting of the principal and teachers, actively sharing information in teacher groups in other schools, especially regarding the curriculum to give the impression to other schools that the school is active in finding information that is ultimately expected to be re-highlighted by the community. For example in the curriculum part of last year's Craft and Entrepreneurship section was in the spotlight.

Future improvements in curriculum development require that the research carried out address fundamental questions for the education program. Implementation of research results depends on local groups that are equipped to filter, complement and disseminate curriculum research, and sponsor curriculum research in each school and classroom [12]. The implementation of curriculum research findings depends upon local groups equipped to screen curriculumproposals, review and disseminate curriculum research, and sponsorcurriculum experimentation in individual schools and classrooms. Some things that become the base of curriculum development in this school are to prepare students to face the development of the global world. Equipping students to continue to higher education and besides fulfilling the needs of the local community and the global community. Therefore in line with the opinion of Audrey and Howard as understood by Oemar Hamalik which defines curriculum development as a learning opportunity planning that aims to bring students towards the desired changes and assess the extent to which the changes have been achieved. So it was concluded that one of these private schools was able to bounce back to improve and achieve good quality back in the past years when it was of good quality [13].

D. CONCLUSION

Curriculum, not a foreign word in the world of education. Education or learning cannot be separated from this term, because the curriculum is one component in learning. The curriculum makes

the learning process and learning will run in a structured and systematic way to achieve the desired learning goals. Curriculum development becomes very important in line with the progress of science, technology, arts and culture, and changes in society. To achieve the effective and efficient objectives of the learning, curriculum developers continue to improve and evaluate the curriculum that is implemented.

One of the private schools in Yogyakarta, including schools that triumphed in his time. With the presence of several factors the problem caused this school to decline. But from the whole school is currently improving themselves to improve quality again. With the implementation of the 2013 curriculum the school hopes to be able to produce students who are smart, active and think critically and are ready to face global challenges going forward. It is thus marked by this school developing processed foods of students' own work in the form of processing agricultural products such as making cakes from cassava, so students are required to be able to be independent and creative. In general, curriculum development in this school is already good because it is able to clean up and start to re-improve its quality. It is marked that in the future, it will plan to develop a strategy which focuses extracurricular activities in agriculture from developing the subjects of Craft and Entrepreneurship (CAE) It's just a few that need to be noted that the availability of educational staff who have not been optimal and also the number of students is still very lacking because it is influenced by several problems.

Finally, using experiments and research to improve the quality of teaching in various fields; for example guidance, teacher preparation, curriculum, etc. are some of the choices that can be made by educational practitioners in improving the quality of education. Give space to students to develop their creativity into a solutive step to overcome the negative effects of globalization that will continue to make humans more focused on technology, especially in the world of work.

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DEVELOPMENT OF INTEGRATED CURRICULUM DESIGN FOR GEOPARK CONTENT TO TRANSFORM INDIGENOUS KNOWLEDGE FOR CURRENT AND FUTURE GENERATIONS IN ORDER TO CONTRIBUTE TO THE SUCCESS OF THE UNESCO GLOBAL GEOPARK GOALS

Prihantini[1] and Deti Rostika[2]
Indonesian Education University Cibiru Campus
prihantini@upi.edu, derosti@upi.edu

ABSTRACT

Based on geological studies, Indonesia's position is sandwiched between three giant earth plates, namely the Australian Indian Ocean Plate, the Eurasian Plate and the Pacific Plate. This unique characteristic is an excellence potential as well as a challenge to develop the intelligence of the lives of current and future generations. The excellence potential is indegenous knowledge that needs to be transformed through education because education acts as an effective medium for the transformation of knowledge, life values, and the potential of natural resources in the environment in which the generations live. To guarantee the sustainability of indigenous knowledge in education, it is necessary to develop a written curriculum because the curriculum is a major component of education to be used as a guide in the education process. Since 2015, UNESCO Global Geoparks (UGGp) has facilitated countries in the world to develop geoparks. UGGp aims for conservation, education and sustainable development. UGGp views education is important and as a "vital engine" to transform the values contained in geopark. In Indonesia there are four UGGp, one of which is Ciletuh Palabuhanratu UGGp. Considering the important role of the curriculum to transform the values contained in geopark through education, the general research objective is to develop an integrated curriculum design of geopark content. The research location was Ciletuh Palabuhanratu UGGp, Sukabumi Regency. The specific objectives of the research are: (1) identifying the characteristics of the local superiority values of Ciletuh-Palabuhanratu Geopark; (2) designing an integrated curriculum geopark content for elementary school level; (3) validating the design of integrated curriculum geopark content of elementary school level. The research method applied Design and development research (D&D research). The research respondents consisted of 51 people, consisting of eight elementary school supervisors, five UGGp managers who are members of the Sukabumi Pakidulan Nature Society (PAPSI), 37 elementary school teachers, and 1 person of geopark expert. Data collection techniques used observation in eight UGGp location subdistricts and geopark artifacts to identify the values of geopark contents, interviews to the members of the Sukabumi Pakidulan Nature Society (PAPSI), and focus group discussions (FGD) to validate and evaluate integrated curriculum designs. Data analysis techniques apply qualitative data analysis, namely data reduction, data display, verification and conclusion. The results of the research identified three pillars of geopark content that can be integrated in the curriculum, namely geodiversity, biodiversity, and cultural diversity. Integrated curriculum design geopark content for grade 1,2,3 elementary schools integrated into subjects of Indonesian Language, Culture and Arts lessons, Physical Education, Sports and Health. For grade 4,5,6 elementary schools integrated into subjects of Indonesian Language, Social Sciences, Natural Sciences, as well as Cultural Arts and Crafts. Recommendations based on the fact finding of the geopark potential and the resulting curriculum design, the Regent of Sukabumi is expected to be able to make regulations of the integrated elementary school curriculum for geopark content can be implemented at the elementary school level in Sukabumi Regency.

Keywords: integrated curriculum, geopark, indigenous knowledge.

A. INTRODUCTION

Based on geological studies, Indonesia's position is sandwiched between three giant earth plates. From the south, the Australian Indian Ocean Plate moves northward urging the Eurasian Plate, from the east side of the Pacific Plate pushing westward and interacting with the Eurasian Plate (Brahmantyo, 2014). The existence of these diverse characteristics makes Indonesia unique in each region. Various uniqueness that is owned by each region, can be unique in terms of geology, natural resources, natural environment, and social culture. The characteristic of this uniqueness has the potential as a local advantage that needs to be protected and maintained because it is beneficial for the survival of the creatures around it. One of the uniqueness that becomes the focus of attention to be studied is the unique geology that is owned by Sukabumi Regency geopark. Since 2018 Sukabumi Regency has been designated as one of the UNESCO Global Geoparks (UGGPs) under the name Ciletuh Palabuhanratu UNESCO Global Geopark (Ciletuh Palabuhanratu UGGP).

Geopark in terms of the unique appearance has the meaning behind the shape and process of geological formation. Geopark consists of a number of geological diversity that has special scientific interests, rarity and beauty, which is known as geological heritage. In its development, geopark is not only related to geological diversity but also includes archaeological, ecological, historical or cultural values (Oktariadi, http://lansdspatial.bappenas.go.id/km/files/ 2014111361357). Therefore the knowledge and values behind the geopark's appearance need to be transformed to the younger generation.

UGGPs aim to contribute to the achievement of SDGs through education. Based on these objectives the Education for Sustainable Development Goals (ESD) program was established and is the main agenda of the UGGPs. ESD functions as a means to empower young people to be able to make responsible decisions and actions in the form of integrity to the environment, contribute to economic and community viability, and respect for cultural diversity that is very beneficial for current and future generations. In the process of education, the younger generation is directed to learn about how to live on a planet that has a unique appearance, and behind it is potentially dangerous for its inhabitants, but within it has social, economic, and cultural literacy values. An understanding of these values contributes to the aims of sustainable development goals (SDGs) for the future of the younger generation. Thus UGGPs are integrated geographical areas that need to be managed holistically in terms of protection, education, and sustainable development (UNESCO, 2016). As stated by Dong, H et al (2013) the main objectives of UGGPs are as follows.

> "The major purpose of establishing geoparks is to concerve Earth's geoheritage, educate the public and promote the socio-economically sustainable development of the local community. That is, geopark should be a sustainable development model for the preservation of geoheritage" (http://dx.doi.org/10.1016/j.quaint).

Based on these objectives, knowledge about the values contained in the geopark needs to be transformed to the younger generation through education. To be able to guarantee the implementation of the transformation process of geopark values to the

younger generation is through the process of education in schools. The main component of education in schools is the written curriculum, because without a written curriculum it cannot be guaranteed a continuous education process. However, based on the results of the study through interviews and document analysis, Sukabumi Regency has not documented in writing the integrated curriculum of geopark content. Therefore, to maintain the continuity of the education process it is necessary to have a written curriculum document integrated with geopark content.

Based on the above problems, it is necessary to develop an integrated curriculum of Geopark content. Through the educational process that is complemented by a written curriculum, the younger generation of Sukabumi Regency is prepared to have the provision of knowledge, attitudes, and skills related to the potential superiority of the area where they live so that it is useful for themselves, the community, and the State.

The Nature of Geopark

The broad definition of geopark is the concept of regional development in which several geoheritage potentials located close together in the area that have been built, are managed by integrating conservation principles and existing spatial plans from the government (https://www.iagi.or.id). Another opinion said that geopark is an area that has geological elements where the local community also has a role to protect and enhance its function (https://pesona.travel/ke Wonder/1027/geopark-taman-bumi-yang-when-pot-potential). Geopark is a management concept of sustainable regional development that harmonizes geological, biological and cultural diversity through the principles of conservation and Regional Spatial Planning (Rosana, Agusta, and Abdurahman (2016). Thus, geopark is a geographical area that has geological diversity and requires protection to be a capital of sustainable development and needs to be transformed through education.

UNESCO's idea of geopark is one of the sustainable development media to realize the welfare of the community by combining three diversity, namely geological, biological and cultural diversity. These three diversity are known as the 'Three Pillars of Geopark Development'. The three pillars of geopark development need support from the aspects of policy or regulation, infrastructure, community empowerment. The three pillars of Geopark and carrying capacity can be illustrated through the following picture.

Figure 1. Three Pillars of Geopark and Supporting Development Capacity
Modification of Oktariadi Images (http://lansdspatial.bappenas.go.id/km/files/2014111361357)

Development of the Integrated Curriculum for Geopark Content

Curriculum content is what must be learned and becomes a learning experience for students including the value knowledge that students must learn. When determining 'content', the question that arises is how do students know to be able to achieve educational goals. Ornstein and Hunkins (2009), call it 'what knowledge students need to succeed'. Based on this basic understanding, 'content' can be defined as the content of the learning process and what is learned by students to achieve goals. Ornstein and Hunkins (2009) put forward the definition of content as follows.

> "Content (subject matter) is a compendium of facts, concepts, generalizations, principles, and theories. It also incorporates methods of processing information. Curricular content provides students with opportunities for discovering knowledge. Content is selected from knowledge domains".

The definition above views 'curriculum content' is a summary of facts, concepts, generalizations, principles, and theories, including how to process information to give students the opportunity to find knowledge. In essence, the knowledge adopted in the curriculum becomes curriculum content. Thus if education aims to build human resources that understand geopark and are aware of contributing to sustainable development in their area, then domain selection of knowledge, attitudes and skills oriented to the three geopark pillars is needed to be learned and taught to young generations.

The development of curriculum content has an impact on the quality of education, so does the quality of education affect the quality of human resources. Therefore, to improve the quality of human resources, it is necessary to develop quality curriculum content. This is consistent with UNESCO's statement that 'curriculum content is another main level of quality education' (http://www.unesco.org/new/en/education).

Integrate Geopark Content in Elementary School Curriculum

As explained earlier that geopark stores a number of knowledge that is useful for young people. Based on the three pillars of geopark shows not only save the potential of natural wealth but a number of knowledge, theories and concepts, values, and skills that are very important to be transformed to the younger generation. This shows that knowledge, theory and concepts, values and skills stored in geopark can be used as local content curriculum.

Local content is a curricular activity to develop competencies that are adjusted to the characteristics and potential of the region (Ministry of Education and Culture, 2006). The local content curriculum aims to create educational programs whose content and delivery media are linked to the natural environment, social environment, and cultural environment and regional needs. Thus it can be interpreted that the local content curriculum is a curricular program implemented by schools to enrich students' learning experiences about the social environment and their place of residence, both in terms of knowledge, values, and skills.

Regional obligation to elevate the potential advantages possessed into the contents of the local content curriculum has been guaranteed in the National Education System Law Number 20 of 2003 and stipulated in Minister of Education and Culture Regulation

Number 79 of 2014. The regulation states that each region is given the authority to develop local content curriculum in accordance with the characteristics of excellence owned. Paying close attention to these regulations, regions that have geopark potential as Sukabumi Regency, are very potential and strategic if the values of knowledge stored in geopark potential are made into the contents of the Regional Local Content curriculum. Geopark has a very valuable potential advantage to shape the personality of future generations, as the research findings of Forsani et al (2011) "*geopark as an innovation for the protection of natural and geological heritages, play an important role in the development of geotourism* (https://onlinelibrary.wiley.com).

Sukabumi Regency Geopark has been registered as UNESCO Global Geoparks (UGGPs) under the name Ciletuh-Palabuhanratu UGGP. This fact is a challenge as well as an opportunity to make the potential of the values of knowledge that exist in the geopark become the contents of the local content curriculum. Local potential that received international recognition is a great opportunity to be maintained, therefore one of the strategies to maintain is to transform the younger generation. To be transformed sustainably, a written curriculum is needed through the local content curriculum containing Geopark. This is in accordance with the goal of UNESCO to form UGGPs namely to succeed in Education for Sustainable Development Goals (ESD).

The local content curriculum is integrated with geopark in essence to include the values of excellence contained in the potential of geopark into the written curriculum and educational process. The local potential of geopark received international recognition because of its advantageous values which have very distinctive characteristics compared to the potential of other regions. The value of local superiority is important to be transformed to the younger generation as follows.

> *It's local, and it's connected to students in a way that they can identify with. It's either a problem in their community or an event that's happening, or it could be a geological phenomenon. But it's something that they're familiar with… So it means something to them. And then we ask questions about it. (*http: // www / ourcurriculummatters.com/2014/4/18).

The definition above is that the contents of the curriculum that are local, provide an opportunity for young people to identify problems or events that occur and can also geological phenomena that occur in the neighborhood. The contents of education in the local content curriculum are all events that occur in society both related to environmental education, community culture, and socio-economic conditions that exist in the community environment. Through these activities become something meaningful for the younger generation. This means that the younger generation is made capable of interpreting events or phenomena that occur in their environment and gain learning experience about knowledge that is the basis for behaving and acting towards the potential that exists in their neighborhood. That the younger generation is able to interpret the events they experienced means that they have gone through a learning process, because the environment provides natural phenomena and social events.

The phenomenon or event is a potential factor that provides experience and gives birth to local community knowledge (indigenous knowledge). Indigenous knowledge or

local knowledge includes a variety of ways to cope with life including nature conservation. Independent knowledge is original knowledge that is useful for regulating human life, both regulating human relations in a society and human relations with nature (Sibarani, 2012). Indigenous knowledge relating to nature conservation makes people aware as an inseparable part of the universe and recalls their humanitarian mission as responsible for the sustainability of the universe (Amien, 2005).

Talking about problems that exist in the community or local nature that can be transformed to the younger generation are values of excellence. The values of local excellence can be extracted from the potentials possessed by geoparks and are characteristic. This potential is anything that characterizes regionalism including aspects of economy, culture, information technology, communication, ecology (Asmani, 2012). Local excellence can be expanded again is the results of the earth, artistic creations, traditions, culture, services, services, natural resources, human resources, or others that become the advantages of an area (Asmani, 2012).

Formulation of the Problem

The formulation of the research problem is the values of excellence that exist in the geopark to be appointed as the contents of the local curriculum. The research questions were formulated as follows.

1. What excellence values can be identified from the geopark to be able to be loaded into the local content curriculum of the Sukabumi Regency?
2. What is the design of the geopark content in the local content curriculum at the elementary school level?
3. What are the results of the design validation of the local content curriculum for geopark-filled regions in elementary school?

Research purposes

1. Identify the characteristics and verify the values of local excellence of Ciletuh-Palabuhanratu Geopark Sukabumi Regency.
2. Designing geopark geo-tourism content in the MULOK curriculum for Primary Schools.
3. Validate the design of the MULOK curriculum.

B. RESEARCH METHODS

In accordance with the research objective is to design geopark content in the local content curriculum at elementary school level. To achieve these objectives, the research method that will be applied is Design and Development Research (D&D Research). The steps of the D&D research method are as follows.

Figure 2. Design of D&D Research

The research location was Sukabumi Regency, specifically eight geopark area sub-districts, including Palabuhanratu, Cisolok, Cikakak, Simpenan, Waluran, Surade, Ciemas, and Ciracap Districts. Map of the research location as shown in the following map.

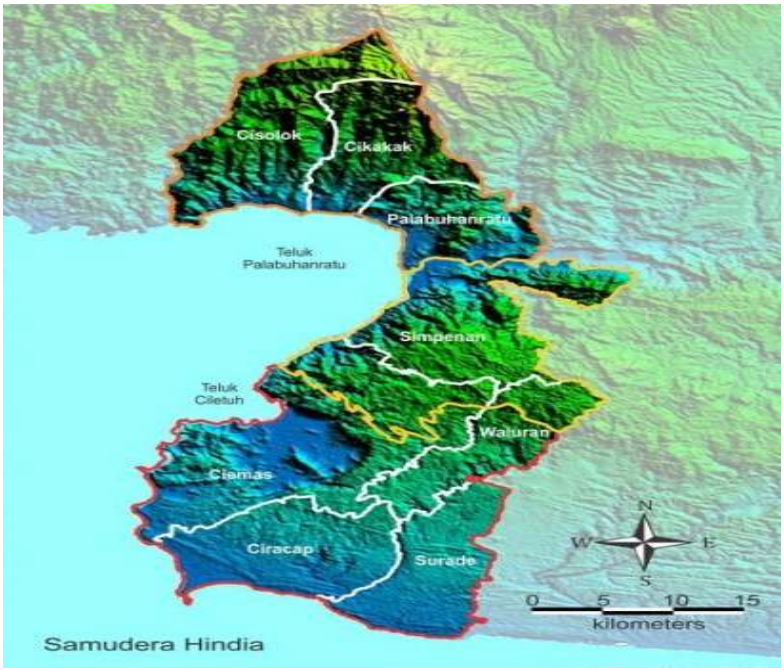

Figure 3. Map of Geopark Location in 8 Subdistric Sukabumi Regency
Source:(httpsi0.wp.comc1.staticflickr.com5439936052676493_bdf89dedf0_b.jpgresize.jpg)

The population includes members of the Pakidulan Sukabumi Nature Society (PAPSI), elementary school supervisors, elementary school principals, and elementary school teachers in eight sub-districts of the Ciletuh-Palabuhanratu Geopark region. The research sample was determined by proportional random sampling. The research respondents consisted of 51 people, consisting of eight elementary school supervisors, ten elementary school principles, five UGGp managers who are members of the Sukabumi Pakidulan Nature Society (PAPSI), 27 elementary school teachers, and 1 person of geopark expert.

C. RESEARCH RESULTS

The local excellence geopark values found based on the results of observations, interviews, and document analysis are as follows.

Table 1. Descriptions of Geopark Local Excellence Values

No	Geopark Pilars	Description of Exelence Values	Location
1.	Geodiversity	Landscape (landscape), small islands (Mandra island, Manuk island, Karang Daeu), cave (Lalay cave, Monkey cave,	Ciemas, Ciracap, Waluran, Simpenan, Surade, Palabuhanratu, Cikakak, Cisolok.

No	Geopark Pilars	Description of Exelence Values	Location
		Gunungsungging cave, Cukcrukan cave, Maung cave and lava pillow), rock outcrops (rock dragon, batik stone) , types of rocks, waterfalls (Curug), beaches, sea, hills, geysers.	
2.	Biodiversity	Raflesia flowers, Cipecang forest, green turtle conservation, Cikered wildlife sanctuary, hanjeuli village.	Ciemas, Ciracap, Waluran, Palabuhanratu
3.	Cultural diversity	Traditional village (Sirnaresmi, Cipta Gelar, Cipta Mulya, Banten royal heritage artifacts)	Cisolok, Ciemas

D. DISCUSSION

Three pillars of geopark, including geodiversity, biodiversity, and cultural diversity. Geodiversity is a legacy (geoheritage) for a community around it and a nation (http://landspatial.bappenas.go.id) and Smith, H (2001). The potential of geopark can be said as local wisdom because it has aspects of earth, therefore it needs to be appointed as curriculum content. Proven identification results that the appearance of geodiversity store a variety of values of knowledge that are important to learn by young people. The values of knowledge include the process of the formation of landscapes and other natural features, the value of beauty and aesthetics, the value of benefits for the lives of people and living things around them.

The values of knowledge stored in biodiversity are the importance of preserving animal and plant habitats for the balance of ecosystems that are beneficial to people's lives. Cultural diversity identified the values of local wisdom including the values of art, and the best practices of social relations in the traditional villages.

Based on these findings an elementary school curriculum analysis was conducted to find integrated subjects and themes what geopark excellence values. The curriculum currently in effect for Elementary School level is the 2013 Curriculum. Characteristics of the 2013 primary school curriculum are the available subjects, core competencies, basic competencies of subjects, and list of themes and sub-theme at each grade level. The results of the curriculum analysis are followed up by making the local content curriculum design integrated with geopark content.

E. CONCLUSION

Geopark content includes three geopark pillars, namely geodiversity, biodiversity, cultural diversity. The content can be integrated into existing subjects in the 2013 Elementary School Curriculum. Geopark content can be integrated in Indonesian subjects, Culture Arts and Craft in the curriculum for grade I, II, III of Elementary Schools. For

grade IV, V, and VI, geopark content can be integrated in Indonesian, Natural Sciences, Social Sciences, Culture Arts and Craft subjects.

Pencaksilat art is one of the aspects of content skills oriented to cultural diversity, however, it is not possible to be integrated in subjects, but separate or independent curriculum needs to be arranged. Skills related to geological hazards is also not possible to be integrated in subjects but need to be arranged in a separate or independent curriculum. The essence of the development of local content curriculum there are two alternatives, which can be integrated in the subjects or arranged separately from the subjects. Written curriculum of pencaksilat skills and geological hazards skills can be arranged separately from the subjects but in its implementation can be integrated with scout extracurricular programs.

Recommedation

The Sukabumi Regent should make a regulation regarding the implementation of the Integrated Curriculum Design for Geopark Content, so that all schools in Sukabumi Regency apply it in teaching and learning process.

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LESS ENERGY "ELECTRIC FOGGING" TO ERADICATE DENGUE HEMORRHAGIC FEVER MOSQUITOES

Suko Pratomo, sukopratomo@upi.edu
Yuyu Hendawati, yuyuhendawati@upi.edu
Tati Sumiati, tatisumiati@upi.edu
Fitri Nuraeni, fitrinuraeni@upi.edu
Suprih Widodo, supri@upi.edu
Nuur Wachid Abdul Majid, nuurwachid@upi.edu
Suhara Iskandar, suharaiskandar40@gmail.com
Universitas Pendidikan Indonesia Purwakarta Campus
Jl. Veteran No.8 Nagritengah Purwakarta, West Java Indonesia
sukopratomo@upi.edu

ABSTRACT

Based on data from Indonesian Health Ministry, it was found that throughout July to August 2015, there were 1781 people suffered Dengue Hemorrhagic Fever (DFH) with 54 fatalities in 14 provinces. DHF is a disease caused by dengue virus which is transmitted from one patient to another, spread by Aides Aegyptus mosquitoes. Steps that can be taken to prevent the spread of DHF is to cut the spread cycle by eradicating the mosquito. One way to eradicate the Aides Aegyptus mosquito is through Fogging. This research is limited only by developing fogging machine to eradicate DHF. This tool is an innovative one because it is portable and can be developed as needed. Thus this portable fogging tool can later become an Intellectual Property Rights and can be reproduced for the needs of the community in order to eradicate the spread of DHF.

Keywords: Electric Fogging, Dengue Hemorrhagic Fever

A. INTRODUCTION

Dengue Hemorrhagic Fever (DHF) is now endemic, thus no wonder if this disease causes panic in the community. This is because this disease has claimed many lives. Based on data from the Indonesian Health Ministry, throughout July to August 2015, there were 1781 people suffered Dengue Hemorrhagic Fever (DFH) with 54 fatalities in 14 provinces. DHF is not a new disease, seven years ago this disease also infected 27 provinces in Indonesia causing 16,000 people to suffer and 429 people died. WHO even estimated that 50 million people in the world, especially small children with frail immune, infected with dengue every year. Dengue Hemorrhagic Fever (DHF) is dengue fever accompanied by enlargement of the liver and manifestations of bleeding. In severe circumstances blood circulation failure can occur and the patient falls into hypovolemic shock due to plasma leakage. DHF is a disease caused by dengue virus which is transmitted from one patient to another, spread by Aedes aegypti mosquitoes. Therefore, steps that can be taken to prevent the spread of DHF is to cut the spread cycle by eradicating the mosquito. One way to eradicate the

Aedes aegypti mosquito is to do Fogging. Another way that can be done is Eradication of Mosquito Nest (Pemberantasan Sarang Nyamuk) and using *abate* to eradicate mosquito larvae. One of POSYANTEK Work Program in West Dawuan for 2017 is to become one of the institutions that pays attention to the many DHF cases and the inability of the local government to carry out fogging activities due to the limited means. This condition motivates this institution to be responsible for preventing the spread of this disease through innovation by creating simple fogging tools and at an affordable price for the community is done. As a form of concern, a program was carried out to create simple fogging machine in several areas. The implementation of fogging is based on requests from the public.

B. LITERATURE REVIEW

Dengue fever is caused by one of four different virus serotypes with different antigens. This virus is a group of flaviviruses and its serotypes are DEN-1, DEN-2, DEN-3, and DEN-4. Infection by one of these genotypes will provide lifelong immunity but does not cause immunity against other serotypes. So that someone who lives in DHF can be infected 4 times in his lifetime. The diagnosis of DHF is based on clinical criteria of diagnosis according to WHO 1986 (Rezeki SH, et al, 1999) which consists of clinical and laboratory criteria.

Clinical criteria includes: 1) sudden high fever, without apparent cause, lasts continuously for 2-7 days; 2) bleeding manifestations, including positive tourniquet tests, petechial, ecchymosis, epistaxis, gum bleeding, hematemesis and / or melena; 3) enlarged heart; and 4) shock, characterized by rapid and weak pulse and decreased pulse pressure, hypotension, cold feet and hands, moist skin and the patient looks agitated. While laboratory Criteria includes: 1) thrombocytopenia (100,000/mm3 or less); and 2) hemo-concentration, can be seen from an increase in hematocrit of 20% or more according to age and sex standards.

DBD quickly spreads from one patient to another, this is due to the role of the Aedes aegypti mosquito as the spreader of this disease. Even one mosquito bite that carries the disease virus is able to transmit the disease to healthy people. The mosquito that plays a role in dengue transmission is the Aedes aegypti mosquito. This mosquito lives in tropical and sub-tropical regions such as Asia, Africa, Australia and America. This mosquito lives and breeds in clean water reservoirs that are not directly connected to the soil such as bathtub, Bird drink containers, tendon water, water jars, cans, old tires and so on. The development of Aedes aegypti mosquitoes from eggs to adults takes about 10-12 days. Only female mosquitoes bite and suck blood as well as choose human blood to ripen their eggs. Age of female Aedes Aegypti mosquitoes ranges from 2 weeks to 3 months or an average of 1.5 months, depending on the temperature and humidity of the surrounding air. Its ability to fly ranges from 40-100 m from the breeding site. The preferred place for mosquitoes is hanging objects in the house such as curtains, mosquito nets and clothes in dark and damp rooms. The density of mosquitoes will increase during the rainy season, where there is a pool of clean water that can be used as a breeding ground for mosquitoes.

The rainy season has reached its peak and now there is a lot of news about dengue hemorrhagic fever (DHF) which is endemic in various regions and has killed many people. To ensure that this disease does not have a greater adverse impact, the government is increasingly promoting fogging

or fumigation in various places to reduce the number of Aedes aigepty mosquitoes which are the main causes of DHF. Therefore, this research aims to produce a portable fogging tool to combat the spread of DHF that also can be used as a learning media Science and Environmental Education. Yet, the problem in this research is limited to how to develop portable fogging machine to eradicate the spread of DHF.

C. METHODOLOGY

This research was carried out from June to December 2019 in UPI Purwakarta. In this research the R & D (Research and Development) approach is used, which intends to develop a DHF mosquito repellent tool so that it can be used as a learning media for Science and Environmental Education. The R&D approach is used due to several reasons: first the researcher wants to develop a DHF mosquito repellent device, and the tool will be used as a learning media for Science and Environmental Education, especially for students in Elementary Teacher Education Program (PGSD) In UPI Purwakarta.

The procedure adopted in this study refer to research and development (R&D) according to Sugiyono (2009: 298) and Borg and Gall (2003: 625). According to Borg and Gall (2003: 569):

Research and development is an industry-based development model in which the finding of research are used to design new products and procedures, which than are systematically field-tested, evaluated and refined until they meet specified criteria of effectiveness, quality, or similar standards.

Research designed using the R&D approach, as Borg & Gall (2003: 624) argues, is "a process used to develop and validate educational products". This understanding implies that research and development method is, in principle, a process for developing a research product, and then validates the product. This means that research and development methods are applied to produce products and test the effectiveness of the product.

The product development is carried out using ADDIE models, namely: Analysis, Design, Development, Implementation, and Evaluation as can be seen on Figure 1.

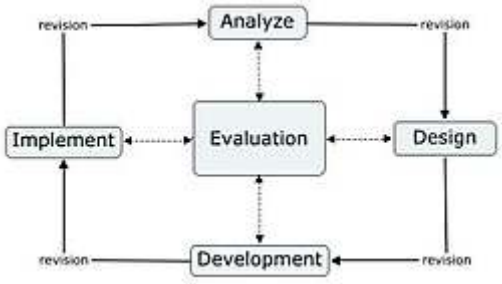

Figure 1. Instructional Design Development

In this research the product trials are intended to test product reliability and it is conducted in Purwakarta Regency. While the functionality test was carried out at UPI Purwakarta Campus in the Environmental Education Course.

Data collection techniques were carried out through: (1) interviews; (2) questionnaire; (3) observation; and (4) documentation.

D. RESULTS

The following are the tools and materials needed to make less energy electric fogging machine:

Smoke Machine – 400 Watts

DC to AC Inverter – 220 Volts 1000 Watts

Dry Cell Battery 12 Volts 7 Ampere

Battery Charger

Liquid smoke juice

The smoke machine used is a smoke machine with specifications using 220V voltage with a heat capacity that requires 400 Watts of power, equipped with a liquid thrust pump and a thermostat sensor to regulate the heat temperature level that cut the electrical power source if the heater is too hot and regulates liquid pump to flow. The power inverter has function to change the voltage from DC 12V to AC 220V so that the smoke machine can operate. Dry cell battery 12V battery is used for main power as the main source and then converted to 220V voltage. Battery charger is used to

charge the battery after used or the amperage has run out in the battery. Smoke juice liquid is a mixing liquid so that the potion can become smoke easily.

In order to make the fogging machine portable, smoke machine that uses AC 220V power must be given a source that can be brought mobile too. Therefore, batteries with 12V DC voltage is used. In order to be able to change the power into AC 220 V so the inverter is needed. By doing so the voltage can be changed to 220V AC with 1000 W power. When warmed up, this tool requires high voltage, thus it is necessary to use AC voltage 220 which has a large power capacity. After heated (warmed up) about ± 2 minutes, the voltage current is diverted using a DC voltage that has been prepared and then it can be used outdoors to begin fogging in a room or area with dengue fever symptoms.

Figure 2. Tools set up

Making an electric fogging machine requires the following steps:

Table 1. Electric Fogging Machine in the Making

No	Steps	Description
1		The CPU frame that is assembled as a container is prepared

2		The tool is connected to the inverter
3		Trafo (inverter) 220 W is inserted
4		A fuse for safety
5		Turning on the machine

6		Smoke Juice become smoke
7		Press the button to start fogging
8		Maximum spray results for approximately 30 minutes
9		The charger is connected to the socket as a supply

10		In the case of charging, please make sure it is not too long
11		Machine refinement to ensure that component placement is more concise and the overall machine can be more effective and efficient

E. CONCLUSION

From the previous elaboration, it can be concluded that the less energy electric fogging machine can be constructed with aforementioned tools and materials. Furthermore, this machine can be used effectively and efficiently to reduce the appearance of mosquito around fogged area, that might lead to the reduction of DHF symptoms. In addition, this machine also can be used as a learning media in Environmental Education course.

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EFFECTIVENESS OF ACTIVE LEARNING TO IMPROVE BIOLOGY HIGHER ORDER THINKING SKILLS (BIOHOTS)

1) Vina Septiani, vina11septiani@gmail.com
2) Paidi, Paidi@uny.ac.id
Biology Education Department, Graduate School of Yogyakarta State University, Yogyakarta, Indonesia

vina11septiani@gmail.com

Abstract. The application of active learning to improve Biology Higher Order Thinking Skills (BioHOTS) has been widely carried out in Indonesia, starting from the level of secondary school to college. In general, research materials are the environment. This study aims to gather information about the types of active learning in enhancing BioHOTS. This research applied a meta-analysis method with a qualitative approach producing descriptive data through document analysis. Data were collected from international journals indexed by SCOPUS, with Quartile (Q) 1-4, in the last five (5) years. Data analysis was performed by calculating the percentage of the same findings. Active learning that could be used to measure HOTS from the dimension of thinking skills (critical and creative) was Blended Project-based Learning; Orientation, Identify, Discussion, Decision, and Engage (OIDDE); Problem-based Learning (PBL); Differentiated science inquiry+mind map (DSI mind-map); and Project-based Learning (PjBL). Active learning that could be used to measure HOTS from the cognitive level was Inquiry and Concept mapping. Meanwhile, the active learning that can be used to measure HOTS from the knowledge level was Synectic. The most widely used learning media with active learning was LKPD.

Keyword: *HOTS, biology, active learning, LKPD*

A. INTRODUCTION

Higher order thinking skills (HOTS) have to be possessed by students to face the industry 4.0 era [1]. It is supported by Gelven & Stewart [2] who states that schools and colleges have developed students' HOTS enabling them to work and study for life. If schools and colleges do not equip students with HOTS, then the graduates will not be ready to overcome real-life issues.

HOTS occurs when someone connects and develops their background knowledge with newly gained information to address unfamiliar issues [3]. Based on the dimension of thinking skills, HOTS covers critical thinking and creative thinking [4]. Then, based on the cognitive level, it consists of analysis, evaluation, and creation, while based on the level of knowledge it comprises conceptual, procedural, and metacognitive [5].

Based on the Program for International Student Assessment (PISA) and Trends in International Match and Science Survey (TIMSS), Indonesia is always on the lowest rank. A survey conducted by the Organization for Economic Cooperation and Development (OECD) in 2015 found that Indonesia's rank in PISA was 64 out of 72 countries with a score of 403 in science. Then, another survey by the International Association for the Evaluation of Educational Achievement (IEA) in 2015 revealed that Indonesia's rank in TIMSS was 45 out of 48 countries with a score of 397 in science. The results of both surveys indicate that Indonesian students' scientific literacy is relatively low. The process, content, and application of science are still far from the target. Moreover, the thinking skills are still limited to remembering, understanding, and applying, meaning that students' thinking skill is in the level of Lower Order Thinking Skills (LOTS).

Currently, the workers must have HOTS to compete globally and face challenges in the industry 4.0. era. As in the future, factories will mostly use the robot system thus the number of employment decreases for workers without HOTS. It is in line with Sani [6] who states that the industry 4.0 era will reduce employment by 800 million up to 2030 throughout the world. Therefore, it will be a threat to many countries, particularly Indonesia that has a high number of workforces.

HOTS cannot be acquired instantly by students. To develop HOTS, they need to be regularly trained through various learning activities. Hence, it's clear that educators played a crucial role in this case. Educators have to find out the ways, strategies, or methods to develop students' HOTS [7]. Sunal & Haas [8] confirm that in developing HOTS, educators should not only focus on students but also the strategies in implementing learning activities in the classroom.

Active learning is designed to make students actively learn, both in teams and individually [9]. The active learning that makes students active in accessing knowledge can be utilized to develop HOTS [10]. The application of active learning to measure students' HOTS has been widely explored by researchers. Nargundkar et al. [11] used Guided Problem Based Learning to improve critical thinking skills; Raiyn & Tilchin [12] used Problem Based Learning (PBL) to improve analytical skills and creative thinking; Salem [13] used flipped classroom to improve analysis, evaluation, and creation skills; and Manurung et al. [14] used Snowball Throwing to improve creative thinking skills.

However, not all active learning methods are suitable for all subjects [15]. Pardamean [16] found that Problem Based Learning (PBL) did not improve dental students' critical thinking skills; Zarifsanaiey, Amini & Saadat [17] revealed that simulation-based training and integrated training (simulation and critical thinking strategies) did not improve nursing students' critical thinking skills. Hence, to improve students' HOT, it is crucial to select a suitable active learning method based on the characteristics of the subjects.

HOT can be improved not only through active learning but also through other methods. Learning will be more effective if educators use varied learning media such as books, television, multimedia, and computers [18]. Learning media facilitates communication between teachers and students during the teaching and learning activities. Each type of learning media has its own characteristics, advantages, and disadvantages. Therefore, in selecting the learning media, teachers have to consider the characteristics of the subject and the facilities and infrastructure available at schools [19].

It has been stated earlier that many studies concerning the development of HOTS through active learning have been conducted in various fields of study. Therefore, the current study focuses on active learning to develop Higher Order Thinking Skills of Biology (BioHOTS). The research questions of the study are:

1. In the BioHOTS research, what are the active learning used in measuring BioHOTS based on the dimension of thinking skills; cognitive level; and knowledge level?
2. In the BioHOTS research, what are learning media used in the application of active learning?
3. In the BioHOTS research, what are the education level of the research samples?
4. In BioHOTS research, what are the biological materials used?
5. In the BioHOTS research, where is the common location of studies, in the country or abroad?

2. RESEARCH METHOD

2.1. Research design

This research applied a meta-analysis method with a qualitative approach that generated descriptive data through document analysis [20]. In line with the aims and research questions of this study, document analysis made it possible to have a general overview regarding the objects of the previous studies [21].

2.2. Data source

The reviewed articles were from international journals indexed by SCOPUS indexed with Quartile (Q) 1-4. The scientific influence of the journal was previously checked through Scimago Journal & Country Rank (SJR). The researchers prepared document analysis forms to classify information based on research questions, namely: active learning in measuring Higher Order Thinking Skills of Biology (BioHOTS) based on the dimension of thinking skills; cognitive level; and knowledge level; learning media used in the application of active learning; education levels of the research samples; Biological materials used in the research; and the location of the research.

2.3. Data collection

Data were collected from January 1st, 2014 - October 1st, 2019. Keywords used in searching for the articles were: active learning AND higher order thinking skills, active learning AND critical thinking, active learning AND creative thinking, active learning AND cognitive process, active learning cognitive product. The authors typed these keywords in the Educational Resources Information Center (ERIC), ProQuest, the Directory of Open Access Journal (DOAJ), ScienceDirect, and Google Scholar.

2.4. Data analysis

To collect accurate data, the authors analyzed the abstract, results, discussion, and conclusions of each article. After the data to address the research questions were collected, they were tabulated to find the frequency and percentage. Frequency showed the number of journals with similar findings, while the percentage was gained by dividing the frequency by the total number of journals and multiplied by 100%.

3. RESULT AND DISCUSSION

3.1. Active learning to measure Higher Order Thinking Skills of Biology (BioHOTS) based on thinking skills, cognitive level, and knowledge level

The development of HOTS is closely related to the learning process. If teachers only use a monologic approach in the learning process, then the students will have a minimum role compared to the teachers. Thus, it limits the students' skills to think and act. As a result, they will only have knowing, understanding, and creating skills, in which they are at the LOTS level [5]. Therefore, teachers have to shift from the monologic approach to the dialogical approach to actively engage the students in the learning process [6].

The students' activeness in the learning process highly depends on the stimulus provided by the teachers. The stimulus can be in the form of applying active learning. Active learning is a learning model that optimizes the students' potentials enabling them to achieve learning outcomes in accordance with their potential [9]. Bonwell & Eison [22] stated that in active learning, students are required to think critically, analyze, and evaluate. These three aspects are parts of HOTS. Thus, it can be concluded that active learning has the potential to develop students' HOTS.

Based on the twenty reviewed articles, 18 of them concerns about active learning to improve BioHOTS. All of them were in teams. Daryanto and Karim [9] highlighted that active learning is designed to make students actively learn, both in teams and individually.

Active learning to improve HOTS based on the dimension of thinking skills of critical and creative thinking consists of Project-Based Learning; Orientation, Identify, Discussion, Decision, and Engage (OIDDE); Problem Based Learning (PBL); Differentiated science inquiry + mind map (DSI mind map); and Project-Based Learning (PjBL). Then, based on the cognitive level, it can be through Inquiry and Concept mapping, while based on the knowledge level, it can be through Synectics. The detailed result is summarized in Table 1.

Table 1. Active Learning in Improving HOTS

No.	HOTS	Active Learning
1.	Dimension of thinking skills a. Critical thinking	*Peer-Led Team Learning* (PLTL) [23]; *Blended Project-Based Learning* [24]; *Reading, Mind Mapping, Sharing* (RMS) [25]; *Reading-Concept Map-Numbered Head Together* (Remap-NHT) [26]; *Differentiated Science Inquiry+mind map* (DSI mind-map) [27]; *Socio-Biological Case-Based Learning* (SocBioCBL) [28]; *Orientation, Identify, Discussion, Decision, and Engage* (OIDDE) [29]; *Problem Based Learning* (PBL) [30] [31]; *Project-Based Learning* (PjBL) [30]; *Inquiry*

		Student Team Achievement Development (INSTAD) [32]; *Contextual Teaching and Learning* (CTL) [33]; *Reading-Concept Map-Timed Pair Share* (Remap-TmPS) [34]; *Stimulating Higher-Order-Thinking Skills* (Stim-HOTs) [35]; *Reading, Identifying, Constructing, Solving, Reviewing, Extending* (RICOSRE) [36]
	b. Creative thinking	*Blended Project Based Learning* [24]; *Search Solve Create and Share+ Metacognitive Strategy* (SSCS+MS) [37]; *Differentiated Science Inquiry+mind map* (DSI mind-map) [38]; *Orientation, Identify, Discussion, Decision, and Engage (OIDDE)* [29]; *Problem Based Learning* (PBL) [30]; *Project Based Learning* (PjBL) [30]; *Hybrid-PjBL* [39]; *Synectics* [40]
2.	Cognitive level	*Inquiry* [41] and *Concept mapping* [42]
3.	Knowledge level	*Synectics* [40]

Even though the applied active learning is varied, some studies still used the same model with some innovations in its learning stages. It can be seen from studies conducted by Husamah [24] that used Blended Project-Based Learning and a study by Rahardjanto, Husamah & Fauzi [39] that used Hybrid-PjBL. Both studies adopted the Project-Based Learning (PjBL) model. This model encourages students to collaborate and communicate with their peers to produce a product [43]. Trowbridge, Bybee & Powell [44] explain that Project Based Learning (PjBL) improves students' thinking skills. Thus, it can be concluded that Project Based Learning (PjBL) trains thinking, collaboration, and communication skills in which they all are crucial in the 21st century. Therefore, Project-Based Learning (PjBL) is suitable to develop 21st-century skills [45].

Innovation in the stages of learning was not only carried out in the Project-Based Learning (PjBL) model, but also in the inquiry model. Two studies adopted the inquiry model. First, Fuad et al. [27] and Zubaidah et al. [38] applied the Differentiated Science Inquiry+mind map (DSI mind map). Second, Putra, Prayitno & Maridi [32] used Inquiry Student Team Achievement Development (INSTAD). In this inquiry model, students can develop critical thinking skills and analysis skills to find solutions for certain issues [9]. Both skills are identified as parts of HOTS.

Furthermore, other studies used concept mapping combined with another active learning model. For example, Bramwell-Lalor & Rainford [42] used concept mapping; Muhlisin et al. [25] used Reading, Mind Mapping, Sharing (RMS); Mahanal, Bahri & Zubaidah [26] used Reading-Concept Map-Numbered Head Together (Remap-NHT); Fuad et al. [27] used the Differentiated Science Inquiry+mind map (DSI mind map); Zubaidah et al. [38] used Differentiated Science Inquiry+mind maps (DSI mind maps); and Bustami, Syafruddin, & Afriani [34] used Reading-Concept Map-Timed Pair Share (Remap-TmPS).

Mind mapping could balance the right and left brain. The right brain is responsible for imagination and art, while the left brain is for logic. Therefore, the application of mind mapping in the learning process facilitated students to understand difficult materials and to develop creative ideas [9]. Buzan [46] proposed the advantages of applying mind mapping in the learning process, namely to help students in solving problems and to have a better memory.

Concept mapping is as important as mind mapping. Besides being an assessment tool [47], concept mapping could also be used as a learning strategy [48]. In making concept mapping, students tried to make connections between concepts and to produce visual images that represent their knowledge [49]. Hence, the concept mapping can be used as quality indicators for learning and the level of students' thinking skills.

Although active learning to HOTS is varied, the learning principles are the same. They covered (1) assigning tasks that encourage students to think actively; (2) formulating problems to find the solutions; (3) examining the contextual issues experienced by students; (4) train students to develop creative ideas; (5) assigning students to search for information from various sources; (6) train students to solve problems critically and creatively; and (7) train students to make decisions analytically and evaluatively [6].

3.2. Learning media used in the application of active learning

The application of active learning must be supported by the use of learning media. Learning media played essential roles in improving the quality of learning [50]. If teachers selected the unsuitable media, then the quality of learning would remain the same, constant, or even decrease. Therefore, it is necessary to understand the principles in selecting the learning media. Abidin [51] proposed four principles for selecting learning media. Those are clarity of media selection purposes, the familiarity of media, some media to be selected or compared, and norms in selecting the media.

This study revealed that the most commonly used learning media in active learning is student worksheets (LKPD), with a percentage of 50%. LKPD is one of the most crucial learning media supporting educational goals [52]. In addition, Chappell & Craft [53] explained that LKPD is a part of teaching materials to develop thinking skills, ask and respond to questions, and assess improvement in learning outcomes. The percentage of the use of learning media in active learning is presented in Figure 1.

3.3. Level education of research samples

Based on the results of the analysis, researches focused on BioHOTS that was conducted to senior high school students was higher compared to junior high school and college level. A total of 10% of questions requiring high order thinking skills has been added to the national examination since 2018. Developing students' high order thinking skills since senior high school level will equip the graduates with sufficient knowledge to enroll in colleges.

Furthermore, questions that require HOTS were not only found in the national examination but also the selection of civil servants in 2019 will be completed with HOTS questions particularly in Basic Competency (SKD) and Field Competency (SKB) tests. It became an alarm for the public that everyone has to have high order thinking skills. Hecklau et al. [54] revealed that HOTS is an important competency for everyone to be able to compete in industry 4.0. Therefore, it is not only students who need high order thinking skills, but also every individual without exception. The percentage of research samples' education level can be seen in Figure 2.

3.4. Biological materials used in the research

Biology is a branch of Natural Sciences that studies living organisms. It can be said that Biological materials are closely related to the real-world context. The real world always deals with complex problems; consequently, it requires HOTS to address them [6]. Based on the analysis, the most widely used materials were related to the environment as it was the most important part of life [55]. As a result, problems related to the environment have to be solved thoroughly using critical and creative thinking. The list of Biological materials used in the reviewed articles is presented in Table 2.

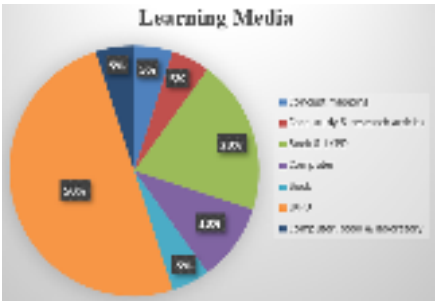
Table 2. List of Biological materials used in the research

No.	Materials	Frequency	Percentage (%)
1.	Aspects of biochemistry (water, carbohydrates, lipids and proteins), Cell structure, Membrane structure and function, and Enzymes	1	5
2.	Basic concepts of scientific research	1	5
3.	Introduction to biology	2	10
4.	Environment	4	20
5.	Basic concepts of science	1	5
6.	Observing Objects, Microscope, Laboratory Safety, Characteristics of Living Things, and Classification of Living Things	2	10
7.	Biodiversity, viruses, protists and monera	1	5
8.	Respiration system	1	5
9.	Ecosystem	1	5
10.	Circulation system	1	5

11.	Cell metabolism	1	5
12.	Structure and function of plant and animal tissues	1	5
13.	Others	3	15
	Total	20	100

3.5. Location of the research

The importance of HOTS in facing the industry 4.0 era has been realized by the Government of Indonesia. It is based on the analysis of reviewed articles that 85% of research to improve BioHOTS was conducted in Indonesia. In addition to preparing the human resources for industry 4.0, the research aims to improve Indonesia's rank in PISA and TIMSS as this country is still low. The percentage of research locations can be seen in Figure 3.



(Figure 1. Learning Media.

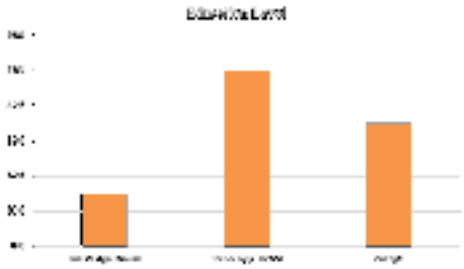


Figure 2. Education Level

Figure 3. Location of the Research.

D. CONCLUSION

BioHOTS research is mostly done in Indonesia, particularly in the high school level. This phenomenon is an effort initiated by Indonesian educators to prepare human resources (HR) in facing industry 4.0. era and to improve Indonesia's rank in the PISA and TIMSS. The most widely used materials in the research are about the environment as it becomes an important part of life. Thus, problems related to the environment need to be solved thoroughly using HOTS.

HOTS can be improved by implementing active learning. In active learning, the students are required to think critically, and to analyze and evaluate. Critical thinking, analyzing, and evaluating skills are considered as parts of HOTS. Based on the dimension of thinking skills (critical and creative thinking), the active learning that can be used to improve HOTS are Blended Project-Based Learning; Orientation, Identify, Discussion, Decision, and Engage (OIDDE); Problem Based Learning (PBL); Differentiated science inquiry+mind map (DSI mind map); and Project-Based Learning (PjBL). Then, based on the cognitive level includes Inquiry and Concept Mapping, while based on the knowledge level it covers Synectics. Learning will be more effective if it is supported by learning media. The most widely used learning media is LKPD. LKPD has the potential to develop thinking skills, to ask and respond to questions, and to assess the improvement of students' learning outcomes.

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IMPACT OF USING DIGITAL TECHNOLOGY FOR STUDENT ACHIEVEMENT IN BIOLOGY LEARNING

Novita Dameria Br Sijabat and Paidi
Student of Postgraduate Program in Biological Education
Lecture in Biology Education Department of Graduate School
Yogyakarta State University, Indonesia
E-mail: novita.jabat06@gmail.com

ABSTRACT

Using digital technology in Biology Learning is a must thing to do in Education 21st Century. The digital technology will further assist the process of distributing Biology from teachers to students. The goal of these articles is to systematically explore and summarize the using of digital technology in Biology Learning. The review builds on a systematic literature search in selected databases following established recommendations for using several databases. It will describe a variety of previous and present research and the findings of the digital tools used and their impact on student achievement. Computers (87%), Laptop/ PC Tablet (33%) and mobile phone (33%) with the help of the internet are the tools most often used to support digital-based biology learning. The articles conclude that in spite of numerous using digital technology in biology learning, has to be carried out to use digital technology in an appropriate for biology learning in Indonesia and an efficient way.

A.INTRODUCTION

The implementation of digital technology into education is being researched for more than twenty years. Scientists from various countries carry out thousands of research every year [1]. A computer is the first digital technology that is widely used the United States was the first country to implement computers in education. This is due to the inefficiency of the US education system and the danger that can be reached by countries behind the Soviet Union. To prevent this, in the 70s, almost all universities and colleges in the US were given computers [4]. In the early 80s, ICT was also introduced to secondary schools. After several years later, Western European countries and industrialized countries in the Far East also began to introduce ICTs into general education [10]. International-level research throughout the world shows [30] that in the mid-90s computers were widely available in most high and lower secondary schools in many countries, and they had just primary education was introduced. The existence of computers in schools does not mean that technology has been effectively integrated into the education process. The international survey mentioned above proves this statement [31].

When personal computers become available, ICT was introduced into secondary schools not only as a mean for teaching and learning but also as an object of learning [3]. Most of the countries introduced separate informatics curricula into secondary education [27]. At the same time, many experiments were carried out looked for new more powerful ways of ICT use. Not only the efficiency of tools but also different other aspects of ICT integration into teaching and learning were investigated.

In the past decade, developments in information technology have been filled with changes in education. This has led to goals, and ways of integrating computers into education have never been felt. The progress of ICT implementation research in education also reflects this transformation. The objectives of the study and analysis of aspects of ICT integration have changed substantially. New special methods that investigate various factors for the use of ICTs are applied now. The efficiency

of new technology is assessed not only based on the knowledge of the final students but also according to the progress of the students, impacting on their general abilities. At present, ICTs are often investigated because only one of many factors can have a major influence on educational success. The development of digital technology today requires teachers to have various competencies in implementing effective and efficient learning. Through the various technologies developed today, teachers and students must be able to use technology in learning. Different aspects of computer integration into education are investigated: their pervasion, methods, and efficiency of use. The implementation of technology in education is still and not yet efficient enough due to various technical, organizational and methodical constraints. The evolution of researches reflects the development of technologies, the changes in education, and the tendencies of computers' use in education.

The use of information and technology in education is one way through which learner achievement can be enhanced [5]. In line with changes in the society, the 21st-century economy requires school graduates to be well conversant with modern electronic knowledge, embracing computer technology and other forms of media to remain competitive in the global employment market. This indicates that learners without literacy in computer technology are at risk of being left out of global employment opportunities. Therefore, Learning institutions, have an opportunity to improve performance skills and enter into the service sector economy by adopting the use of computer technology. This will ensure that learners have the skills required for the ever increasingly competitive labor market.

B.METHODS

The review builds on a systematic literature search in selected databases following established recommendations for using several databases, defining inclusion and exclusion criteria for publications selected for the review process as well as transparency in the selection process [7]. Our approach to such recommendations is outlined below:

- Databased selection and search items
  Three databases were used in this systematic literature review: Web of Science, Scopus and Education Resources Information Center (ERIC). Web of Science and Scopus were selected as the primary databases for international academic literature on Biology and Science Education [1] ERIC was included as it specializes in educational research publications. The following search terms were used in this systematic review:
  "digital technology" and "biology education"
  "technology in biology education"
- Inclusion and exclusion for selection of articles
  The inclusion criteria are that the publications should be full-text articles, reviews or conference papers written in English. The material includes publications from 2013 until 2019. Initially, 15 papers met the inclusion criteria.
- Review and Coding Process
  In order to systemize the reading, the papers constructed an initial sorting template to capture the scientific approach in the articles. Besides identifying the digital technology used and define in each article, also identify the subject discipline for each article to gain an overview of the disciplines addressing the concepts. The sorting scheme consisted of the following 2 categories (1) Tools of digital technology used in Biology learning and (2) The impact of implementing digital technology in Biology learning.

C.RESEARCH QUESTION

The research questions that will be discussed in this research review are as follows:
1. What type of digital technology tools used in Biology learning?
2. How is the implementation of digital technology in Biology learning?
3. What is the impact of implementing digital technology in Biology learning?

D.RESULTS AND DISSCUSION

4.1 Implementation and the impact of using digital Technology in Biology learning

Several articles analyzed to show that the integration of technology in education, especially Biology learning is still very low. The use of digital technology is one form of integrating ICT in education. The implementation in the classroom, there are several models and appropriate learning methods that can support the use of digital technology to uphold learning. There are several different benefits offered relating to the tools used, both in the form of hardware and software. The impact obtained from the use of digital technology also tends to be positive and improve student learning outcomes.

The title of the article being reviewed and a summary of its substance is explained in the following table 1:

No.	Title of Article	Year	Substance
1.	Visual Literacy Skills of Students in College-Level Biology: Learning Outcomes following Digital or Hand-Drawing Activities [6]	2014	This study compared learning outcomes following two types of learning tools: a traditional drawing activity, or a learning activity on a computer. After each learning activity, students were given a quiz and were also asked to self-evaluate their performance in an attempt to measure their level of metacognition.
2.	Integration of Various Technologies in Biology Learning [32]	2017	Observations show that the technology used by teachers in the form of HP, projector, and whiteboard used for presenting the material using the lecture method. Based on the results of the analysis of the use of various learning technologies using the rubric of technology integration assessment (TIAI) in the implementation of the use of technology in learning and teaching developed by Britten & Cassady showed that the use of learning technology in the district of Malangbong enter the category of technology components to support the implementation of learning.
3.	Application of Virtual Reality Technology in Biology Education [22]	2013	To investigate the effect of VRBS on knowledge achievement, two Grade 10 classes (15- and 16-year-olds) were selected in which the VRBS was piloted-one was a control group, and the other was the treatment group. Post-learning, students were tested to assess their learning achievement and VRBS students were also asked to complete a questionnaire aimed at finding out why they think VRBS might be more effective than other multimedia for learning.
4.	Integrating ICT into Teaching and Learning Biology: A Case for Rachuonyo South Sub-County, Kenya [27]	2017	In order to ascertain nature of the use of ICT, respondents were asked to indicate computer applications they used by responding to a set of Likert questions indicating the extent of usage as daily (D), Weekly (W), all of the time (AOT) and Not applied (NA). The respondents were also asked to indicate how they used ICT in instructional processes. Teachers used ICT in the instructional process for communicating with students, 41.2%, online learning, 41.2% and administration, 25.5%.
5.	The Effect of Using Edmodo in Biology Education on Students' Attitudes Towards	2017	Based on the results of this study, that Edmodo promotes the efficient development of several skills. By joining different professional groups, teachers can develop their skills and broaden their knowledge.

	Biology and ICT [36]		Also, Edmodo can be used for the efficient planning of pedagogical processes and activities as well. In this respect, there is usefulness behind posting quizzes created on the interface within their relevant learning areas. Student groups and communities develop from the creation of an online classroom within the Edmodo system, where children are in constant contact with each other and the teacher
6.	Effectiveness of the Biology PtechLS Module in a Felda Science Centre [2]	2014	This module was effective as proven by the significant increase in achievement. It was not noted whether this increase was due to the module alone, or whether other factors such as extra lessons in class or extra tuition classes contributed to the gains in test scores.
7.	Use of Digital Storytelling in Biology Teaching [18]	2016	The findings of the advantages of digital storytelling in the study revealed that preservice teachers thought the use of digital storytelling in classes will help make students' learning more permanent and increase their learning
8.	Impact Of E-AV Biology Website For Learning About Renewable Energy [28]	2013	e-AV Biology with individual learning strategy in Teaching and Learning Biology was able to considerably enhance students' Biology knowledge compared to the conventional teaching approach. e-AV Biology with individual learning strategy in Teaching and Learning Biology. It was able to affect students' knowledge in the experiment group, and it was able to help students in the class experiments reach the standard Biology marks of teachers.
9.	Efficacy of a Meiosis Learning Module Developed for the Virtual Cell Animation Collection [11]	2017	The goal in the production of learning modules by the Vcell Animation team is to provide high-quality online resources designed to convey biological concepts across variation in student demographics and course design. One such course design in which effective learning modules may prove most beneficial is the flipped model of active-learning classrooms, which has been shown to lead to higher student achievement in multiple studies
10.	Evaluation of Webquest in Biology: Teachers' Perception [29]	2014	Teachers perceived that WebQuest was interesting from the aspects of technology such as navigation, graphics, interface, menus, icons, and the use of the color. Positive perception towards technical aspects is important because this aspect will influence respondents' perception of WebQuest as a teaching and learning media. Teachers agreed that the use of language was easy to understand and the content was suitable. Teachers also thought that the information presented was useful for cloning topic. Navigation in the WebQuest was smooth and it provided access for e-learning.
11.	Use of Slowmation in Biology Teaching [17]	2018	In the study, the preservice teachers searched the subjects for which they created slowmation, and they developed their scenarios. They believed that the activities they carried out contributed to their research and information literacy skills and that the activities carried out to edit photos and videos developed their

			technology and media literacy skills. In addition, the digital storytelling process, a multimedia learning and teaching tool like the slowmation, is thought to develop technology and media literacy skills
12.	Can a Multimedia Tool Help Students' Learning Performance in Complex Biology Subjects? [24]	2015	In the process of designing a multimedia teaching and learning tool, designers ought to prefer dynamic visualization techniques (simulation/animation) rather than static visualization. Moreover, apart from known multimedia design principles (modality, multiple representations, coherence, etc.); and for teaching/learning tools, visually stimulating videos/animations should be used as both advance organizers and emotional motivational supporters. On the other hand, the study focused on the achievement and views of the students.
13.	Visualization in Basic Science and Engineering Education of Future Primary School Teachers in Human Biology Education Using Augmented Reality [13]	2019	The use of AR technology in education could help students improve their knowledge of the subject, increase their motivation to learn, and ultimately improve their own involvement in the learning process. The AR application of anatomy (like "The Brain iExplore" and "Anatomy 4D") will assist them in learning human anatomy using enhanced materials that stimulate their interest. Based on the study results, we encourage higher education institutions to accept AR applications because visual demonstration and visualization in the educational process bring a faster understanding of the subject in the curriculum and increases the interest in learning complex subjects.
14.	Varied student perception of e-text use among student populations in Biology course [20]	2018	On the surface, student perception of e-text use is mixed. When deeper analysis of the data is performed, specific subgroups are identified that have a greater preference for e-texts and e-learning exercises. All students surveyed have a positive perception of the value-added e-materials, such as e-homework assignments, that offer additional practice, reading comprehension, formative assessment, and additional points within final grades. Our empirical study shows satisfaction with e-text use depends on the subgroup of the student and how the e-text is used in the course.
15.	Challenges and Opportunities for Learning Biology in Distance-Based Settings [9]	2013	This article considered other learning approaches like research and review projects and inquiry-based learning. We believe that there are many obstacles related to effective biology teaching in distanced-based settings. Most of these challenges can be overcome with careful planning and proper application of technologies and educational theories. Distance-based biology teaching can offer many advantages over traditional settings for those willing to explore the possibilities.

According to Leonard [25] ICT refers to technology (hardware, software, telecommunication, and networks), something which is tangible such as personal computers, servers, routers, cables, and intangible things such as software. Integrated technology nowadays has its advantage in combining realistic visuals with texts and sounds, besides allowing teachers to apply ICT

in many ways. The interactive multimedia materials are developed by integrating graphics, visuals, text, music, video, and animation and these helped to strengthen the students' comprehension of a concept [24] ICT tools have now removed the time and space limitations found in traditional teaching. Classroom dialogue can now be extended beyond the time and space constraints of class time [16]. Howland [14] state that integrating ICT tools in teaching can lead to increased students' learning competencies and increased opportunities for communication.

Wasson [37] in his research explains that all interviewed teachers used ICT to some extent when teaching. Differences described between the use in grammar school and secondary school can be attributed in part due to accessibility and infrastructure. Not surprisingly the teachers emphasized that it is not the use of technology itself that is important, but how the tools are used to achieve the objectives of the curriculum. All of the teachers stressed that feedback influences learning outcomes and mentioned that it is striking how students can reach another level by getting good feedback. [8] Most of the teachers give both oral and written feedback on student work, but the main message expressed by the teachers is that talking directly to the student is the best method. Another noteworthy finding was how teachers who do not use grades find a remarkable change in the student focus on learning; they explained that when the focus on grades is not there, students seem to be more interested in the subject itself [19]. All students make progress, especially those who are not particularly interested in studying. This may be because they can focus on what they have done, and how to improve based on feedback, rather than on a "good or bad" grade. This finding is supported by previous research [33].

However, a number of learning technologies that are fundamentally changing the centrality of teachers or their professional roles. In what follows, we look at three existing forms of instructional technology, each of which has different implications for the centralization and professionalization of teachers. These technologies which provide illustrative examples rather than a complete taxonomy serve various pedagogical functions in the 21st-century classroom [16] [26]. In the near future, teachers will likely employ all three, even in a single class, according to the needs of individual students and the learning goals of different units. It is perhaps most helpful to think of these not as discrete categories but as reference points on a continuum of present and future instructional technologies [8] The first type of instructional technology is perhaps the easiest to imagine: an automated workbook. Just as teachers give students worksheets to practice skills in almost every subject, those same worksheets have been adapted into computer-based workbook systems [12] The second type of instructional technology is the digital equivalent of books, film, artwork, and many other media.[10]

Some advantage of digital technologies for learning suggest that games and other digital environments will function differently, in the sense that students will be able to play with (i.e., use) digital tools [13] and develop their own understandings of these simulated experiences. In this view, students are "noble savages" growing up in a digital wilderness untainted by the prejudices and strictures of adults [19] Other researchers argue that the most plausible use of games and simulations—as well as digital versions of books and other media, will be similar to the use of books in the traditional classroom. Students will use the mediated experiences of games and other media to make sense of events and concepts. But, this argument goes, students' understanding of those experiences will be shaped by conversations [23]

4.2 Biology Content

The biological content used in research also generally varies depending on the digital device used. However, the material most widely used as research material is material about cells and systems in the human body, which is carried out at the level of high school and high school education. However, there are three (4) articles that do not specifically mention their biological material, the authors only informing that the research is conducted on Biology subjects only. The list of biological materials used as research material is summarized in Table 2.

Tabel 2. Biology Content of the Articles

No.	Biology Content	Frequence	Percentage (%)
1.	Cell Division	4	27
2.	Animalia Kingdom	1	7

3.	Biology in Senior High School	4	27
4.	Digestive System	2	13
5.	Biotechnology	1	7
6.	Nervous System	2	13
7.	Anatomy and Physiology	1	7
Total		15	100

4.3 Tools of Digital Technology used in Biology Learning

The tools used to implement digital technology in learning Biology in this study are also diverse, both in the form of hardware that can be touched and used directly or in the form of software as a support tool. the hardware tools and software tools used in this study are summarized in the following table 3 and tabel 4.

Tabel 3. Hardware Tools of Digital Technology used in Biology Learning

No.	Tools (Hardware)	Frequence	Percentage (%)
1.	Computer	13	87
2.	Mobile Phone	5	33
3.	Projector Infocus	1	7
4.	Laptop/Tablet PC	5	33
5.	CD RoMs	1	7
6.	Cartridges	1	7
7.	Microphone	3	20
8.	Interactive Whiteboards	1	7
9.	Microscope	1	7

Tabel 4. Software Tools of Digital Technology used in Biology Learning

No.	Tools (Software)	Frequence	Percentage (%)
1.	Internet	15	100
2.	3D Webmaster	1	7
3.	Edmodo	1	7
4.	E-Module	3	20
5.	Webpage	3	20
6.	NVivo 11.0	1	7
7.	E-Audio Visual	1	7
8.	Webquest	1	7
9.	Video	2	13
10.	E-Photo/Picture	2	13
11.	Brain iExplore	1	7
12.	Anatomy 4D	1	7
Total		32	100

Through the multitude of technology initiatives and professional development experiences, teaching professionals are becoming more familiar with digital tools, such as blogs, wikis, and various software packages, and integrating them into their literacy instruction. However, it is imperative that the digital tools are not just a novelty [24].

E. CONCLUSION

Based on the results of a review of the 15 articles, it was found that digital tools are of good use and can improve student learning outcomes and interest in learning Biology. The most widely used tools are computers (87%), laptops (33%) and mobile phones (33%) with all of them integrated to the internet. As for some supporting software such as websites, applications and video or electronic-based photos also declared to be a supporting tool so that the Biology learning process can

run effectively and efficiently. The material most often discussed using digital technology is the division of cells and systems in the human body.

Teachers as knowledge distributors are also expected to have digital literacy in order to be able to use these digital-based facilities [14] to encourage active and creative learning and to successfully improve student learning outcomes [15]. The results of this study are expected to be a picture of digital technology used in learning Biology, both in terms of its effectiveness and weaknesses.

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THE EFFECT OF LEARNING MODELS AND DIVERGENT THINKING TO HIGHER ORDER THINKING SKILLS IN PHYSICS SUBJECTS OF SENIOR HIGH SCHOOL

Aji Saputra, ajisaputra069@gmail.com
I Made Astra, imadeastra@gmail.com
Yetti Supriyati
Physics Department, Faculty of Mathematics and Science, State University of Jakarta, Jakarta, 13220, Indonesia
ajisaputra069@gmail.com

ABSTRACT

The aim of this research is to determine the effect of learning models and divergent thinking to higher order thinking skills in physics subjects of senior high school. This research uses quasi-experimental method and treatment by level 2x2 research design. There are 71 samples was selected by purposive sampling. This research involves two factors, namely learning models and divergent thinking. Divergent thinking is divided into two groups, namely high divergent thinking and low divergent thinking. The grouping of students based on divergent thinking categories aims to determine the effect of learning model on various levels of students' divergent thinking. The learning model consists of Treffinger learning and Problem Based Learning. The experimental class will be treated by Treffinger model and the control class will be treated by Problem Based Learning model. The conclusions of this study are as follows: 1) there are differences in the ability of higher order thinking skills who are given the Treffinger model and the Problem Based Learning model, 2) there is an influence of interaction between learning models and divergent thinking toward higher order thinking skills.

Keyword: Treffinger, problem based learning, divergent thinking, HOTS

A. INTRODUCTION

Development in society and economics requires the education system to equip young people with new skills and competencies [1]. In the 21st century there has been progress in information, computers, automation and communication reaching all over the world, so there needs to be innovation in the skills and competencies needed for education in this era [2]. Changes in the world cause communication and competence are also undergoing renewal so children need expertise to face challenges in the future [3]. In this century, education must be able to highlight globalization and internationalization in which every technological advance presents theoretical constructions and realistic insights in the development and improvement of knowledge, skills and attitudes between educators and students [4]. In summary, 21st century skills represent characteristics students should possess to overcome adversity and achieve success in postsecondary education and the workforce [5].

Wagner from Harvard University identified competencies and survival skills needed by students in facing life, the world of work, and citizenship in the 21st century emphasized on the following seven (7) skills: (1) critical thinking skills and problem solving, (2) collaboration and leadership, (3) agility and adaptability, (4) initiative and entrepreneurial spirit, (5) able to communicate effectively both orally and in writing, (6) able to access and analyze information, and (7) have curiosity and imagination [6]. Development of mindset in students is one of the demands that must be met in the global era.

Problem solving is an aspect of 21st century competence and is a basic human activity because in everyday life people will face problems. If a strategy fails to solve a problem, it can try other ways to solve it. The ability to solve problems is one aspect that is still not mastered by students. Based on the results of interviews with the physics teacher at SMAN 3 Bekasi, the ability to solve problems owned by the students is very lacking, it is known when the teacher gives an evaluation with the type of problem-based questions the students still feel difficult. Thus the need for assessment of learning that has been applied to the demands of 21st century skills to find out appropriate learning.

The ability to solve problems will affect student learning outcomes [7]. This is consistent with the results of observations [8] low physics learning outcomes thought to occur due to lack of students' physics problem solving abilities. Based on these problems learning is needed that accustom students to study physics based on everyday problems. Learning that trains problem solving is an ideal learning model to meet the goals of 21st century education, because it involves the 4C principles of critical thinking, communication, collaboration and creativity [9]. In addition to solving the problem Higher Order Thinking Skills is also one of the 21st Century learning demands. This is in line with the Partnership of 21st Century Skills which identifies that students in the 21st century must be able to develop competitive skills that focus on developing higher-order thinking skills.

One alternative solution to solve the above problems is by using a problem-based learning model so that it trains students' abilities to solve problems. Treffinger learning model can be used as an alternative solution because it is a creative learning model that aims to develop student creativity using affective and cognitive skills contained in three levels, namely basic tools, practice with process, and working with real problems.

Based on this, it will be known which one is creative, which is different from the others. The ability to find alternatives to a problem is the ability to think divergent. Thus, the ability to think divergent is part of the ability to think creatively [10]. This is in line with the opinion Hurlock which says that creativity arises from divergent thinking. Guilford also mentioned that divergent thinking is an indicator of creativity [11]. Divergent thinking allows one to think beyond the usual path so that it can involve a variety of different aspects [12].

Based on the previous description, the writer is interested in examining the effect of divergent learning and thinking models on higher order thinking skills in Physics subjects in high school. In this study, researchers used the Treffinger learning model and the Problem Based Learning model because both are learning models that practice problem solving and are ideal learning models to meet the goals of 21st century education.

B. RESEARCH METHOD

This research was carried out in Bekasi 3 High School in the academic year 2019/2020. The research time will be conducted from July to September. This research uses quasi experiment method and treatment by level 2x2 research design. Quasi experiment method aims to predict the conditions that can be achieved through actual experiments but there is no control or manipulation of all variables. Furthermore, this research design provides the basics of observing stratification. Examples of divisions are as follows: high IQ and low IQ groups, students who are diligent and lazy, groups think high divegen and low divergent thinking.

This research involves two factors, namely learning models and divergent thinking. Divergent thinking consists of two, namely high divergent thinking and low divergent thinking. The grouping of students based on divergent thinking categories aims to determine the effect that the learning model has on different students. The learning model consists of Treffinger learning models and Problem Based Learning learning models.The experimental class will be treated using the Treffinger model and the control class will be treated with the Problem Based Learning model. Before being treated with a model, students will be given divergent thinking tests. This test is used to distinguish students with high divergent thinking and students with low divergent thinking. A higher level thinking ability test will be given at the end of the study. Both instruments to be used have been tested for validity and reliability. The data that will be obtained from these two instruments will then be tested for analysis prerequisites namely normality and homogeneity tests, then using independent sample t-test and the two-way anova hypothesis test.

C. RESULT AND DISCUSSION

This section describe data that related to the description of the variables were: the dependent variable science learning outcomes, independent variables which consists of integrated learning

model and critical thinking skills. Description of research data these three variables would otherwise form the size of centralization of data, among others: (1) mean, (2) median, (3) modus and (4) standard deviation.

Tabel 1

Data	A1	A2	A1B1	A1B2	A2B1	A2B2
Mean	73.00	68.61	81.11	64.41	74.21	62.35
Median	75.00	70.00	80.00	65.00	75.00	65.00
Modus	70	65	75	70	70	65
Standar Deviation	10.16	7.13	5.57	5.83	4.49	3.12

A1 is a group of students who are given learning with the Treffinger learning model. A2 is a group of students who are given training with the Problem Based Learning model. A1B1 is higher order thinking skills students who have high divergent thinking and are entitled to the Treffinger learning model. A2B1 is higher order thinking skills students who have high divergent models and are entitled to Problem Based Learning. A1B2 is higher order thinking skills students who have the Treffinger learning model. A2B2 is higher order thinking skills students who have low divergent models and are entitled to discuss Problem Based Learning.

The main effect hypothesis test between groups A1 and A2 is intended to test whether there are differences in the ability of high-level thinking students who are given the Treffinger model and students who are given the Problem Based Learning model. Test this hypothesis for two treatments which are then referred to as the experimental class (A1) and the control class (A2). The two groups to be tested are not paired and each data is normally distributed, so we can use an independent sample t-test.

Tabel 2

	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference
Equal variances assumed	2.111	69	0.038	4.389	2.079
Equal variances not assumed	2.101	60.821	0.040	4.389	2.089

The results of the independent sample t-test from the SPSS program with a significance level (α) of 5% or 0.05 obtained the results of Sig. (2-tailed) 0.038. Sig value (2-tailed) <0.05 then H0 is rejected and H1 is accepted, which means there is a difference between group A1 and group A2.

Hypothesis testing shows that there are differences in high-level thinking skills of students who are given the Treffinger model with the problem based learning model. Then from the results of descriptive statistical tables obtained the results that the average test results of high-level thinking ability of students who use the Treffinger model are higher than students who use the problem based learning model. Both of these models are recommended learning models for 21st century learning. In learning in the second class the model requires students to learn actively. The application of the Treffinger learning model is done by forming groups of 4-6 students. Next, each group was given a student worksheet containing 3 questions representing 3 stages of the Treffinger model, namely basic tools, practice with process and working with real problems. Students then work on one by one the questions in the worksheet which are then presented in front of the class. Then the application of the problem based learning model is also carried out by forming groups with members of 4-6 students. Then each group is given a student worksheet which contains a problem to be solved together. In the Problem Based Learning Worksheet contains data collection, hypothesis and problem solving. The results of the worksheets are then also presented in front of the class.

The results of this study are also supported by research from [13] as a whole the Treffinger model can also improve students' communication skills so that they are more active in learning. In other studies statistically, the creative and critical thinking abilities of students using the Treffinger learning model are better than students who are taught using conventional learning models [14].

Next, the interaction effect hypothesis test between A x B is intended to test whether there

is an interaction effect between the learning model (A) and divergent thinking (B) on higher order thinking skills. In this case the learning model in question is the Treffinger model and the Problem Based Learning model.

Tabel 3

Tests of Between-Subjects Effects

Dependent Variable:	HOTS				
Source	Type III Sum of Squares	df	Mean Square	F	Sig.
A * B	103.805	1	103.805	4.372	0.040
Error	1590.936	67	23.745		
Total	361275.000	71			
Corrected Total	5632.394	70			

a. R Squared = .718 (Adjusted R Squared = .705)

The results of the 2-way Anova test obtained Sig. 0.04 so that the Sig. <0.05 then H0 is rejected and H1 is accepted, which means there is an interaction effect between variable A and variable B.

Hypothesis testing shows that there is an interaction effect between learning models and divergent thinking on higher order thinking skills. This shows that each learning model gives a different effect when applied to groups of students who have different divergent thinking categories. In this case, it can also be interpreted that each learning model has a certain interaction with the group of high divergent thinking categories of students and low divergent thinking students. This is also consistent with previous research that Treffinger's learning model influences divergent thinking skills [15]. Learning in the classroom is also the case, in the class that is applied Treffinger model students with high divergent thinking categories look active and enjoy the exploration of ideas and free ideas in solving problems at each stage of the learning model.

D. CONCLUSION

Based on the research results obtained by data analysis and hypothesis testing, the following conclusions can be drawn:

1. There is a difference in students' higher-order thinking skills given the Treffinger model and the Problem Based Learning model.
2. There is an interaction effect between the learning model and divergent thinking on higher order thinking skills

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SCHOOL STRATEGY IN INCREASING EDUCATION QUALITY THROUGH SPECIALIZATION CLASS PROGRAM

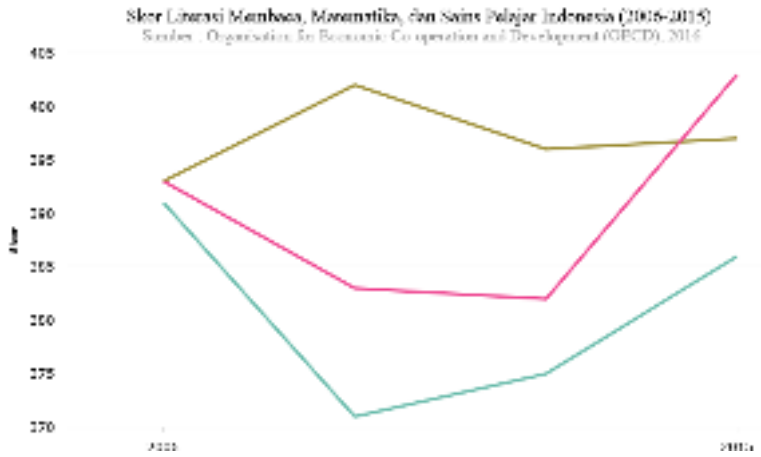
Zulfa Aulia[1] **zulfaaulia.141@gmail.com.**
Nurtanio Agus Purwanto[2] nurtanio@uny.ac.id
Universitas Negeri Yogyakarta
E-mail : zulfaaulia.141@gmail.com[1] nurtanio@uny.acid[2]

Abstract. The importance of coaching programs is one of the goals to improve the quality of student education. So far what has happened is the lack of students in the provision of knowledge and support for their interests and talents. This is why educational attainment is one indicator to measure progress towards sustainable development goals. Specialization class programs such as activity (known as "tahfidz" in Arabic), language, ICT and science classes are used as a school strategy to improve the quality of student education. This study aims to describe the elements of concern for schools in the management of specialization class programs, find out the performance of teachers in the process of student coaching and identify the achievement of quality improvement. This study was a qualitative method. The research subjects were the Principal, Homeroom Teacher interest and talent class program and student representatives in the talent interest class program. The results of this study are: (1) schools make specialization class programs a breakthrough in the face of competition in terms of academic achievement of students with superior public schools in the Yogyakarta region (2) specialization classes are capable of producing good graduate competency standards (3) specialization class programs as a form 2013 curriculum implementation implemented by private SMP in Yogyakarta

Keywords: Quality of Education, Specialization Class Program.

A. INTRODUCTION

Quality improvement in the field of education needs to have standards that serve as a reference in its application, in addition to referring to national education standards that include content, process, graduate competency, teacher and education staff, facilities and infrastructure, management, financing, and assessment standards. The Minister of Education and Culture that make the Program for International Student Assessment (PISA) an international standard of education in Indonesia. PISA is an evaluation program initiated by the *Organization for Economic Cooperation and Development* (OECD) to evaluate the education system of 72 countries around the world. In the application of PISA the assessment criteria include cognitive abilities and expertise in reading, mathematics and science. Based on the results of the PISA survey in 2015 (Organisation for Economic Co-operation and development 2016). Indonesia experienced an increase, the biggest increase was seen in science competence from 382 scores in 2012 to 403 scores in 2015. Besides in science, other scores also increased in mathematics, an increase from 375 scores in 2012 to 386 scores in 2015. A further increase was in reading competence, an increase from 396 scores in 2012 to 397 scores in 2015 (Kemendikbud 2016)[1].



(Figure 1 Organization for Economic Co-operation and Development -OECD, 2016)

The explanation relating to the results of the survey on the quality of education in Indonesia requires schools to become educational institutions that are given authority to organize teaching and learning activities. The institution as a place for the implementation of teaching and learning activities has become an obligation to organize quality learning experiences for students as a form of improving the quality of education and as a form of satisfaction of parents or the community who have given confidence to the school to make their children meet their needs, both in terms of academic and non-academic needs.

These student needs are the responsibility of the school so that these student needs can be met properly. One of the responsibilities undertaken by the school is to run specialization classes with the aim of facilitating students to achieve national education goals. Therefore this specialization class must be grounded in the rules derived from the curriculum-2013 regarding the existence of the specialization class program, these principles among others: Emphasis on leadership relationships, and knowledge such as wholeness that must be seen by students and also helps the eye lessons with local content, academic education, and character education as a whole that provides benefits for the nation. Having a strong enthusiasm to make the educational process as a learning process that educates and a vehicle for character development, a life that trains and independence as soft skills and the strength of science, technology and art as hardskills[1]. Both of these gifts are created as a foundation designed to help students meet their needs.

During this time what has happened is students are still lacking the knowledge and to support their interests and talents. This is why educational attainment is one indicator to measure the progress towards sustainable development goals. UIS (Unesco Institute for Statistics) education statistical data states that by 2030 [2] substantially increasing the number of young people and adults who have relevant skills, including technical and vocational skills, for employment, decent work, and entrepreneurship. This question leads us to the phenomenon that students will later enter the field that is in accordance with their potential. The event became a special hope that the management of the specialization class program would have an impact on the success of students when they enter the workforce with fields of interest in accordance with their talents.

According to Slameto [3] interest is a relatively fixed trend in carrying out activities. This is in line with the opinion of Subramaniam [4] who states that interest tends to be stable in someone and arises passion to carry out an activity. He explained more deeply that there arises from a sense of liking and being interested in doing something without being told to. Based on the explanation from the two experts that the students carry out and join the class program of interests and talents should have been in accordance with the wishes that have been without any coercion from any party. This is done with the hope that students can pursue their potential and talents without a sense of burden in themselves. Based on the phenomena that occur, this research will lead not only to improving the quality of education at the institution but also an increase in individual students with an interest and talent program at the secondary school level

In the administration of specialization in each class at the junior high school level must include four stages in accordance with the following picture, namely the stage of understanding the characteristics of self, the stage of understanding the value of life, introduction to the environment, solving life problems and future planning of students. The four stages of managing the specialization clasess are carroed out in the sequence [5].

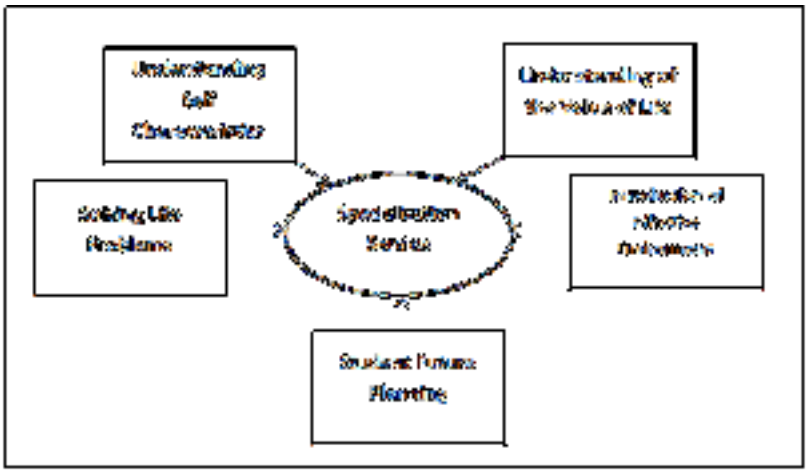


Figure 2. Stages of Specialization Classes Mapping

After passing through the four steps, students need to do self-reflection on what they have done during learning. This is a process of evaluating the effectiveness of each strategy they already have to help them achieve their goals[6].

The Directorate of Secondary School Development (Directorate of PSMP) [7], at the Directorate General of Primary and Secondary Education, has made various efforts, both developing the quality of learning, meeting the needs of learning facilities and infrastructure, improving school institutional management, and fostering student activities (Dikdasmen 2019). Improving the quality of education in junior high schools (SMP) is pursued in an integrated manner, both in the achievement of academic and non-academic fields in order to develop various aspects of the personality of students in accordance with the objectives of national education [8]. Because of this, the achievement of quality education in school is organized in the form of the creation of an atmosphere of learning and the process of learning that enables participants to develop their potential. Through these efforts, the students are expected to gain the experience of learning as the whole educational aspect, until the whole modality of learning and aspects of his personality develop optimally.

Based on the description it appears that the urgency of managing interest and talent class programs needs to get special attention due to the given sustainability of the learning process and the fulfillment of student needs, not only in terms of academic aspects but also in non-academic ones. This is because the interest that arises in students can create a sense of enthusiasm and do it happily without coercion, in line with opinions Kahu, Nelson, & Picton [9] which say that with students carrying out their tasks on the basis of their interests and talents then the student will be happier and more motivated.

This form of improving the quality of education is due to the competitiveness that exists in the learning process at the secondary school level. In addition, the implementation of specialization classes is also a form of the implementation of the curriculum-2013 which mandates the existence of specialization classes as a form of meeting the needs of students both in cognitive, affective, and psychomotor aspects. Through this specialization classes it is hoped that all three aspects can be absorbed by students as a result of the competence of graduates of SMP Muhammadiyah 2 Yogyakarta.

B. RESEARCH METHOD

The method used in this research is a qualitative method. The research subjects were the Principal, Homeroom Teacher for interest and talent class program, and student representatives who were members of the interest and talent class program. Data was collected through interview, observation and documentation techniques. Interviews

were conducted using the snowball sampling method. Analysis of the data used in this study refers to the theory of data analysis according to Miler and Huberman which includes data reduction, data presentation, and drawing conclusions [10].

C. RESULT AND DISCUSSION

A. Programs specialization classes and implementation of the curriculum-2013

In accordance with the rules applied in the curriculum-2013, the specialization class becomes a continuous process to facilitate students in achieving the full objectives of national education. The purpose of national education itself is in the form of meeting the needs of students, this is a reference for schools to improve their quality as an effective school in the management of specialization classes to run according to the goals of national education [11].

Based on interviews with the homeroom teacher of SMP Muhammadiyah 2 Yogyakarta, they have been holding specialization classes for about 6 years from 2013, this specialization class started with a language specialization class that was established earlier than other specialization classes. In 2014 the Tahfidz specialization class was established, then in 2017 there was a Science specialization class then in 2018 the ICT class was established. Through the explanation of the homeroom teacher, it can be understood that the language specialization class first stood up compared to other specialization classes. The School standing as a private school that competes with other leading public schools in the Yogyakarta region make it a challenge for the school to continue to compete to improve student achievement in academic and non-academic fields in order to maintain its existence as a competent educational institution.

Specialization classes can be interpreted as opportunities for students to choose what fields they want to pursue in terms of their non-academic aspects. As a private school, according to Mr. Mustaqim as the Deputy Principal of the Development Section in terms of academic achievement students still, have difficulties in competing with other leading public schools. Specialization classes here become a school breakthrough program in the face of competition between other schools as a community attraction, besides that through this specialization class program will facilitate students in improving their academic achievement with the skills they have through the talents developed in the specialization class program. Specialization classes at one of private SMP in Yogyakarta consisting of recalling activity (known as “tahfidz” in Arabic), ICT, language, and science classes have their respective advantages and competencies in improving student achievement.

Specialization Classes and Graduate Competency Standards

Each specialization class has student success targets, one of them in the Tahfidz specialization class program, which includes: students who are in the Tahfidz specialization class are able to memorize Al-Qur'an 3 to 5 juz namely juz 1, 27, 28, 29, and 30 as well as a few selected verses, students are able to translate several verses of the Qur'an, students are able to do communication using 2 foreign languages namely Arabic and English, students are able to master various religious competencies or skills such as (sermons, imams, adhan and reading (known as “tartil” in Arabic) Al -Qur'an, students are able to master various competencies of religious knowledge such as the Qur'an, Hadits, Aqidah, Akhlaq, Fiqh Worship, Date, Arabic, and Kemuhammadiyahan), and students are able to master general scientific competencies according to the curriculum. From the explanation of the achievement targets of the Tahfidz specialization class, it can be seen that the school in managing specialization classes cannot be separated from the 2013 curriculum reference.

The next specialization class is the language class, this class is the specialization class that is most in demand by the public because this language class emphasizes students to be superior in English language skills. This capability is highly needed in the current era which requires the ability to face competition not only in the national arena but internationally. Language specialization classes have learning programs that have been arranged to start from students sitting in grade 7 to students sitting in class 9 preparing for graduation. The 7th grade program in this

language class includes the school introducing an English test through a mini junior TOEFL test, visiting an institution at a university in Yogyakarta that has conducted an MOU with the school to introduce education and culture in the country foreign, and the school trains English-language communication and exchange ideas with native speakers so students can be more tolerant and wise in dealing with foreign cultures. After students pass the learning program in grade 7, students are re-honed their English language skills in class 8, class 8 programs in this language class include *broadcasting training* This training is intended to train students to learn print and electronic media. The next learning program is foreign language learning which includes English, Japanese and Mandarin. The learning program gives a broader insight into foreign cultures by learning the languages. This is also very helpful in student exchange activities that have been held since 2 years ago which were carried out for several continents in the world. One of which will be held at the end of this year is the European continent. At grade 9 level who have prepared national examinations, in this language class the school provides learning programs that support student achievement in facing national examinations, these programs cover breaking the 2020 limit, in this learning program students prepare to deepen the national exam materials incorrectly only in the English field. Through the learning programs in language specialization classes from grades 7 to 9, students are able to sharpen their English language skills in *speaking, reading, listening,* and *writing skills*. These four abilities are very much needed by students in facing global competition in the world of education through their English language skills. To be able to help the achievement of student targets collaborative learning and involvement can be considered important in learning, because they can promote the effectiveness of learning through active student participation in the learning process [12]

The next specialization class is the science class, in this specialization class students get coaching facilities in mathematics, physics, biology, and social studies. These four fields of science invite students to be interested in work related to natural science through scientific experiments, exploring the chemical processes of a substance, observing plant growth, observing the content of a product, testing assembling scientific experiment equipment, discussing events or natural phenomena and so on. Through these activities, students can absorb the three aspects that are expected to meet the needs of students, namely cognitive, affective and psychomotor aspects.

The last specialization class is the ICT *(Information Communication Technology)* class in this specialization class, students who are interested in the world of information technology are provided with guidance by expert teachers through a number of activities including using computer application programs, writing on social media or log, following developments ICT, an experiment to make a web or application program, making videos or actual reports through social media such as YouTube or Instagram. Through these activities, students can explore work related to information technology that continues to evolve with the times. So that this specialization class is in accordance with the wishes and abilities of each student. In this case, it refers to national standards of education which conical to the competency standards of graduates, which are in this specialization classroom program.

The Role of Specialization Class Program for Student Achievement

Based on the description of the four specializations, the organization of this specialization is a gradual process of assistance for students to obtain information and images for students to explore interests in certain subjects as well as the possibility of further study at the secondary education level. This is consistent with the phenomenon that occurs in the field, which shows that many students at the junior secondary level are entering high school or equivalent and universities who have not been based on student specialization supported by potential, talent and conditions of self-sufficiency. This is useful for optimal potential development, such as general basic abilities, talents, interests and physical and socio-cultural conditions and career interests of students.

D. CONCLUSION

These specialization classes program which is carried out at one of the private SMP in Yogyakarta is a process of independent decision making and choice by students based on an understanding of their potential, interests, and opportunities that exist without any element of coercion from any party. So this specialization class in

accordance with the wishes and abilities of each student. This case refers to national standards of education which conical to the competency standard of graduates.

Therefore this school provides a place for students to deepen their interests and talents through specialization class programs which are excellent programs. In addition, schools also provide life skills that are applied in the form of moral and national education in accordance with the learning curriculum adopted by the Indonesian state which will certainly be useful for students in the future

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WHAT INDUSTRY NEEDS FROM VOCATIONAL HIGH SCHOOL GRADUATES MAJORING IN MULTIMEDIA IN THE DISRUTIPTIVE ERA

leli.alhapip@kemdikbud.go.id
mariati.prb@gmail.com
yogi_anggraena@yahoo.com

ABSTRACT

This study aims to examine the mutimedia curriculum in vocational high schools (SMK) in the Disruptive Era. Multimedia is a combination of text, sound, animation and video that are delivered by computer or other electronic and digitally manipulated means. Multimedia applications can be used in many areas, such as educations and businesses. In the field of education, multimedia is used as a teaching medium, both in class and individually or self-taught. In the business sector, multimedia is used to present a company profile, product profile, and information media for marketing systems. This research was conducted by using a mixed method research which was using questionnaires and focus group discussions (FGD) as data collection techniques. The result shows that: 1) the multimedia curriculum in SMK should be synergized with Indonesian national work competency standards (SKKNI) of level 2, and adjusted to Business and Industrial World (DUDI) needs; 2) basic competencies of multimedia curriculum need to be deepened; 3) there is no mutually supportive relationship between DUDI and SMK that is creating an educational ecosystem which is able to formulate the desired standard qualifications of human resources to ensure the continuity and progress of DUDI in Indonesia. SMK supposed to use standards that have been set as a reference in developing programs and curriculum.

A. INTRODUCTION

In the 21st century era, one of the sectors that are predicted to contribute to high economic growth is the creative industry associated with the creation or use of knowledge and information by utilizing the creativity, skills, and talents of individuals to create prosperity and employment by producing and exploiting individual creative and creative power. such as advertising, architecture, arts, crafts. design, fashion, film, music, performing arts, publishing, research and development, software, toys and games, television and radio, and technology-based video games. In the present time the creative industry does not only rely on creativity manually, but at this time the creative industry is increasingly developing and expanding to the technology sector.

In terms of education, one of the supporters of the advancement of creative industries is vocational or vocational education with the main goal of producing outputs that are not only ready to train, ready to work and ready to use in the business world and the industrial world with certain expertise, but also have creativity, innovation, and entrepreneurial spirit by using opportunities, better ways of creating new businesses formed in conditions of risk or uncertainty. Thus, the basis of this vocational skills and expertise also needs to be given in general education from an early age to students in order to have the ability of creation, innovation and the entrepreneurial and productive spirit. The Ministry of Communication and Information Technology (Kemenkominfo), in 2016 has a program called the 1,000 Digital Startup Movement to give birth to new startups. Based on data from the Ministry of Communication and Information in October 2018, the program has given birth to 525 startups. Meanwhile, the latest data from the startup company registration site, startupranking.com, Indonesia has 2,079 startup companies and occupies the fifth position in the world. Indonesia is under Canada which has 2,485 startups. Based on the data above, it is known that there are wide open opportunities for SMK graduates who have an entrepreneurial spirit to enter the business world with a startup in accordance with their competency expertise. Thus the content of vocational education in vocational and general education must have characteristics, which are in accordance with the needs and challenges of the business and industrial world; experience and learning outcomes that include attitudes, knowledge, and skills through the learning process and real work situations; practice-based learning that is responsive and flexible with the development of the world of work; intensive collaboration and collaboration with the Business and Industrial World DUDI) in building educational relevance.

The essence of 21st century skills is processing information into science and making it a competency to solve problems (Fadel & Bialik, 2015). Therefore, technology and information become one of the important elements in achieving 21st century skills (Scott, 2015). One of the uses of technological advances in the field of

information, especially computers, is multimedia. Multimedia is an integration of several media elements such as sound, images, video and text that are synergistic in synergy to produce more benefits for conveying information to users (Rahman, 2008. Current technology has combined multimedia capabilities in the form of images, audio, video and text interactivity designed to be easily used by users to meet their needs. Multimedia placement can be applied anywhere as long as the community needs access to information resources. The role of multimedia can also help people who have difficulty receiving one-way analog information because the information will be presented more visually appealing and so users will be more interested. Therefore, Multimedia needs to be reviewed or validated to ensure that the contents of the curriculum are appropriate to the needs and contain entrepreneurial competencies, 21st century skills, information technology, and meet the needs of the business and industrial world.

B. METHODOLOGY

This research uses quantitative and qualitative approaches through data analysis and questionnaire methods. The method of data analysis is carried out through a literature study that examines (mainly) secondary data, both in the form of legislation, research results, assessment results, best practices and other references. While the data analysis approach can be done by examining primary data obtained / collected directly from stakeholders. Primary data can be obtained by: observing / observing, gathering discussion (Focus Group Discussion), interviewing, listening to the opinions of speakers or experts. The type of questionnaire required was a structured questionnaire with closed questions. For each item an answer option is provided for selected respondents with quantitative values.

C. RESULTS AND DISCUSSION

Multimedia, has been used since 1962, from multi-, or "many," rooted in the Latin multus, "many or much;" and media, the plural form of medium, or "system of communication.". Multi means a lot, and the media means the place, means or tools

used to convey information. So based on the word 'multimedia' can be formulated as a container or the unification of several media which is then defined as elements of multimedia formation (Pleub, 2009). These elements such as text, images, sound, animation, and video. Multimedia is a new concept and technology in the field of information technology, where information in the form of text, images, sound, animation, and video is put together in a computer to be stored, processed and presented both in a linear and interactive way. Therefore, by combining all the multimedia elements make information in the form of multimedia that can be received by the senses of sight and hearing, closer to its original form in the real world. Interactive multimedia is when an application contains all existing multimedia elements and the user (user) is given a decision or the ability to escort and animate those elements. Multimedia is often used in the world of informatics. Apart from the world of informatics, Multimedia is also adopted by the world of games, and also for creating websites (Arifin, et al, 2015). Multimedia is also used in education and business. In the world of education, multimedia is used as a teaching medium, both in class and individually or self-taught. In the business world, multimedia is used as a company profile media, product profile, even as a media of information kiosks and training in e-learning systems.

Multimedia Skills Competency is one of the competency skills in vocational high schools (SMK) that educates students to become young experts in the multimedia field. Multimedia is any combination of text, sound, animation and video delivered by computer or other electronic or digitally manipulated means. It is a woven combination of digitally manipulated text, photographs, graphic art, sound, animation, and video elements (Vaughan, 2006). The purpose of multimedia expertise competency is to equip students with skills, knowledge, and attitudes to be competent in:

1) Operate digital illustration, digital imaging and web design software and equipment
2) Operate software and multimedia equipment, presentations, 2D animation, and 3D animation

3) Operate digital audio, digital video and visual effects software and equipment

Specifically, the basic competencies of graduates that must be mastered by students after taking the competence of multimedia expertise include.

1) Assembling Personal Computer (PC) which covers the concept of a computer system, the function of computer components / Pheriferal, safety & safety, PC assembly booting, Identifying PC assembling equipment, and testing PC assembly.
2) Installing operating systems that include operating system classifications, computer specifications, installing Gui-based operating systems, installing application software
3) Identifying multimedia etymology which includes defining and categorizing multimedia, identifying multimedia content production, and identifying multimedia communication.
4) Illustrate the multimedia product production process flow which includes identifying the Pre Production multimedia process, identifying the multimedia Production process, identifying the Post Production multimedia process.
5) Arranging bid proposals which include analyzing project requirements, identifying skills in accordance with report requirements, drafting costs and available sources, making proposals, and making tender requests.
6) Formulate occupational health, safety and safety procedures which include outlining the work safety law, identifying human safety standard procedures, identifying standard tool safety procedures, implementing work environment procedures concerning health, safety and security.
7) Maintaining multimedia equipment which includes identifying steps for maintaining multimedia equipment and making shooting equipment maintenance cards.
8) Update the contents of web pages that include checking information for relevance and being updated, checking links and navigation, editing information as needed, and testing and ensuring changes

9) Mastering production shooting techniques that include selecting and preparing shooting materials and equipment, setting up and operating a basic video camera, charging and maintaining batteries during shooting, operating the camera, arranging camera cables, and operating the clapper board.
10) Applying the principles of graphic art in the design of visual communication for multimedia which includes identifying the aesthetic and ethical principles of graphic art (nirmana), sketching, drawing perspectives, drawing objects, and drawing illustrations.
11) Mastering how to draw keys for animation which includes identifying animation requirements, making key drawings, and arranging and completing key drawings
12) Mastering how to clean-up and insert drawings which include finding the original drawing requirements, making original drawings, identifying the terms of three-dimensional drawings, and making three-dimensional drawings.
13) Make stop-motion animation (flat area) which includes identification of animation requirements and create color models and color spots, create storyboards
14) Combine text into multimedia presentations that include using multimedia text software and designing multimedia texts.
15) Combining 2D images into multimedia presentations that include editing digital images, using 2D multimedia graphics software, creating 2D Multimedia graphic designs, and displaying 2D digital artwork.
16) Incorporating digital photography into multimedia presentations that include using a digital camera, combining a digital camera into a series of banners, and the arrangement of digital photo artwork and 8D graphics.
17) Incorporating audio into a multimedia presentation that includes elaborating digital audio formats, using digital audio software, designing and digital audio, and building digital audio tracks.

18) Creating a multimedia application Story Board that includes identifying needs, planning the flow of contents (story board), and describing the implementation process in the Story board.
19) Using lighting equipment that includes identifying the basis of lighting, identifying the effects of light, and preparing lighting operations
20) Apply special effects to production objects which include identifying special effects supporting materials, installing special effects soft ware, and creating special effects on objects.

Based on survey data, observations, and exploratory studies as well as focus group discussions (FGD), data on Multimedia Expertise Competencies can be analyzed as follows:

1. It would be better if the vocational curriculum is synergized with industry needs by involving the industry directly to the curriculum making, so that what is expected from the competency of graduates can be in accordance with industry needs, or can also be involved directly in the activities of the teaching and learning activities industry as a guest teacher , and can also allow the school to send students or teachers to work internships in the industry with the approval and permission of the ministry.
2. The most visible problem in the results of a survey conducted is the output dimension, especially in the question items about cooperation (links) with Business and Industrial World (DUDI) abroad. There is no MoU between DUDI abroad and the ministries, especially ministries that overshadow vocational schools.
3. On the level item of graduate positions, it still shows that graduates generally do not see definitive statistical forms or calculation data.
4. The existing Multimedia Vocational Curriculum still needs to be synergized with work on level II of the SKKNI and in accordance with DUDI needs,

5. Prioritizing behavior (attitude) in teaching and learning activities, such as training patience, honesty, discipline, courtesy and others related to the Multimedia curriculum,
6. It would be better if the vocational curriculum is synergized with industry needs by involving the industry directly in the making of the curriculum, so that what is expected from graduate competencies can be in accordance with industry needs, or can also be involved directly in the activities of the teaching and learning activities industry as a guest teacher , and can also allow the school to send students or teachers to work internships in the industry with the approval and permission of the ministry. Schools should collaborate with DUDI who want to accept graduates,
7. There needs to be a reciprocal relationship between DUDI and educational and training institutions, both formal, informal and those managed by the industry itself. DUDI must be able to formulate the desired standard qualifications of human resources, to ensure the continuity and progress of DUDI in Indonesia. The educational institution or the training must use the standards that have been set as a reference in developing programs and curriculum, while the bureaucrats use it as a reference in formulating policies for macro human resource development. And the hours of study must be separated between the National Content, the Regional Content, and the Vocational Content.

In the 2013 curriculum design the vocational training program that can be implemented by schools is actually quite complete and varied. At present, for example SMK offer nine areas of expertise, namely: 1) technology and engineering, 2) energy and mining, 3) information and communication technology, 4) health and social work, 5) agribusiness and agrotechnology, 6) maritime affairs, 7) business and management, 8) tourism, and 9) arts and creative industries. The nine areas of expertise accommodate 146 competency skills with a 3-year and 4-year learning program (Per Dirjen Dikdasmen, No. 06 / D.D5 / KK / 2018 about the expertise spectrum of vocational high school / madrasah aliyah vocational (MAK)). On the

other hand, the ever-increasing demands in various fields of work that are found in the business and industrial world (DUDI) require policies, both the government and regional governments in order to have harmony, compatibility, and connection with DUDI needs. This spirit means to immediately carry out renewal and improvement of the SMK curriculum, especially related to certain competency skills. One of the things that needs to be done to make an update is the need for validation of expertise competencies that are aligned with work culture, work competencies, work skills, and work skills required by DUDI systemically and systematically. However, the reality of the absorption of vocational graduates has not been able to be optimally absorbed by DUDI as described in the narrative above. One of the factors causing this to happen is the quality of SMK graduates who have not met the qualifications required by employment. In fact, there is a tendency for employers to prefer high school graduates over vocational graduate.

The DUDI complaint as revealed above, is not without reason, because in reality the competence and skills of vocational graduates still leave homework sufficient to require attention for the development of vocational curriculum. Complaints about abilities and skills become one of the causes of the absorption of graduates in the workforce. Not absorbing vocational graduates is not absolute because there are no jobs, but because of the low skills possessed by graduates.

One of the crucial problems in SMK policy studies from time to time is setting goals in the educational curriculum. On the one hand, the aims of the SMK curriculum are expected to be always in harmony with symbiosis with the needs of SMK, but on the other hand the dynamics that emerge are not always easy to be accomplished. Many things must be considered, not only as an instrument of state policy, but also concerning skills, competencies, understanding, intelligence, skills, understanding, behavior, attitudes, work culture, and appreciation of jobs in the workplace. Of course, to advance SMK there are many things that have become challenges, problems, and obstacles so far that have caused educational outcomes to appear to be less encouraging and not as expected. As a footnote, one of the serious obstacles is the perspective and mental attitude of policy makers, both at the central

and regional levels, which are not yet oriented towards the needs of DUDI. Therefore, seriousness is needed for all education stakeholders in all lines to make effective, meaningful, and strategic efforts and be on target in improving the competency and skills of vocational graduates through a series of validation competencies that are effective, quality, democratic, and encouraging strengthening work culture and ability to work evenly, inclusive, and fair in the future.

The curriculum designed for SMK must be directed into a workforce that will gain the meaningfulness of competence and work culture because it is directly involved with the rhythm of work that exists in DUDI. The perspective of SMK students is learning while working. Learning for that, needs to be directed according to this perspective. In other words, the implementation of meaningful learning can produce vocational graduates ready to work because they have work laboratory experience. Learning focuses on two 'places of learning', namely the classroom and work orientation at work along the 'work' line. Such a model can guarantee that more than half of graduates can be directly absorbed into the workforce either by DUDI coaches or other industries.

D. CONCLUSIONS

Vocational education policy in the case of vocational high schools (SMK), as part of the national education system that is integral to all policies and programs of the Work Cabinet, has a very strategic value to prepare a society that has high competitiveness in particular and the Indonesian nation is generally of high quality high in order to enter a better future with greater confidence and have the same degree with other parts of Indonesia and other nations in the world. This goal will be achieved if all Vocational education stakeholders in all lines work hand in hand to produce better and higher education, especially in Multimedia expertise competencies. There needs to be a reciprocal relationship between DUDI and education and training institutions (formal education and training), both formal, informal education and those managed by the industry itself. DUDI must be able to formulate the desired standard qualifications of human resources, to ensure the continuity and progress of DUDI in

Indonesia. The educational institution or the training must use the standards that have been set as a reference in developing programs and curriculum, while the bureaucrats use it as a reference in formulating policies for macro human resource development. And the hours of study must be separated between the National Content, the Regional Content, and the Vocational Content

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IMPACT OF ZONING SYSTEM FOR TEACHER IN SCHOOLS LEARNING PROCESSES

1. Hana Maria Uli Lumbanraja, lumbanrajahana@ymail.com
2. Nurtanio Agus Purwanto, nurtanio@uny.ac.id
Yogyakarta State University

lumbanrajahana@ymail.com[1], nurtanio@uny.ac.id[2]

ABSTRACT

This zoning problem is broad enough and not only focus on the of student, but also concerns the problem of learning processes, problems of teachers, even the problem of parents and the society. Teacher is a crucial component in the education management, which officiate by organizing teaching and learning activities in schools. With the implementation of this zoning system, it will affect the teacher in the learning process and also the achievement of educational success. This research aims to determine the impact of the zoning system on teachers in the learning process at school. This research is a descriptive research with literature review methods and interview. The results found that the zoning system has positive and negative impacts for teachers. The implementation of this zoning system makes it more difficult for teachers to manage the class, because class conditions are increasingly diverse, both from the child's character, children's abilities, children's understanding level, and children's motivation. The positive impact, with the diversity of characteristics and levels of understanding of students, the teacher who is less competent will be able to improve self-competence in teaching. However, it takes time for teachers to understand and learn to adjust to an increasingly diverse learning process, as a result the learning process in the classroom cannot run optimally. Another impact of this zoning system is that in some schools has lack of students which results in several empty classes. It makes teachers difficult to meet their maximum teaching hours and will affect the certification allowance they will receive.

Keywords: Zoning system, teacher, learning process, impact.

A. INTRODUCTION

Education is one of the important things that has the aim to educate the nation's children in preparing themselves in the era of globalization. This has been guaranteed in the legal system, namely in the opening of the 1945 Constitution which states that one of the objectives of the Unitary Republic of Indonesia (NKRI) is to educate the nation's life. The survival and progress of a nation, especially for developing countries is determined by the progress of education. Every citizen has the right to education, because education is a human right that has an important role in people's lives. Education can be achieved in various ways, one of them through education in schools. Schools are formal educational institutions where the educational process takes place that systematically plans and provides opportunities for students to carry out various learning activities. These activities are arranged in a curriculum, which in turn is carried out in the form of a learning process aimed at the growth and development of students who are directed and encouraged to achieve the goals they aspire to [1].

The teaching and learning process, which is now known as learning, is one of the main aspects as a determinant of the quality of education. Learning is the basis of an educational process and wants to achieve successful goals. Therefore, problem solving regarding the low quality of education must be focused on the quality of learning. In the learning process there are

three components, namely the instructor (teacher), students, and teaching materials. The teacher functions as a provider of teaching materials, and students as recipients. In this context, the teacher has a very important role, because the success of education depends on the quality of a teacher. The teacher has an important role and role in the teaching and learning process, both formal and informal education. Therefore, in every effort to improve the quality of education cannot be separated from various matters relating to the existence of the teacher itself.

The main task of the teacher is teaching. Teaching can only be done properly and correctly by someone who has passed a certain education that was designed to be prepared to become a teacher. The success of the learning process is highly dependent on the quality of the teachers who teach, as expressed by Suryadi (2014: 159), that the quality of teachers is an absolute prerequisite for building superior and quality education. How good is the curriculum, the complete infrastructure and modern resources, but if the school does not have professional teachers, there is no guarantee that students will perform high [2]. The teacher must be able to manage the class, the skills to manage the class which is meant here is the teacher's skill in creating and maintaining optimal learning conditions as well as the skill of returning the conditions of learning to optimal conditions if there are minor and temporary disturbances or continuous disturbances [3]. In addition, teachers must also be able to design every learning program, both in terms of material and learning media, and be able to guide and guide students to reach maturity so as to achieve educational success.

In improving the quality of national education, the government as an institution of state administration has a very important role. One of the government's efforts in the framework of educational equality at this time is the government issued a new regulation in the acceptance of students through the Minister of Education and Culture Regulation number 17 of 2017 concerning New Student Reception (PPDB), which in the Permendikbud, governs the zoning system that must be applied by schools in accepting prospective new students. Previously, the zoning system had been implemented in stages since 2016, which began with the use of zoning to administer national exams. Then in 2017 the zoning system was first implemented in PPDB, and was refined in 2018 through Permendikbud number 14 of 2018.

Since 2018, PPDB has been implemented in a number of cities in Indonesia. PPDB with this zoning system is expected to provide equal rights for citizens to obtain free and quality education so as to cut the poverty chain in Indonesia. As stated in article 31 paragraph 1 of the 1945 Constitution which states that every citizen has the right to education [4]. The implementation of this educational process is to educate and develop the nation's morals to be better and more dignified. Based on these regulations, schools run by local governments must accept prospective students who live in the closest zone radius of the school at least 90% of the total number of students received and the remaining 10% for achievement and transfer. Then in

June 2019, the student quota policy was changed by the Ministry of Education and Culture to a minimum of 80% for zoning, 15% for achievement, and 5% for transfer [5].

However, in KOMPAS.com (2019) - President Joko Widodo highlighted the many complaints related to the implementation of the school zoning system in a number of regions. Jokowi said, the problems of implementing the zoning system in PPDB in the 2019 school year were more numerous than before. Seeing this, it does not cover that there are indeed many problems that need to be evaluated from the implementation of the zoning system in PPDBThen, Deputy Mayor of Bandung Yana Mulyana in KOMPAS.com (2019) - said, in fact the City of Bandung was not ready to run the zoning system in Accepting New Students (PPDB). Before the zoning system was implemented, he was more amenable to equality both from the school infrastructure and the instructors. Teachers who have the potential should be transferred for equity. Even if the mutation must be done, it should be gradual 20-30 percent first. PPDB should keep academic priority [6].

The zoning system in the selection process for the admission of new students (PPDB) makes some parents worry that their children will fail to enter public schools because of the reason that the distance from home to favorite school is quite far. For favorite schools, the implementation of this zoning system makes the school stakeholders restless, because the student input process cannot be selected by the school and will potentially decrease the reputation of the school. On the other hand, public schools that have not been seeded feel like they are benefiting. Less favorite schools will get potential students because of this zoning system. Armed with this potential student, non-superior schools also have the potential to offset, even leave, the prestige of the previous superior school. What can not be missed, private schools will also harvest potential students. Because, many students who are not accepted into superior schools, because they are defeated by the zoning requirements, instead choose a favorite private school [7].

The issue of zoning does not only concern the way PPDB is carried out, but it also involves broader educational issues, such as student learning processes, learning motivation, school performance, parents and teacher problems, and the society. Not only the community, even governors, mayors, there are also many pros and cons of zoning system policies. This can be seen from the expressions that often appear in daily talks in the community and teachers about education in schools. For the teacher itself, the application of the zoning system greatly influences the learning process, because student input is increasingly diverse, both from the character of the child, the child's ability, the level of understanding of the child, and the child's motivation, this makes it more difficult for teachers to manage the class. Even though this zoning system has been running for 3 years, but in line with its implementation, improving the quality of teachers still needs to be done. Why is that, because teachers also have an important role in the learning process that influences the success of the success of education. For this reason, in this

study researchers felt the need to find out what the effects of the zoning system on teachers in the learning process at school.

B. METHOD

This research is a descriptive research with a *literature review* method and interviews. Collecting data from this study through two sources, namely secondary data and primary data. Sekuder data uses a *literature review* that is by analyzing a number of books, journals, articles, and various news related to the implementation of the zoning system and the impact of the zoning system. This study focuses on the impact of zoning on teachers in the learning process at school. Then the primary data is the researcher conducting data collection by interviewing the teacher in one of the State Junior High Schools in Banguntapan, Yogyakarta. This interview was conducted to find out more about events in the field.

C. RESULT AND DISCUSSION

The issue of equal distribution of education in Indonesia has become a crucial issue and has come under the spotlight of the government. Various policies have been carried out by the government in improving the quality of education, one of the efforts is to do equalization of education, namely the zoning system. The implementation of the zoning system is implemented in formal education in state schools. In formal education, the initial stages to begin education are carried out through the acceptance of new students. Admission of new students is a selection process that will determine students who are accepted into a school. This process is expected to run objectively, accountably, transparently, and without discrimination so as to encourage increased access to services and equitable education.

The implementation of the zoning system that prioritizes the distance of residence of prospective students to schools as the main determinant of PPDB is currently difficult to implement. As Indroyono (2019) stated that through PPDB, the distribution of students and the distribution of schools became uneven, as a result there were some schools that lacked and even excess students because the schools were in densely populated zones. Another case is that schools which usually accept a small number of prospective students through this zoning system have become more PPDB, the problem is infrastructure and the number of teachers is inadequate, this makes the school unable to accept students outside the building capacity and educators [8]. This was also expressed by Ula, MD, and Lestari, I. (2019) that what was imposed from the implementation of this zoning system was the number of student admissions through the regional route from year to year which always increased from the initial 20% to the present 90% causing many students who score below the minimum completeness criteria (KKM) [9].

From online news, iNews.id (2019) - it was reported that in Gunungkidul Regency, DIY, there are still a number of public schools that lack students until the closing of PPDB online. One

of them happened at SMP Negeri 4 Wonosari. Until the deadline for the registration and announcement period, this school is only able to capture 80 students from 128 available quotas, as a result there are still around two empty classes [10]. The shortcomings of these students cannot be separated from the zoning system implemented in PPDB. Many prospective students and parents choose another junior high school that is closer. As a result, this school became one of the schools that were not in demand. Through this zoning system, schools cannot accept large numbers of students to get students from outside the zoning. The lack of students who register makes the teachers uneasy. One of them concerns the certification allowance that will be received. Because, teachers will find it difficult to fulfill a maximum of 24 hours of their teaching.

The impact of the implementation of this zoning system is very much felt by teachers in schools, because teachers are increasingly difficult to manage classes. The composition of students who are accepted by the zoning system has very high diversity, because students who have high average abilities are mixed with students with low average abilities [11]. Teachers who have been accustomed to teaching students with high average abilities, must now teach students who have low average grades and very diverse abilities. Teachers are guided to have more skills and innovations in teaching diverse children in high abilities. Teachers must know that highly capable children need new challenges and enrichment from teachers to be motivated and improve their abilities. On the other hand, even low-ability children need the help of teachers to develop their scientific understanding correctly.

This situation requires teachers to adapt quickly because the approaches and teaching skills for these two categories of learners are different. The problem is that the adjustment of the teacher's ability to teach cannot be done in a short time. Not to mention the diverse behavior of students is felt especially when in the classroom, the teacher used to feel light, because once explained students easily understand. However, with the zoning system the teacher teaches extra to make students understand the lessons, sometimes even the teacher does not teach the subject matter but instead teaches ethics and manners. It takes time for teachers to understand and learn to adjust to diverse learning processes, as a result the learning process in the classroom cannot run optimally.

Through interviews with one of the state junior high school teachers in Banguntapan it has been found that this school has implemented a zoning system since 2018. The implementation of this zoning system has a great influence on the reputation and learning process in schools. The school's reputation which has been rated by the community as quite good and is a favorite of parents in sending their children to school, is now overwhelmed by the school in maintaining that reputation. This happened because of a change in policy made by the Government, namely the Zoning system policy. With the zoning system, school input has dropped from previous years, because there are no standard values in PPDB selection. Schools must accept students whose homes are close to the school without a specified grade. This makes students who have high

grades forced to be rejected because the school must prioritize students who live near the school location.

The implementation of this zoning system also makes it difficult for teachers to manage the class, because the classroom conditions are very diverse, both in the child's character, children's abilities (academic and non-academic), the level of children's understanding, and children's motivation. Students who are accepted through the zoning system have relatively low learning abilities. They have difficulty in understanding the material that has been delivered and more and more children are difficult to manage. To handle this, teachers are required to be able to adapt quickly to changes in the existing conditions of children.

The impact of applying the zoning system as described above, both from the results of the literature review, and also from the results of the interview, shows that the application of this system has more negative than positive effects. However, this does not mean that the policy must be discarded, but rather must consider the positive impact which is greater than the negative impact. Some examples of positive impacts from the application of PPDB zoning are (Nurlailiyah, 2019) mentioning that with the diversity of characteristics and levels of understanding of students, teachers who are less competent will be able to improve their competence in teaching [12]. Then the research results of Dewi, K., E & Septiana, R. (2018) stated that the zoning system has a positive impact, namely that this zoning system will encourage the creativity of educators in learning with heterogeneous student conditions [13].

Seeing the impacts arising from the implementation of the zoning system as described above, schools must work extra in dealing with this impact. Schools are also required to improve the quality of teachers in teaching through training and improvement of teacher professionalism with the subject teacher deliberations (MGMP) on how to achieve student target scores, and student input. This was done in order to be able to maintain the reputation and quality of the school which was assessed both by parents and the community. Then, it is hoped that the Ministry of Education and Culture will continue to revise the regulations in Permendikbud no. 14 of 2018, so that through this zoning system design all parties understand the objectives and can comply with the rules so that the implementation of PPDB can work well, so as to reduce the negative impacts caused and produce educational goals that are aspired.

D. CONCLUSION

From the results of the literature review and interviews regarding the impact of the zoning system for teachers in the learning process, the application of this zoning system found negative and positive impacts. The negative impact, the zoning system makes teaching and learning culture not conducive. The implementation of the zoning system makes it difficult for teachers to manage classrooms, due to increasingly diverse classroom conditions, both from the child's character, children's abilities, children's understanding level, and children's motivation. The teacher also

complains about the negative behavior of students who are difficult to control, as a result the teacher becomes unable to maximize the control of children's character education. Another impact of this zoning system is that in some schools there is a shortage of students which results in several empty classes. This makes it difficult for teachers to meet their maximum teaching hours and will affect the certification allowance they will receive.

This zoning system also has a positive impact which will erase the image of favorite schools and to prevent discrimination. For teachers, the zoning system will make teachers increasingly enhance learning strategies and develop creativity for themselves. With the diversity of characteristics and levels of student understanding, less competent teachers will be able to improve their competence in teaching. However, it takes time for teachers to understand and learn to adjust to an increasingly diverse learning process, as a result the learning process in the classroom cannot directly run optimally.

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EFFECTIVENESS OF GUIDED INQUIRY LEARNING TO IMPROVE COMPETENCE OF UNDERSTANDING CONTENT OF QUR'AN VERSES AND HADITHS

Saridudin
Center for Religious and Religious Education
Religious Research, Development and Training Agency,
Ministry of Religious Affairs
dudinsaridudin@gmail.com

Abstract

The background of this research was the observation that the competence of junior high school students in understanding Quran verses and Hadiths was quite low. This is mainly caused by the conventional learning methods, which is more teacher-oriented. This research aims to asses the effectiveness of guided inquiry learning methods in improving students understanding of the Quran verses and Hadis. The method used in this research is a quasi-experimental with nonequivalent control group design. The population is all students of grade VII of MTs Al-Ikhlash Padakembang Kabupaten Tasikmalaya academic year 2013/2014. Sampling was purposive so that grade VII C is selected as an experimental group and grade VII B is selected as the control group. Guided inquiry learning is implemented in the experimental group learning process and conventional learning is implemented in the control group. The main data collection techniques are questionnaires and observation. Hypothesis testing based on the calculation of the two-sample paired t-test showed that the mean of pre-test and post-test of the experimental class differ significantly. It shows that there are significant differences between the pre-test and post-test mean of the experimental group. Consequently, the guided inquiry learning model is recommended as one of the models of learning that can enhance students' competence in understanding the content of the Qur'an verses and Hadiths.

Keywords: guided inquiry learning, the understanding of the Qur'an verses and Hadiths

INTRODUCTION

Islamic Religious Education (PAI) is an education that provides knowledge and shapes the attitudes, personalities, and skills of students in practicing the teachings of Islam, which is carried out at least through subjects at all levels of education (the decision of the minister of religion No. 211 of 2011). Islamic Religious Education in Madrasah Tsanawiyah (MTs) includes four subjects namely the Qur'an and Hadith, Moral Law, Fiqh, and Islamic Cultural History.

The Qur'an and Hadith are part of a group of Islamic Education subjects taught at MTs. The scope of the Qur'an and Hadith subjects in MTs is in accordance with the decision of the minister of religion No. 2 of 2008 concerning competency standards for graduates and standards of content in Islamic Education and Arabic Language in Madrasas including reading and writing competencies which are elements of the application of Tajweed science; translating the meaning (interpretation) which is an understanding, interpretation of the verses of the Koran and Hadith in enriching intellectual treasures; and apply the contents of the verses of the Koran and Hadith which are elements of real practice in everyday life.

Giving the Qur'an and Hadith subjects in MTs is intended so that students can understand the contents of the verses of the Koran and Hadith properly and correctly. Learning the Qur'an and Hadith is good and right is expected to give birth to humans who are intelligent, broad-minded, critical and contextual.

Learning the Qur'an and Hadith in MTs should be something interesting, because the Qur'an and Hadith are not only the words of God and the words of the prophet which are only textual but contextual, meaning that they always dialogue with the context of the

accompanying community. What the Qur'an and Hadith convey is the answer to the problems faced by humans at the time the verses were revealed or at the time the Hadiths are revealed, and the message of the verse or word is always contextual in today's human life.

Students must be able to understand the contents of the verses of the Qur'an and Hadith and relate them to various life contexts, both related to faith, worship, morality, social and so forth. This is important because the Qur'an and Hadith are revealed to humans and provide solutions to the various problems they face.

Problems that occur in the field indicate the opposite phenomenon. Some of the results of research related to PAI subjects which include Qur'an and Hadith subjects, as stated by Wasliman in Masykur (2001: 8), so far the learning process of PAI has not been able to touch the overall affective and psychomotor aspects, PAI only takes place limited to the delivery of scientific disciplines.

Gojwan in Afifah (2013: 14) states that PAI learning shows unsatisfactory results, both in the process and student learning outcomes. There are a number of obstacles including (1) the low motivation of students to learn; (2) PAI subject matter is still oriented towards cognitive abilities and lacks in attitude formation (affective) and habituation (psychomotor); (3) limited attitudes and understanding of teachers in the development of student-centered learning models (student-centered), so learning is still conventional; and (4) limited learning facilities and infrastructure.

In the Qur'an and Hadith subjects, some learning problems that occur according to Nasir (2012: 12) are: *first,* the weak understanding of some madrasa students towards the Koran and Hadith, *second,* the low student interest in learning in the Qur'an and Hadith subjects, and *third*, the weak the competence of some teachers of the Qur'an and Hadith subjects.

The low ability of students to understand the content of the Qur'an and Hadith verses is due to the delivery of material that is still teacher-centered so that the involvement of students in teaching and learning process becomes low (Nasir: 2012). Learning the Qur'an and Hadith in schools is more conventional, more prioritizing cognitive teaching values than affective and psychomotor values. Even though there are at least three areas that must be a teacher's attention in conducting learning, namely the cognitive, affective and psychomotor domains.

Based on a study conducted by the author at MTs Al-Ikhlash Padakembang, Tasikmalaya Regency, the ability of students to understand the content of the verses of the Qur'an and Hadith is still low. This is based on the data obtained that the Minimum Completeness Criteria (KKM) understand the content of the Qur'an verses and Hadith VII grade odd semester 2013/2014 academic year only reached an average of 65 of the required KKM that is 70. The above data is reinforced by the results of observation and interviews conducted by the author of grade VII students that from one class interviewed, only about 16% of students can understand the content of the Qur'an and Hadith verses and relate it contextually to the various problems that occur. Students assume that understanding the content of the verses of the Qur'an and Hadith is the most difficult thing from the Qur'an and Hadith subjects.

Students experience confusion when asked the relationship or relationship between a verse of the Qur'an or the Hadith with certain problems, for example, the relationship with worship, faith, morals, humanity, social and so forth. Unlike the case when students are asked to memorize a verse of the Qur'an or a hadith of the prophet, they can certainly memorize it smoothly. Students have not been able to understand the contents of the verses of the Qur'an and Hadith and connect them contextually with various problems of life.

Students assume that the Qur'an and Hadith only deal with Allah and have nothing to do with humanity.

Such conditions require solutions so that learning is not only focused on the teacher but also involves students (student-centered). Learning the Qur'an and Hadith in MTs must be able to give birth to students who can understand the content of the verses of the Qur'an and Hadith and be able to interpret the verses of the Qur'an and Hadith by the context of contemporary community life.

The inquiry learning model offers a student-centered concept of learning. In inquiry learning students are required to develop critical thinking skills rather than just memory (Christopher, 2009). The inquiry is a learning model that seeks to instill the basics of scientific thinking in students, so that in this learning process students learn more independently, develop creativity in understanding concepts and solving problems (Komalasari, 2011: 73). The purpose of an inquiry is to develop intellectual abilities and skills in raising questions and searching for answers with things to know (Sukmadinata and Erliany, 2012: 156).

In general, the steps of learning by using the inquiry learning model described by Sanjaya (2010: 306-308) are orientation, formulating problems, formulating hypotheses, collecting data, testing hypotheses and formulating conclusions.

Guided inquiry learning helps students investigate questions and problems (Atkinson and Andrea, 2008). Ogle in Kuhlthau (2007: 3) states that learning with the guided Inkuri model using the KWL framework, students must ask questions about "what do I know?" (K); "what do I want to learn?" (W); dan "what did I learn?" (L).

Guided inquiry allows students to gain a broader understanding of subject content. At the same time, students develop competencies in reading, writing and speaking, and in turn acquire social skills through interaction, collaboration, and collaboration with other students. Also, students learn how to study in an information-rich environment. Students are involved in five types of learning, namely: curriculum content, information literacy, learning processes, literacy competencies, and social abilities. (Kuhlthau, 2007: 8).

With the guided inquiry learning model in the Qur'an and Hadith Subjects, MTs students are expected to have the ability to understand the content of the verses of the Qur'an and Hadith according to the context, and more importantly be able to implement them in daily life. In the process of learning to understand the content of the Koran and Hadith teachers need to formulate learning objectives to understand the content of the Koran and Hadith. The objectives formulated include aspects of knowledge (knowing), aspects of implementation (doing), and aspects of habituation (Luthfi, 2012: 302).

The skills in understanding the contents of the verses of the Qur'an and Hadith are not only to be known but also belong to him and blend with his personality. Students are skilled at understanding the contents of verses of the Qur'an and Hadith, so every time a student has read the Qur'an and Hadith, or listens to the Qur'an or Hadith, then students will be able to dive in and understand the content of the Qur'an or Hadith. This is the purpose of teaching the aspect of being. Learning to achieve high being is more directed to educational efforts so that students carry out what they know in their daily lives.

Based on some of the ideas above, this study intends to examine the implementation of guided inquiry learning to improve the ability to understand the content of the verses of the Qur'an and Hadith in MTs Al-Ikhlash Padakembang, Tasikmalaya Regency.

This research is focused on the ability to understand the content of the verses of the Qur'an and Hadith with the subject of tolerance and the problems of preaching. The subject of tolerance and the problem of da'wah was chosen because this subject is interesting and has a very broad scope to be associated with various problems that occur, both relating to

social relations, the phenomenon of modern community life and various religious problems that arise in society.

The research question is whether guided inquiry learning is effective in improving the ability to understand the content of the Quranic verses and Hadith of MTs students? While the aim is to test the effectiveness of guided inquiry learning in improving the ability to understand the content of the Quranic verses and Hadith of MTs students.

Guided Inquiry Learning

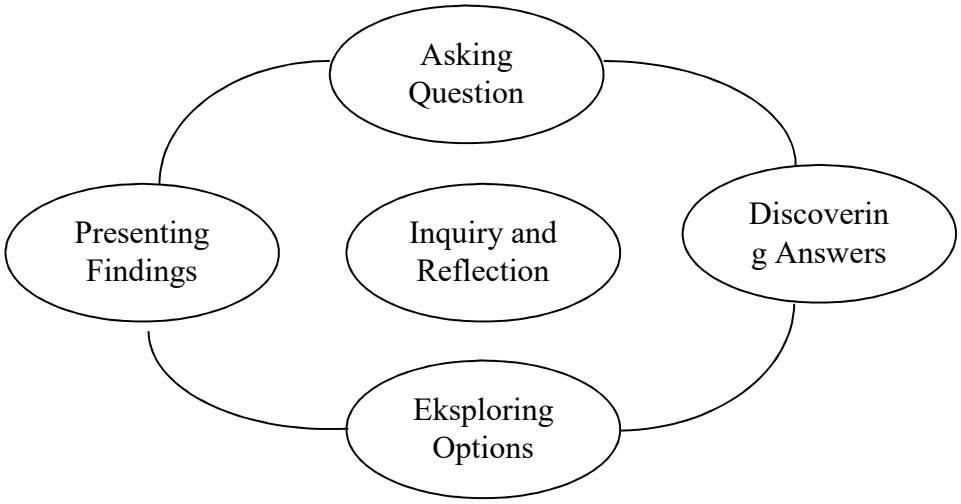
Inquiry learning is a series of learning activities that emphasize the process of thinking critically and analytically to seek and find answers that are certain from a problem in question (Sanjaya, 2010, p. 303). The process of thinking itself is usually done through questions and answers between the teacher and students. The inquiry learning model is often also called the heuristic strategy, which is derived from the Greek language, heuristic which means I find it.

Understanding inquiry in several different ways occurs in the classroom in the form of processes, content, context, and strategy (Stewart, Gyle and Shore, 2012, pp. 7-8). The process is an activity that is guided by students' curiosity and interest, where students learn process skills that can be generalized across the subject domain. Content is an active investigation, critical thinking, and reflection that provides an opportunity to interact with the material; thus, students reach a deep understanding of content and become better able to apply knowledge. Strategies include problem-solving, planning, organization, and self-regulation that encourage students to carry out collaborative investigations and self-regulation. In Context, Students make meaning from experience; thus, the inquiry environment requires some form of resources, data access, individuals as participants in group activities, dialogue, and reflection.

The inquiry is important to ensure that students not only memorize factual information that is needed but also apply facts to the development of meaningful questions and understanding of students. The question model used during the inquiry process allows students to progress from merely holding and finding factual information to being able to apply new knowledge in several different ways (Coffman, 2009, p. 1).

The inquiry learning model encourages and helps students form their questions and work through the process of answering questions. Through inquiry learning, students are actively involved in inquiry activities by incorporating information literacy skills in problem-solving. Skills such as observing, gathering, analyzing, and synthesizing information are developed to make predictions and draw conclusions. The inquiry-oriented learning model allows students to find and pursue information with active involvement and involvement in the material (Coffman, 2009, p. 2). The inquiry follows the process as described below:

Picture 1
Inquiry Process



The process starts with questions and moves through the discovery, exploration, and presentation of findings. Throughout this dynamic process, questions are introduced, hypotheses are tested, and new questions are formed and reformed. The essence of the inquiry process is reflection and feedback from teachers and classmates to ensure that understanding and learning occur. This is a cyclical process which is a continuous movement between each stage. Inquiry learning involves many activities that encourage students to think, ask questions, explore information and present possible solutions or ideas. The inquiry process involves:

1. Identify questions to find possible answers.
2. Identifying appropriate and quality resources to help students answer the questions identified.
3. Manipulate resources to ensure that correct information is identified and answers to specific questions are explored.
4. Formulate the answers found and identify how these answers relate to the original question.

Several things are the main characteristics of the inquiry learning model according to Sanjaya (2010, p. 304). *First*, the inquiry learning model emphasizes student activity maximally to search and find, meaning that the inquiry learning model places students as subjects of learning. In the learning process students not only act as recipients of the lesson through verbal explanation of the teacher, but they play a role to find the core of the subject matter itself.

Second, all activities undertaken by students are directed to search for and find their answers which are certain from something questioned, so that it is expected to foster an attitude of confidence (self-belief). Thus, the inquiry learning model places the teacher not as a source of learning, but as a facilitator and motivator for student learning. Learning activities are usually carried out through a question and answer process between teachers and students. Therefore, the teacher's ability to use questioning techniques is a major requirement in conducting an inquiry.

Third, the purpose of using inquiry learning models is to develop the ability to think systematically, logically and critically or develop intellectual abilities as part of mental processes. Thus in the inquiry learning model students are not only required to master the subject matter but how they can use their potential.

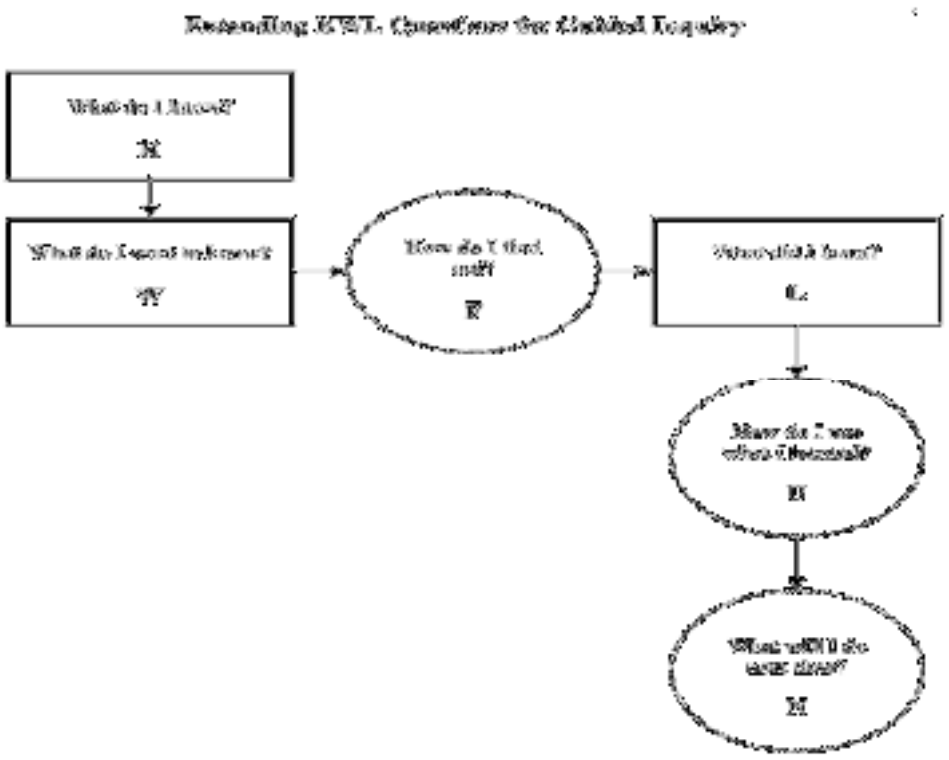
The inquiry is a learning model where students find and use various sources of information and ideas to improve their understanding of a particular problem, topic, or issue (Kuhlthau, 2007, p. 2). This requires more than just answering questions or getting the right answers. It also supports investigation, exploration, search, questions, research, search, and study. An inquiry does not stand alone, but involves interest, and challenges students to connect their world with the curriculum. (Kuhlthau, 2007, p. 2).

Through guided inquiry students gain the ability to use learning tools and resources inside and outside the information age as they learn about curriculum content and meet subject areas of curriculum standards. Guided inquiry helps students develop research competencies and subject knowledge and also develops motivation, reading comprehension, language development, writing skills, cooperative learning, and social skills. All of this has been identified as something important for lifelong learning. (Kuhlthau, 2007, p. 2).

The guided inquiry learning model requires careful planning, close supervision, continuous assessment, and targeted intervention by the teacher through an inquiry process that gradually leads to independent learning. Integrated inquiry units are planned and guided by the teacher. The ultimate goal is to develop independent students who know how to expand their knowledge and expertise through the use of various sources of information used both inside and outside of school. (Kuhlthau, 2007, p. 2).

In the process of teaching and learning with the guided inquiry model, students are required to find concepts through instructions from a teacher. The instructions are generally in the form of guiding questions. In addition to the questions, the teacher can also provide explanations when students will experiment.

Ogle in Kuhlthau (2007, p. 3) states that learning with the guided Inkuri model using the KWL framework, students must ask about "what do I know?" (K); "What do I want to learn?" (W); and "what did I learn?" (L). This concept was later expanded by encouraging students to think about the facts and ideas they faced. The KWL concept is expanded with "how do I find out ?, how do I share what I learned? and what will I do next time? ". By focusing on finding new information, learning it and linking it to what students already know, students are required to construct new knowledge and share it with others. By asking "what will I do next time?" Develops a reflection that allows transfer to other situations and promotes metacognition of higher-order thinking. This reflection combines content thinking (what did I learn?) And process (how did I learn), so students get a deeper appreciation of the search and use of information (Kuhlthau, 2007, p. 4). The process is described as follows:



Source : Kuhlthau (2007, p. 4).

Inquiry learning, in general, emphasizes these questions and ideas which motivate students to want to learn a lot and create ways to share what they have learned. Guided inquiry brings out something central even further moving students to higher levels of thinking and learning by focusing on instructive interventions at each stage of the inquiry process. The teacher must focus on what students think, feel and do.

Guided inquiry is guided preparation for life-long learning, not just preparation for tests (Kuhlthau (2007, p. 4). Inquiry learning is effective in preparing students to think deeply about the subject so that they can succeed in authentic tests with learning situations. Guided inquiry targets student assessments and such situations are integrated into the process, the result is lasting learning that has meaning and can be applied in student life (Kuhlthau, 2007, p. 5).

The inquiry is a way of learning curriculum content. Guided inquiry is integrated into curriculum content. Students are actively involved in the content of the lesson, motivating them to pursue important questions and reach a deeper understanding of the content. (Kuhlthau, 2007, p. 5). In the guided inquiry, curriculum content is linked to the world of students through wise planning and adaptability.

Students are involved in each stage of the learning process, from choosing what is investigated, to formulating a focused perspective, presenting their learning in the final product. Guided inquiry combines reflection through the process, with the final product as evidence of a deeper construction of knowledge and understanding. In guided inquiry students and teachers collaborate and work together on ideas. Students work as a learning community, helping and learning from each other, not as individuals who work exclusively on personal assignments. (Kuhlthau, 2007, p. 5).

What distinguishes the guided inquiry model from other learning models is described as follows:

Table 1
The difference between guided inquiry models and other models

What Guided Inquiry Is Not and Is	
Guided Inquiry Is Not . . .	Guided Inquiry Is . . .
Preparation solely for the test	Preparation for lifelong learning
An all-or-subject	Integrated into curriculum
Isolated information skills	Transferable information concepts
Relying on one textbook	Using a variety of sources
Finding answer to a prescribed question	Involving students in every stage of the learning, from planning to the final product
Curriculum without meaning to students	Curriculum connected to the students' world
Individual students working exclusively on subject tasks	A community of learners working together
Solely teacher directed	Students and teachers collaborating
Overemphasis on the end product	Emphasis on the process and product

Source : Kuhlthau (2007, p. 6).

Guided inquiry creates guided environments that motivate students to learn by providing opportunities for them to construct their meanings and develop a deep understanding (Kuhlthau, 2007, p. 6).

Guided inquiry allows students to gain a broader understanding of subject content and information literacy concepts. At the same time, students develop competencies in reading, writing and speaking, and in turn acquire social skills through interaction, collaboration, and collaboration with other students. Also, students learn how to study in an information-rich environment. Students are involved in five types of learning: curriculum content, information literacy, learning processes, literacy competencies, and social abilities. (Kuhlthau, 2007, p. 8).

Table 2
Five types of learning

Five Kinds of Learning in the Inquiry Process	
1. Curriculum content	fact finding, interpreting, and synthesizing
2. Information literacy	concepts for locating, evaluating, and using
3. Learning how to learn	initiating, selecting, exploring, focusing, collecting, and presenting
4. Literacy competence	reading, writing, speaking, and listening
5. Social skills	interacting, conversing, and collaborating

Source : Kuhlthau (2007, p. 6).

In general, the steps of learning by using the inquiry learning model are explained by Sanjaya (2010, pp. 306-308) as follows:

Orientation

The orientation step is a step to foster a responsive learning atmosphere or climate. In this step, the teacher conditions students to be ready to carry out the learning process. The teacher stimulates and invites students to think about solving problems. The orientation step is very important. The success of inquiry learning models is very

dependent on the willingness of students to be active in using their abilities to solve problems.

Formulate the problem

Formulating a problem is a step to bring students to a problem that contains a puzzle. The problem presented is a problem that challenges students to think to solve the puzzle. The process of finding answers in the inquiry learning model is very important, because through this process students will gain valuable experience as an effort to develop mentally through the process of thinking. Thus, puzzles that are a problem in inquiry models are puzzles that contain clear concepts that must be sought and found.

Formulate a hypothesis

The hypothesis is a temporary answer to a problem that is being studied. As a temporary answer, the hypothesis needs to be tested for truth. The ability or potential of individuals to think has been owned since the individual was born. The potential of thinking starts with the ability of each individual to guess or hypothesize a problem. When an individual can prove his guess, then he will arrive at a position that can encourage further thinking.

Collecting data

Collecting data is an activity to capture the information needed to test the proposed hypothesis. In the inquiry learning model, collecting data is a mental process that is very important in intellectual development. The process of collecting data not only requires strong motivation in learning but also requires perseverance and the ability to use its thinking potential. Therefore, the task and role of the teacher in this stage are to ask questions that can encourage students to think in search of the information needed.

Test the hypothesis

Hypothesis testing is the process of determining the answers that are considered acceptable by the data or information obtained based on data collection. The most important thing in testing a hypothesis is finding the level of student confidence in the answers given. Testing the hypothesis also means developing the ability to think rationally. This means that the correctness of the answers given is not only based on argumentation, but must be supported by data found and can be justified.

Formulate conclusions

Formulating conclusions is the process of describing findings obtained based on the results of hypothesis testing. Formulating conclusions is a gong in the learning process. It often happens because of the large amount of data obtained, causing the conclusions that are formulated to not focus on the problem to be solved. Therefore, to reach accurate conclusions, teachers should be able to show students which data are relevant.

Understanding the Contents of Al-Qur'an Verses and Hadith

Al-Qur'an and Hadith are the two main pillars of Islamic teachings. Every detail and detail of Islamic teachings must refer to the Qur'an and the Hadith. Even the Qur'an characterizes itself as *hudallinnaas*, guidance for humanity. Likewise with the Hadith, both structurally and functionally agreed upon by the majority of Muslims, as a source of Islamic teachings. It is with this Hadith that the teachings of Islam become clear, detailed, and specific. The hadith has a role in interpreting the Qur'an in practice or application of Islamic teachings factually and ideally. The existence of the Qur'an and Hadith is not only

to be read and memorized. Al-Qur'an and Hadith are important to know the contents of the content. By understanding the content of the Qur'an and the Hadith will lead us to practice it.

The steps to be able to understand the contents of the verses of the Qur'an according to Lutfi (2012, p. 300) are as follows:

1. Understand verse by verse. Interpreting one Qur'anic verse with another Qur'anic verse is the highest form of interpretation. The most frequently used phrase is *Al-Qur'an yufassiru ba'dhuhu ba'dha.* Because there are some Qur'anic verses that interpret (explain) the meaning of the other verses.
2. Understand the Qur'anic verses with the Hadith Sahih. Interpreting the Qur'anic verses with Sahih hadith is very important. Allah sent the Qur'an to the Prophet SAW to explain its meaning to all mankind.
3. Understand verses with the understanding of companions. Referring to the interpretations of the Companions to Qur'anic verses such as Ibn Abbas and Ibn Mas'ud is very important to know the meaning of a verse. Because, in addition to always being with the Prophet, they also learned directly from him.
4. Learn Arabic grammar. No doubt, to understand and interpret the Qur'anic verses, knowing Arabic grammar is urgent. Because the Qur'an is revealed in Arabic.
5. Understand the Qur'anic nash with *asbabun nuzul*. Knowing *asbabun nuzul* (an event that brings down verses) is very helpful in understanding the Qur'an correctly.
6. Understand the Qur'an's nash with makkiyyah-madaniyyah. Knowing the grouping of verses into Makkiyyah or Madaniyyah is very helpful in understanding the Qur'an correctly.
7. Refer to the Qur'anic Interpretation Books. About the many interpretive books of the Qur'an, whether Arabic or Indonesian, it is helpful to better understand the contents of the Qur'anic verses.

Thus understanding the Qur'an correctly does not escape the language of its rules, or is often referred to as the Qur'an, so it is known how to interpret the Qur'an. Among these methods are the reasons *(asbabun nuzul)* he revealed, the *mansukh* authorship, the difference in the place of verse descent, as well as the knowledge of the verses of muhkam and mutasyabihat and many more. In the Qur'anic interpretations of the Qur'an, muffassers in interpreting the Qur'anic verses have always used these methods.

The same is true of Hadith. Before adopting the Prophet's Traditions, a Muslim should first understand the content. This is done so that his understanding is correct and his practice is directed. The steps taken to understand the Hadith according to Luthfi (2012, p. 301) are:

1. Understanding the Hadith with the guidance of the Qur'an. The hadith is the second source of law after the Qur'an in Islamic law. The hadith explains and details what is in the Qur'an. There is no contradiction between the Hadith and the Qur'an. If there is a conflict, it might happen because the Hadith is not authentic or we cannot understand it.
2. Collecting hadiths with one theme and discussion in one place. It is imperative to understand the Hadith with the correct understanding, that is to collect the authentic Hadiths which are one discussion so that mutasyabih hadiths (which have many interpretations) can be returned to the muhkam (clear meaning), and the 'amm (general meaning) interpreted by the khashsh (special meaning). In this way, the purpose of the hadith will be clear, so do not make any conflict between one hadith and another.

3. Compromising the Hadiths that seem contradictory. There is no contradiction between the Qur'anic texts and authentic Ahadith. If there is a conflict, then that is our assumption alone, not the nature of these texts. This is the belief of a believer in the hadiths that can be trusted (authentic ahadith or hasan).
4. Know the Nasih and Mansukh of a Hadith. The Holy Prophet is the Hadith who removed the Other Hadith; Mansukh is a deleted Hadith. The Nasakh (old law replaced by the new law) in the Hadith does happen. A Muslim who practices a Hadith without knowing that it is mansukh, means that he has fallen into knowledge that is not commanded by Shari'ah to practice it. Because we are not commanded to practice mansukh hadiths. While the law is a 'illat (cause) it is forbidden to practice one Hadith (which is mansukh).
5. Know Asbabulous Hadith. False Asbestos is the Reason for Hadith. To understand a Hadith with a true and deep understanding, we must not, we must know the circumstances and conditions that caused the hadith to be recited by the Prophet. Usually, Hadiths come as explanations of specific events and as therapists for those situations and conditions. Thus, the meaning of the Hadith can be clearly defined and detailed. The purpose is that the hadith is not the target of superficial approximation, or we follow an unintended zhahir (by its meaning).
6. Know the Gharibul Hadith. Gharibul Hadiths are Words that are Hard to Understand in Hadith texts. The Messenger of Allah (may peace be upon him) was the most fluent in the Arabic language and he spoke to his friends in the Arabic language which they knew well. They had no difficulty in understanding what the Prophet wanted to say because they were native Arabs, who had never been influenced by the 'Ajam' (non-Arab) language. So special skills are needed in deepening the gharib words in the hadith.
7. Refer to the Hadith Books. Books containing explanations and descriptions of the Hadith (text). Including an important step in understanding the Prophet's hadiths is to refer to the scriptures. For this reason, there are explanations of gharib, scripts, fiqhul hadiths, and narratives that seem to contradict. So a person who refers to the hadiths of the hadith will be very helpful in understanding the contents of a hadith.

Learning to understand the content of the Qur'an and Hadith for students of Madrasah Tsanawiyah, of course, have not used the steps mentioned above. However, the steps in understanding the Qur'an and the Hadith, as described above, are very well done by the teacher who will provide learning to understand the Qur'an and the Hadith. Following these steps will add insight and intended direction from the verses of the Qur'an and the Hadith. The results of the teacher's understanding of understanding the content of the Qur'an and Hadith verses by following these steps are then passed on to the students. Of course, using interesting learning methods and techniques. The aim is that students, in turn, can understand the contents of the Qur'an and the Hadith verses properly.

In the process of learning to understand the content of the Qur'an and the Hadith, the teacher needs to formulate the learning objectives to understand the content of the Qur'an and the Hadith. The objectives formulated include aspects of knowledge (knowing), aspects of implementation (doing), and aspects of habituation (Lutfi, 2012, p. 302).

RESEARCH METHOD

This research uses a quantitative approach, with a quasi-experimental method. This study does not use pure experiments, because to carry out experiments purely, variables that

might influence and influence independent variables must be tightly controlled. The type of design in this study is in the form of a nonequivalent (pretest and posttest) control group design. This design was chosen because the experimental group and the control group were not chosen randomly.

The purpose of a quasi-experimental study is to examine the effect of a particular treatment on a certain group compared to other groups that use different treatments (Sukardi, 2008: 3). This study intends to examine the effect of guided inquiry learning as an independent variable on the ability to understand the content of the verses of the Koran and Hadith (dependent variable).

Before conducting research, research instruments are first made. A research instrument is a tool used to measure observed natural and social phenomena (Sugiono, 2017). Before conducting data collection, testing of research instruments is first carried out. Instrument testing is done by testing the instrument for the research sample. This is done to get a valid and reliable instrument.

A valid instrument means an instrument that can be used to measure what should be measured, whereas a reliable instrument is an instrument that, if used several times to measure the same object, will produce the same data (Sugiono, 2017). The reliability validity test is carried out about the accuracy of the measuring instrument against the concept being measured so that it measures what should be measured and produces accurate data.

Research instruments are made to measure the ability of students to understand the content of the verses of the Qur'an and Hadith. The instruments used in this study were a test and non-test forms. The test instrument used was an objective test (multiple choice) of 30 items. To deepen multiple-choice instruments then 5 item essays are added.

Before getting treated both groups were given a pre-test to measure the initial conditions, then the experimental group was given treatment and the comparison group was not treated. After finishing the treatment in the experimental class, then given a final test (post-test) to see the results of the treatment.

The research instrument in the form of a non-test was used questionnaire, observation, and interview. Questionnaires are given to students in a list of questions about students' attitudes towards the implementation of guided inquiry learning with the possible answers available. Observations were made to look directly at the subject under study, and ongoing activities. The observation was carried out pre-experiment and at the time of the experiment. The interview is a question and answer technique with respondents who are determined to explore data related to research problems. The data concerns student responses to learning with the guided inquiry model.

The research trial was conducted at MTs Al-Ikhlash Padakembang, Tasikmalaya Regency in the 2013/2014 academic year. In this study, the population is all students of MTs Al-Ikhlash Padakembang, Tasikmalaya Regency with a class VII sample of two classes. One class was used as an experimental class, class VII C with 30 students, and the other class as a control class, class VII B with 32 people.

Sampling was done by purposive sampling technique. This is based on the consideration that these two classes have certain characteristics, characteristics, and characteristics that are homogeneous according to the variables studied. The purpose of taking samples like this is so that research can be carried out effectively and efficiently, especially in terms of supervision, the condition of the research subjects, the research time determined and the conditions of the study.

The instrument trial data was processed with Anates Version 4.1 software to obtain validity and reliability. The results of the pretest, posttest, N-gain, for guided inquiry

learning were processed with the help of Microsoft Excel program and SPSS software Version 17.0 for Windows.

RESULTS AND DISCUSSION

This study aims to test the effectiveness of guided inquiry learning in improving the ability to understand the content of the Quranic verses and Hadith of MTs students, with a quasi-experimental method. In general, the guided inquiry learning model has proven to be effective in increasing the ability of students to understand the content of the verses of the Koran and Hadith.

The learning activities carried out in this study were six meetings. The first meeting was filled with a pre-test that was intended to determine the students' initial ability to understand the content of the Qur'an and Hadith verses. The second meeting to the fifth meeting was filled with the implementation of learning in the classroom, both in the experimental class and the control class. The sixth meeting was filled with a post-test.

In the experimental class at the end of each meeting a post-test is conducted, this is to see the effect of guided inquiry learning treatment on the ability to understand the content of the verses of the Qur'an and Hadith. To see the effectiveness of the model used in the comparison group, learning is done with conventional models.

Before learning is carried out first, a research instrument trial is held. From the trial results of research instruments that were processed using Anates Version, 4.1 software showed that the level of validity of the questions obtained a validity coefficient of 0.68 with a good predicate. As for the reliability test, the results obtained 0.76 in the high category. These results indicate that the instrument is valid and reliable so that it can be used in research.

Each learning that is carried out refers to the six steps of learning, namely orientation, formulating problems, formulating hypotheses, collecting data, testing hypotheses and formulating conclusions. The material discussed is related to tolerance based on the Alkafirun letter.

Orientation is a step to foster a responsive learning atmosphere or climate. In this step, the teacher conditions students to be ready to carry out the learning process. The teacher stimulates and invites students to think about solving problems related to tolerance. Formulating a problem is a step to bring students to a problem that contains a puzzle. The problem presented is a problem that challenges students to think of solving problems related to the implementation of tolerance in everyday life.

The hypothesis is a temporary answer to a problem that is being studied. As a temporary answer, the hypothesis needs to be tested for truth. The ability or potential of individuals to think has been owned since the individual was born. The potential of thinking starts from the ability of each individual to guess or guess from a problem. In this step students are required to make hypotheses about the material being taught relating to tolerance.

Collecting data is an activity to capture the information needed to test the proposed hypothesis. In the inquiry learning model, collecting data is a mental process that is very important in intellectual development. The process of collecting data not only requires strong motivation in learning but also requires perseverance and the ability to use its thinking potential. Therefore, the task and role of the teacher in this stage are to ask questions that can encourage students to think in search of the information needed relating to the discussion about tolerance in people's lives.

Hypothesis testing is the process of determining the answers that are considered acceptable by the data or information obtained based on data collection. What is done is

looking for students' level of confidence in the answers given. Testing the hypothesis also means developing students' rational thinking skills. This means that the correctness of the answers given is not only based on argumentation but must be supported by data found and can be justified.

Formulating conclusions is the process of describing findings obtained based on the results of hypothesis testing. Formulating conclusions is the gong in the learning process. To reach accurate conclusions the teacher shows students which data are relevant in relation to the discussion of tolerance.

From data processing using SPSS Version 17.0 for Windows software, it is known that the control class pre-test normality test is obtained asymp value. Sig. of 0.176 is greater than the value of $\alpha = 0.05$, this means that the pre-test data are normally distributed. Control class post-test normality test obtained Asymp value. Sig. of 0.106 is greater than the value of $\alpha = 0.05$, then H0 is accepted, this also means that the post-test data are normally distributed.

The pre-test normality test of the experimental class shows the Asymp value. Sig. of 0.168 is greater than the value of $\alpha = 0.05$, this shows that the distribution of the pre-test data of the experimental class is normal. Test normality of post-test experimental class obtained Asymp value. Sig. of 0.134 is greater than the value of $\alpha = 0.05$, this means that the distribution of the post-test data of the experimental class is also normal.

Homogeneity testing is carried out on the ability of students to understand the content of verses of the Qur'an and Hadith. At the real level α 0.05. The test is carried out on the pretest-posttest of the control class, the pretest-posttest of the experimental class, the pretest-pretest between the control class and the experimental class, and the post-test-post test between the control class and the experimental class.

Homogeneity test results using SPSS 17 software obtained homogeneity tests pre test-post test control class obtained a significance value of 0.290, which is greater than the alpha value of 0.05, so that conclusions can be drawn because the significance value is greater than the alpha value of 0.05, then both groups have the same variant (homogeneous). The homogeneity test prep-post-test experimental class obtained a significance value of 0.550, which is greater than the alpha value of 0.05, so that conclusions can be drawn because the significance value is greater than the alpha value of 0.05 then both groups have the same variant (homogeneous).

To test the hypothesis used the comparison formula of two independent variables (t-test). The purpose of the t-test of two independent variables is to compare (differentiate) whether the two variables are the same or different. The point is to test the ability of generalization (significance) of research results in the form of a comparison of the state of the variables of the two sample averages. Two sample t-test paired between the pretest and posttest of the control class and the pretest and posttest of the experimental class.

Calculations using SPSS software version 17, the results of the Pre-test and post-test experimental class (Independent Samples Test) with a sig 2 tailed value (0,000) smaller than the alphabet value (0.05), then H0 is rejected and H1 is accepted. This means that the pre-test and post-test scores of the experimental class are not the same. This shows that there is a significant difference between the pre-test scores and the post-test scores of the experimental class students. Pre-test and post-test control class (Independent Samples Test) sig 2 tailed value (0,000) which is smaller than the alphabet value (0.05), then H0 is rejected and H1 is accepted, meaning that the value of the pre-test and post-test control class is not the same.

From data processing, it is known the extent to which guided inquiry learning can improve the ability to understand the content of the Quranic Verses and Hadith of MTs students. The improvement obtained by the experimental class and the control class will be

seen as the difference between the pre-test score and the post-test score as well as the ideal score of students' ability which is shown in the normalized gain score. The following are presented descriptive statistics of pre-test, post-test, and normalized gain scores.

Table 3
Statistics table pre-test and post-test experimental and control classes

Tes	Experimental group					Control group				
	N	X_{min}	X_{mak}	$\bar{x}$	S	N	X_{min}	X_{mak}	$\bar{x}$	S
Pre-test	30	40	80	58,66	11,33	32	40	73	57,28	10,76
Post-test	30	60	100	82,50	12,49	32	60	87	73,37	8,32
N Gain	30	0,14	1	0,59	0,27	32	0,14	0,66	0,35	0,14

From the above table, the average results of the pre-test scores of the ability to understand the content of the Koran verses and the hadith of the experimental and control classes indicate that the standard deviation of the experimental group is greater than the standard deviation of the control group ($S_{eksperimen}$ = 11,33 > $S_{kontrol}$ = 10,76), and the mean value of the experimental group is greater than the mean of the control group ($\bar{x}_{eksperimen}$ =58,66 > $\bar{x}_{kontrol}$ = 57,28). The ability to understand the content of the verses of the Koran and Hadith students in the experimental class is greater than in the control class. A difference of about 1.38 indicates a small difference, and after learning using the guided inquiry model the ability to understand the content of the verses of the Koran and Hadith of the experimental and control classes shows the standard deviation of the experimental group is much greater than the standard deviation of the control group ($S_{eksperimen}$= 12,49 > $S_{kontrol}$ = 8.32), and the mean value of the experimental group is far greater than the mean of the control group ($\bar{x}_{eksperimen}$ = 82.50 > $\bar{x}_{kontrol}$ = 73,37). A difference of around 9.13 is a significant achievement.

The increase in the average value of the experimental class students showed that there was an increase in the ability to understand the content of the Qur'an and Hadith verses. The difference between the mean of the control group and the experimental group was quite high as seen from the KKM of the subjects of the Quran Hadith for class VII by 70. The increase in the control class was only 3.37, while for the experimental class it was 12.5.

The increase in the experimental class was caused by several possibilities including the fact that students felt more comfortable and liked the method implemented while also opening the mindset of students because learning was always associated with actual daily problems.

This can be seen from the results of the questionnaire processing student responses to guided inquiry learning to improve the ability to understand the content of the verses of the Koran and Hadith obtain an average of 3.6 with an achievement of 91% with a positive category.

The results of observation during the learning process showed positive student enthusiasm. Their participation in learning is shown when the process of exploring issues related to tolerance and preaching problems. Students can explore the problems of tolerance and the problems of preaching today that are around them. At the stage of data collection relating to the learning process students dig up information from

various sources relating to tolerance issues that are seen in the media or experienced by students themselves. A difference of around 9.13 is a significant achievement.

While the results of the interview relate to the guided inquiry learning model that is applied, students feel satisfied and happy because they feel involved in all learning processes. What students feel before engaging in the guided inquiry learning process is that they are rarely involved in learning. Learning is more dominated by students who are in their language smart. Students respond positively to the implementation of guided inquiry learning to improve their ability to understand the content of the verses of the Koran and Hadith.

CONCLUSION

The implementation of guided inquiry learning in MTs has proven to be effective in increasing the ability of students to understand the content of the verses of the Qur'an and Hadith. This is evidenced by the increase in the value of the experimental class from the initial pre-test by an average of 58.66 to 82.5 in the final post-test. And the occurrence of differences in the average value of the control class and experimental class between 82.5 with 73.37, with a difference of about 9.13. From the results of questionnaire processing, it is known that students give positive responses to learning with the guided inquiry with achievements of 91%. The difference in achievement is a significant one when viewed from the KKM size for the 70 Hadith Quran subjects. The guided inquiry learning model is believed to be one of the learning models that can improve students' ability to understand the content of the Qur'an and Hadith verses.

MTs teachers should associate the material learned with objective conditions that occur in the daily lives of students, the Qur'an and Hadith should not be understood as teaching that deals only with matters of the divine (divinity) but also deals with problems of humanity.

Schools should pay attention to students' interest in learning Islamic Religious Education, especially in the Qur'an and Hadith subjects, because MTs which incidentally are religiously based schools must master the Koran and Hadith more than other schools that are not religious-based, more specifically in understanding the content of the Quranic verses and Hadith.

The Ministry of Religious Affairs should develop a broader model of guided inquiry learning in PAI subjects such as the subjects of jurisprudence, moral conduct and the history of Islamic culture.

This research only focused on the ability of students to understand the content of the verses of the Qur'an and Hadith because of limited research time that is adjusted to the Competency Standards and Basic Competencies. The next researcher can study more broadly about the implementation and practice of the Quran and Hadith in daily life.

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IMPLEMENTATION OF SUNDANESE LEARNING THROUGH VIDEO BLOGGING FOR ELEMENTARY SCHOOL STUDENT

Indira Syawanodya, indira@upi.edu
Etty Rohayati, ettyrohayati@upi.edu
Tin Suhartini, tinsuhartini@upi.edu
Indonesian University of Education

ABSTRACT

Based on APJII, 74% of internet users in Indonesia use the internet to access social media like WhatsApp, Instagram, or YouTube. YouTube channel is used to share videos such as music video, sports videos, game videos, or funny videos. In its progress, many videos shared on YouTube that known as video blogging. Previously, a blog is used to share information that is presented on a web page in article form, but today everyone can make a blog in video form. Video blogging or vlogging usually contains videos about tutorials, traveling journeys, or reviews of products. The use of technology can certainly use in education field. This is done to stimulate the creativity of students and teachers in using technology in their study activities. This research applied video blogging to elementary student grade 4th in Sundanese lesson. From this research can be known student's interest of using video blogging as learning media, student's creativities and ability in operate video blogging, and student's knowledge about making video blogging during shooting, editing, until publishing

Keywords: video blogging, student elementary school, sundanese learning

A. INTRODUCTION

Asosiasi Penyelenggara Jasa Internet Indonesia (APJII) said that Indonesian internet users continue to increase since 1998 until now. Even in 2018, internet users in Indonesia reach 171.17 million people, i.e. 64% of whole Indonesian people. From those 171.17 million people, as much 74% internet users use the internet to accessed machine learning, watch videos and photos, send email, and trade activities.

Industrial revolution 4.0 applies in various aspects, where digitalization is the application of this revolution. This technological development is also influence in education field. Student and educator come to feel the impact of this industrial revolution 4.0. All matters that relate to technology in education field for example send school assignments using email, learning activities with e-learning based, share learning materials or learning modules in a blog, etc.

YouTube channel is known from long time ago as a media to share videos. Anyone can upload videos or just watch. Many things can share in YouTube, such as music videos, funny videos, short movies, and so on. The user's creativity is a main thing in making the videos because it can affect how many viewers of uploaded videos. In line with the development, today many videos in YouTube are known as video blogging or vlogging. Blogging, derived from the word 'web blog' emerging as new form of journalist whose the blog post had strong sense of the author's personality, passions, and point of view [6]. He said that blog activities include life documentation, blog as catharsis, muse, community forum, etc. Currently people no longer present text blog, but they present as video that known as vlog [4]. Content of video blogging is the same as text blog but it only has differences in presentation. Shared video blog in YouTube many contains about tutorials, life activities, or product reviews.

In education field, vlogging can applied as learning media where students and teachers are challenged to have creativities in class during learning activities. However not all school applies vlog as learning media because the activities still done conventionally. Furthermore, in present a vlog, students need certain skills so that published vlog can attract the attention of their viewers.

This research is discuss about implementing Sundanese learning through video blogging as learning media in Sundanese lesson for 4th grade students. A survey that conducted by APJII showed that Indonesian internet user is started from age 5 years old, however there aren't too many users [1]. At the age of 9 – 14, Indonesian people active using internet. It shows that internet users in Indonesia started from basic level student. This research is conducted to grade 4th students in Gudang Kopi I Elementary School, Sumedang. With the combination of culture and technology, students are able to increase their creativity and skills in using technology as media learning.

B. RESEARCH METHOD

2.1 Methodology

Methodology that used in this study is qualitative method, which are the symptoms are holistic and cannot be separated. Research in this method includes some aspects such as place, actor, and activity that interact synergistically. Focus in this research was taken based on Spradley namely the determination of focus based on problem that related to existing theories.

The tested carried out in this study uses credibility data test. The credibility data test is consist of extension of observation, improvement of persistence, triangulation, discussion, analysis of negative cases, and member check. All of those activities is performed to improve the credibility of data result.

2.2 Research Design

Research design in this research consists of several stage, (1) the preparation phase, (2) collecting data, (3) processing data, and (4) the conclusion stage. In the preparation stage, initial contact was made to the elementary school and makes a permit for administration. In addition, it also determines the schedule for research activities in Gudang Kopi I Elemetary School, Sumedang.

Collecting data is obtained from grade 4th students in Gudang Kopi I Elementary School, Sumedang in Sundanese language class. The method that used in this research is taken as purposive sampling from 4th students in Gudang Kopi I Elementary School, Sumedang. Collecting data method is conducted from observation and interview. The observation type is straightforward observation, so that school is aware about the research activity about implementing Sundanese language through video blogging as learning media. Moreover, interview is conducted semi structured, where the purposes of this method is to find out problems more broadly [3].

Assessment instrument that used in this research is reviewed based on both observation and interview result. Afterward the result is analyzed to determine conclusion. Assessment instrument of observation is looked from students' creativity during video blogging shooting, operate the camera, and set the video angle. Moreover

interview is conducted from teacher of Sundanese language lesson. Sundanese language teacher is the most familiar about condition in Sundanese class. Interview was conducted to find out the aspects that affected implementing Sundanese language through video blogging as learning media.

Data processing in this research is done by analysis during the research process using Miles and Huberman Model. The activity of this model is analysis data which is done interactively. The activities consist of collecting data, reducing data, displaying data, and conclusion.

The final stage is the drawing conclusions. This stage reviews the implementation of Sundanese language through video blogging in Gudang Kopi I Elementary School, Sumedang. In this stage students' ability were known during video blogging shoot. Such as students' creativity while talking in front of camera, operating camera, and adjusting the angle.

C. RESULT AND DISCUSSION

3.1 Overview of Result

At the beginning of the activity, students are given knowledge about video blogging activities. Students are stimulated with Sundanese traditional food video blogging. After that students are made into groups of 5 people to analyze the contents of the video blogging. The next activity is students made Sundanese traditional food by implementing video blogging. During the process of cooking activities, students are asked to document the cooking process by video blogging.

The stages of this research is based on qualitative method that shown in figure 3.1 [7].

Fig 1. Interactive Model

Data collection is data that derived from collecting data stage by both observation and interview. The result of observation and interviews obtained notes which are then reduced to retrieve the data needed in this study. Then the data is presented, this research data display is explained in a narrative text. When there is data that is not suitable, the data reduction process is repeated. Finally, the process of drawing conclusions based on data displays.

3.2 Data Result

Implementation Sundanese learning through video blogging is introduced to students so that they can improve their creativity in learning. Especially in subjects whose activities are carried out in a conventional manner. By introducing video blogging, students are also educated in utilizing ICT in the field of education. Students become able to understand that in the process of making video blogging, special skills in operating the camera are needed, such as lighting settings, angel settings, and so on. Besides that because video blogging is required to be active in speaking, so students will be able to improve their speaking skills.

At the beginning of the activity, students are stimulated by watching a video blogging that makes Sundanese traditional food. Students are asked to understand the detailed process that occurs while cooking process, besides that student also analyzes the angle when the shooting takes place. After students watch the blogging video making Sundanese traditional food, students create groups consisting of 5 members to make one of Sundanese traditional food. Each group was asked to write down the need for tools and ingredients needed to make Sundanese traditional food. Because this research activity asked students to cook, so students need to be closely guarded about the use of cooking utensils that can be dangerous, such as knives and stoves

During the cooking processed, student prepared camera as a tool to make video blogging. Students carry out the process of making Sundanese traditional food starting from showing tools and ingredients, chopping ingredients, frying, and finally serving food. During cooking activities, students documented the cooking activity through video blogging using Sundanese language.

Students were very enthusiastic when participating in Sundanese language learning activities using video blogging, but they were still difficult to use the camera during the cooking process. Although this cooking activity was done in groups, students still difficult because they did not determine the distribution of tasks to each member before. So there are students who were busy cooking or busy documenting, and students who were just silent.

In addition, student difficulties also occur because students had difficulty combining cooking activities and making video blog activities. Students sometimes forgot that during the cooking process they must talking in front of the camera. But with the implementation of video blogging in Sundanese language learning, students became more active in speaking. Students were creative when speaking actively in front of the camera.

Another difficulty that occurs when applying language learning through video blogging was adjusts the angle when taking pictures. Students do not understand shooting techniques so video was only done from one perspective.

In another case, interviews were conducted with teachers regarding Sundanese language learning through video blogging. From the interviews it was found that this school had never applied video blogging in the process of teaching and learning activities. This is due to the absence of supporting media, such as cameras, microphones, editing software, and so on. In addition, teachers also feel that there is no continuous learning between Sundanese languages and Information, communication, and technology.

The statements made by the teacher were in accordance with the ability of students when implementing video blogging. Difficulties experienced by students were considered reasonable because previously there was no application of video blogging as a learning media. So students did not know certain skills while operating a camera during the video blog shooting process.

D. CONCLUSION

Implementation of Sundanese learning through video blogging that has been done in this research was conducted by 4th grade student Gudang Kopi I Elementary School Sumedang. Students studied about documenting sundanese learning through video. The assessment is derived from students' creativity during video blogging shoot, and students' knowledgement in using camera as supporting media.

There are several things that affected the implementation of Sundanese language learning through video blogging, including the absence of proper tools during the shooting process so that the picture quality is not good, and the sound that comes out is not clear. In addition, students do not have the skills when taking video so that the shooting process is only at one point. Students also still find it difficult when cooking while talking in front of the camera.

The use of video blogging as a learning media for 4th grade students of Gudang Kopi I Elementary School Sumedang influences students' creativity in speaking. Students are more enthusiastic in attending the lesson. It's just necessary to deepen the material to help students operate the tools to support video blogging.

E. ACKNOWLEDGMENT

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TEAM PROJECT OF COLLABORATION AS LEARNING MODEL BASED INTEGRATED CURRICULUM AT SMP CENDEKIA MUDA BANDUNG

Annisa Fitri; Mukhidin; Rudi Susilana; Sri Mariam;

Universitas Pendidikan Indonesia

nnisafitlubis@gmail.com

ABSTRACT

One of curriculum approach is integrated curriculum which was developed by Forgaty in 1991. This model collaborate multidisciplinary with one central subject as the theme of collaboration project. SMP Cendekia Muda always do this integrated curriculum implementation with the name "TPoC (Team Project of Collaboration)". TPoC always be held twice a year. This paper tries to explain the goals, planning, and sequences which have to be done in order to reach the goal. The aim of TPoC is presenting contextual learning at the class and also bridge real life problem with subjects that students have learned before. Sequences of TPoC are started with collaborating all subject competencies. Secondly, we do fieldtrip, then the students do engineering design process. Students also make scientific report, and finally they will be tested in oral presentation system. Assessment of TPoC is meaningful for the students, they will get the authentic assessment from this project. All teachers can put the TPoC score for contributing summary score at the end of semester.

Keywords : collaboration, contextual, curriculum, integrated, TPoC

A. Introduction

This paper explain an alternative program as implementation of integrated curriculum. TPoC (Team project of collaboration) puts engineering design process as a part of process. Why engineering design process became important material? Because, engineering related with technology. Engineering and technology as opportunities for students to deepen their understanding of science by applying their developing scientific knowledge to the solution of practical problems (NGSS Lead States, 2013). Analyzing the need of 21st competencies is driven by the need of bridging the learning at classroom to workplace environment. We have 12 subjects at SMP Islam Cendekia Muda which is held based on national curriculum 2013, spiritual and local content. We invite the students to face the real world problem, and try to connect all subjects for finding an alternative solution. In facing a complex problem, mere possession of theoretical knowledge but without attendant application experience poses a problem in itself. This is so as "real-world" problems are inherently ill-structured and seldom have a single, best solution; they typically possess multiple solutions or no solution at all (Kitchner 1983).

B. Research Method

This study uses qualitative research with descriptive approach. Data was taken by observation the process in the class. Observation was done about one month, and researcher took all notes and documentation from first day until last day.

C. Result and Discussion

TPoC process has four sequences to be done by students and teacher. The sequences can be described at figure 1.

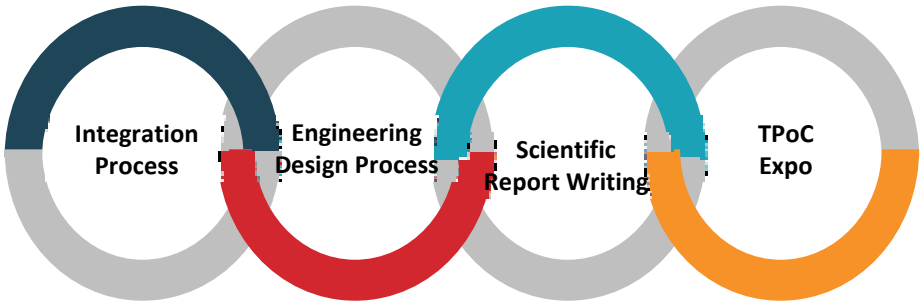

Figure 1. TPoC sequences

3.1 Integration Process

SMP Islam Cendekia Muda has 12 subjects which is delivered to the students based on 2013 national curriculum. All teachers did a meeting to make mind map of collaboration and make a plot of relation between one to another subject. The teacher preparation have to be done before TPoC program will be held. Every subject gives one basic competencies, so we have 12 competencies that will be collaborated in one theme. All subjects are collaborate with Webbed Model based on integrated curriculum model. This model usually take a familiar theme for integrating all subjects (Forgaty, 1991).

Fertile theme which is correlated with condition nowadays should be chosen as the center of integration process. Webbed model is used to organize all subjects' competencies, an example is shown at figure 2.

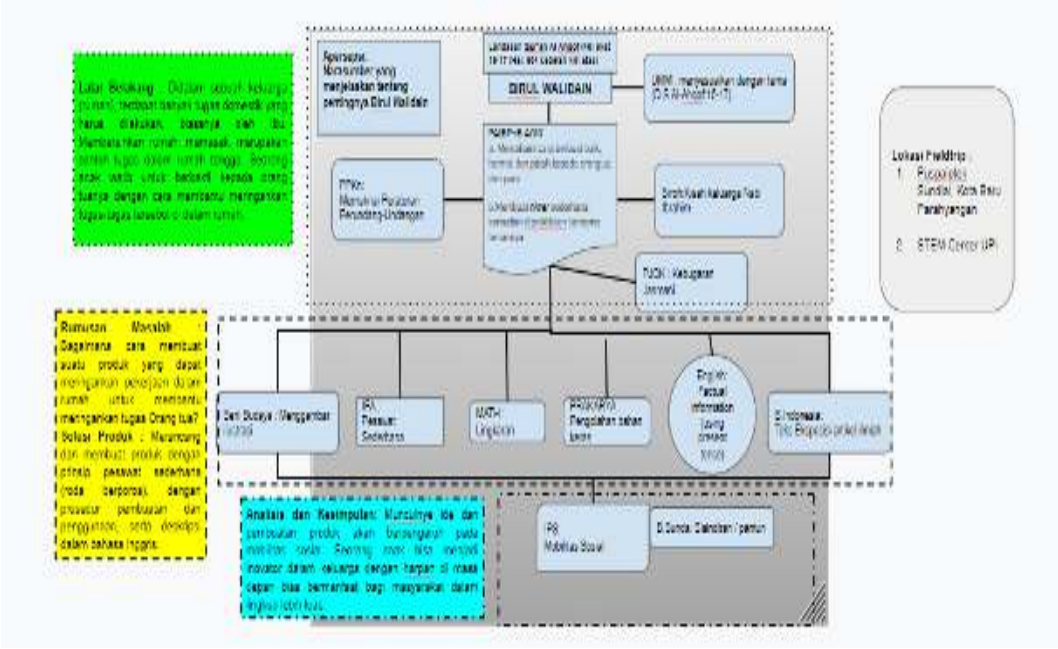

Figure 2. Mind Map of Subject Integration

The understanding of holistic knowledge is delivered to student by integration of subjects. Social sciences is used as background of project (theme) for example civic education tells about norm and rules which can be nationalism content of this project.

3.2 Engineering Design Process

Engineering Design Process (EDP) is character of Science Technology Engineering and Mathematics (STEM) model. Engineering design process has seven steps to do, (1) *Problem Identification*, (2) *Find a Solution,* (3) *Make a Model,* (4) *Test a Model,* (5) *Reflection/Redesign*. Learning process which uses project based learning (in this study uses STEM model) is motivating students to face the challenge, exploring the solution for a problem, giving an alternative solution in real world, and learning deeper knowledge (George Lucas, 2005).

Students are invited to make a product that useful for daily activities. Indirectly, using EDP can train the students how to face a failure, how to collaborate in a group, how to communicate their idea, and how to make a good product. Whole project is delivered as unity of story, product is the alternative solution to answer

the problem which contained in a theme. Natural science, and mathematics become the center of solution from this project.

3.3 Scientific Report Writing

Languages subjects give significant effect in communication competencies enrichment of students. Scientific report drills students how to communicate their origin idea into their own diction. Students write their scientific report based on framework of thinking of integrated subjects. Digital literation also is being sharpen from this part sequence of project. Students are allowed to look for any information from digital resources, and they must choose trusted resources for their literature analysis.

Finally, students must be present their product and scientific report to the audience. Teachers, guest judges, and their parents become their audience. Judges and Teachers gives some questions to evaluate student's project process. Parents also give an evaluation by answering questionnaire. All products will be tested to see their function can be run as well as the expectation. The most important things is not only how good the product is, but also effort and hard process on making the masterpiece.

3.4 Summary of TPoC

Every sequence of TPoC has their own specific objects, analysis should be taken by competencies of 21st century, the subjects, and evaluation per part. The summary of explanation is shown on table 1.

Table 1. Analysis of TPoC Sequence

Sequence of TPoC	21st Century Competencies	Subjects	Evaluation
Integration Process	Critical thinking	All Subjects	Worksheet
Engineering Design Process	Critical thinking, creative, and collaborative	Mathematic and Natural Sciences	Product Testing
Scientific Report Writing	Critical thinking, communicative, and creative	All Subjects	Critical point (per subject), and lay out checking
TPoC Expo	Communicative, collaborative, and Competitive	All Subjects, but Natural Sciences is most highlighted	Score table of presentation, and parent's questionnaire

D. Conclusion

Team project of collaboration (TPoC) is delivered as one of alternative choice integrated curriculum implementation. This program can be adopted as learning method at secondary school. By analyzing the sequences of TPoC, there are several objects which related with 21st century skill, multidisciplinary content, and authentic assessment of learning process.

E. Acknowledgement

Universitas Pendidikan Indonesia gives us a chance to develop this curriculum study. Support and facilitation conditioned master degree student to do some research especially on our major, Curriculum Development. Glad to be a newbie on this scientific paper which gives us a space for innovating a curriculum in disruptive (21st century) era.

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A STUDY OF CREATIVE LEARNING CYCLE IN PROGRAMMING LEARNING FOR JUNIOR HIGH SCHOOL STUDENTS

Dian Anggraini, dian.anggraini@upi.edu
Asyifa Imanda Septiana, asyifa@upi.edu
Indira Syawanodya, indira@upi.edu
Software Engineering, Indonesia University of Education,
Bandung, Indonesia

Abstract. In the industrial revolution 4.0 students are required to think critically, have good communication, be able to collaborate, and have creativity. At present, quality human resources are highly needed and able to adapt to rapid technological developments. Programming learning is one way to compete in the era of digitalization. Programming is as important as any other basic skill that must be possessed by anyone, but at this time programming learning is only given to high school or college students. Programming learning should have been taught early on. To be able to teach programming to students requires great effort to be accepted and make students interested in learning programming. In this study, we present a creative learning cycle model to support students in programming learning. Creative Learning Cycle Model is a learning method that consists of five stages namely imagine, create, play, share, and reflect which is able to help students develop creative thinking ideas in problem solving and be able to provide solutions to these problems so as to increase student interest in learning programming. After the implementation, it was found that 76% of students liked programming learning, 71% of students thought programming was easy to understand and 74% of students even wanted to learn programming more.

Keyword: Learning Methods, Creative Learning Cycle, Programming

A. INTRODUCTION

At this time we are switching to a new industrial era marked by the era of digitalization in various sectors of life. The era of digitalization is also called the industrial revolution era 4.0 which has the characteristics of technology that integrates with people and humans, robotics, quantum computing, augmented reality, biotechnology, 3D printing, automation vehicles, the internet, virtual systems and physical operations globally (Suwardana, Hendra. 2017). In the era of the industrial revolution 4.0 humans are required to think critically, have good communication, be able to collaborate, and have creativity. At present, quality and affordable human resources are needed with rapid technological development. If you are unable to compete with rapid technological developments, you will not be able to compete in the era of digitalization.

Programming learning is one way to compete in the era of digitalization. A basic understanding of programming and how to make programs has become an increasingly important ability to overcome the digital age. Programming is as important as any other basic skill that must be possessed by anyone, but at this time programming learning is only given to high school or college students. Programming lessons should have been taught to children and early teens. Programming can develop structured, logical and creative ways of thinking, making children learn to build, refine and reflect on their ideas. To be able to teach programming to students requires great effort to be accepted and make students interested in learning programming.

Based on the description above shows that the need for learning models that can increase student activity, learning from teacher centered to student centered where students actively participate directly in the learning process and give responsibilities to students. In addition, students need to be given the opportunity to be able to work with teams and be able to exchange ideas about the knowledge they have with friends and teachers, giving rise to the assumption that programming is easy and interesting. One learning model that is predicted to be able to overcome this is the creative learning cycle model.

B. RESEARCH METHOD

The research method serves to design the research to be conducted. The method used in this research is the action research method which combines knowledge, research and action. Action research is one approach to scientific research that has two objectives, namely taking action (for improvement) and building knowledge or theories about action. The results of action research are not as in traditional research which only produces knowledge. Action research is a continuous cycle, namely: 1) planning, 2) taking action; 3) evaluation of actions and so on until effective and efficient actions can be found. The second dimension in action research is that the researcher collaborates with the subject under study, the subject participates actively in the research cycle. This research is different from traditional research, in which organizational members are the object of research (David Coghlan and Teresa Brannick, 2005).

Action research is one type of applied research that aims to facilitate social change or social political objectives (Neumen, 2003). The stages of the research to be carried out are divided into 4 (four) parts, namely the planning stage, the implementation phase, the testing and assessment phase, and the data presentation stage of the research results. The collected data will then be processed to determine the effect of the Creative Learning Cycle on programming learning..

C. RESULT AND DISCUSSION

Programming learning is a lesson that is not widely known by students, but some students have started to learn programming by self-taught where they follow the tutorial without knowing the real problems and solutions. Not infrequently some students who are just starting to learn programming have difficulty being able to understand programming and usually they will stop to learn it because it is considered difficult and unattractive. The challenge in this research is a learning model that is able to attract students' interest in programming learning so that programming is easy to understand. The method of creative learning is predicted to be able to help students to understand programming. Resnick (in Putro, 2013) argues that one of the development methods of Learning by Doing is a creative learning method with the aim of helping students learn to design, create, and create something. Creative learning has stages starting from Imagine, Create, Play, Share, Reflect and then back to Imagine.

In this study students learn Scratch programming where students are guided to be able to make simple games that are done in groups. In the imagine stage students are asked to come up with ideas by imagining a case that can help in the process of solving problems in the form of storyboards. The create stage is the stage where students create simple games using Scratch in accordance with their ideas. "The ability to create (not just interact) content is the key to achieving digital awareness and becoming a full participant in an interactive online world" (Hernandez and Resnick, M., 2010). Next to the play stage which does not mean playing, but students learn through experimentation. Students test the game created and try to correct the shortcomings of the test results. At the share stage students are asked to communicate to other groups the results of games that have been created through exposure in front of the class, this stage aims so that students can share ideas with each other. The next stage students do reflection in order to make the work better and broader than before.

To find out the effect of creative learning methods on programming learning for students is given a questionnaire containing an assessment of students' interest in programming, students' ability in programming and students' interest to learn programming further. The following are the results of the questionnaire in the form of a percentage and are assessed on a Likert scale. STS means Strongly Disagree, TS means Disagree, N means Neutral, S means Agree, SS means Strongly Agree.

	SS	S	N	TS	STS
Student interest in programming	10	26	0	7	2
Students ability in programming	13	15	3	11	3
Student interest in learning programming more	6	30	0	7	2

Based on the results of the questionnaire analysis given to 45 students, it was found that 76% of students were interested in and liked learning in programming, 71% of students thought programming was easy to understand and acknowledged that students' programming abilities improved after learning programming with the method of creative learning and 74% of students even wanted to learn further programming.

D. CONCLUSION

This research has presented creative learning methods to support students in programming learning. The creative learning method can be implemented to improve students 'abilities in programming learning and can attract students' interest in programming learning. Based on the results and analysis done, it was found that 76% of students liked programming learning, 71% of students thought programming was easy to understand and 74% of students even wanted to learn programming more.

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IMPLICATIONS OF AUDIO-VISUAL BASED LEARNING MEDIA ON CRITICAL THINKING ABILITY OF ELEMENTARY SCHOOL STUDENTS

Herdiana, herdianah86@gmail.com
Tina Hayati Dahlan, tinadahlan_psi@upi.edu
Cepi Riyana, cheppy@upi.edu

herdianah86@gmail.com

ABSTRACT

The use of audio-visual based learning media by teachers in public schools in Indonesia today can be said to be still minimal and rarely used in the learning process. Meanwhile, it is believed that audio-visual media is effective to support student learning at the elementary school level. Audio-visual based media can attract students 'attention in learning and can improve students' critical thinking skills. Critical thinking skills affect student learning outcomes and are needed for problem solving in the learning process. This article aims to review the effect of audio visual based media on students' critical thinking skills as a foothold to conduct research on the implications of video media on the critical thinking skills of fifth grade elementary school students that will be conducted at one of the public schools in Indonesia. The method used in this article is the study of literature on the results of research in Asia and America. The data obtained is compiled, analyzed, and concluded so that conclusions are obtained in accordance with the objectives of the study.

Keywords: Audio-Visual Based Learning Media, Critical Thinking Ability

A. INTRODUCTION

The use of audio visual based learning media by teachers in state schools in Indonesia today can be said to be still minimal and rarely used in the learning process. Based on the results of a questionnaire distributed to several state schools in West Java, it is known that although all of these schools have supporting tools for audio visual based learning media, teachers rarely even use audio visual based learning media due to the limited time to prepare the media.

The teacher's time to prepare the media is often used to provide additional learning for most students who are slow in mastering the learning material. Even though, according to several teachers who have used audio visual based media, it states that when using audio visual based learning media the students' responses seem very enthusiastic in participating in learning.

Audio visual based media can attract students 'attention and student involvement in learning and is believed to be able to improve students' critical thinking skills (June, Yaacob, & Kheng, 2014). With the visualization of the material presented, students can better understand the material so that it can be used to improve their critical thinking skills. The results of research conducted by Siswanto and Mustofa in 2012 showed that the contextual learning model using audio visual based media had better influence than contextual learning using worksheets on students' critical thinking skills (Siswanto & Mustofa, 2012). In addition, the results of research conducted by Dewandaru in 2015 showed that audio visual based learning media, video, influenced the critical thinking skills of elementary school students (Kris Hana Dewandaru, 2015).

Critical thinking skills need to be developed in elementary school students as the basic ability to complete learning tasks in school. As expressed by Stobaugh (2013, p. 2) that problem solving and decision making can be obtained from the results of critical thinking. Students with good critical thinking skills can solve problems and take appropriate actions with reasons obtained through a process of analyzing arguments that are persuasive, logical, and rational by involving verification and evaluation (Florea & Hurjui, 2015).

In the learning process at school, critical thinking skills have a direct relationship to learning outcomes where students who have higher critical thinking skills tend to get higher

grades in the subjects studied (Hohmann & Grillo, 2014). Therefore, the authors consider it important to examine the effect of audio visual based media on the critical thinking skills of elementary school students.

B. RESEARCH METHOD

This article uses the method of studying literature on theories and research results in the Asian and American regions. The data obtained is compiled, analyzed, and concluded so that conclusions are obtained in accordance with the objectives of the study. The general purpose of this article is to examine the effect of audio visual media on the critical thinking skills of elementary school students. Specifically, this article aims to find out the definition of audio visual based learning media and find out the implications of audio visual media on the critical thinking skills of elementary school students.

C. RESULT AND DISCUSSION

3.1. Audio visual based learning media

Learning in its syntax is a process of communication between educators and students. According to Susilana (2009, p. 2) learning requires interaction, especially interactions that are human in nature. Related to that, this shows that learning is a communication process, meaning that there is a process of delivering messages from the source of the message to someone or a group of people as recipients of the message. The message sent is usually in the form of information or information from the sender or message source. The message is converted into the form of codes or symbols such as words, sounds, images and so on through channels or channels such as radio, television, OHP, films, etc. (Susilana, 2009 p. 2). The channel that can be said as media.

According to Sadiman (1993, in Kustandi, 2013 p. 7) the media is the carrier or introduction of the message from the sender to the recipient. According to Kustandi (2013 p. 8) learning media is a tool that can help the process of learning and teaching to clarify the meaning of the message conveyed, so that it can achieve learning goals better and perfect. Meanwhile according to Sadiman, et al (2008 p. 7) media in education is anything that can be used to channel messages from the introduction to the recipient can move the thoughts, feelings, attention and interests and attention of students who pay attention to how to make the learning process occur. Thus, it can be concluded that the instructional media is the intermediary of educator communication as a source of messages and students as recipients of messages in the teaching and learning process.

One type of learning media is audio visual based media, which is the media for communication between educators and students in the learning process that presents visual and audio information. In other words, it can be said that students as recipients of information can receive information through the sense of sight and hearing simultaneously.

3.2. Implications of audio visual based learning media on critical thinking skills

Based on the results of research found, audio visual based learning media have positive implications for critical thinking skills. Research on state campus students in Malaysia shows that the use of audio visual based media in the form of Youtube videos combined with interactive activities can make students actively participate and show a strong interest in the learning process (June et al., 2014). Students can understand the material better through visualization. The use of audio visual media is believed to be able to improve their critical thinking skills (June et al., 2014).

At the elementary school level, the results of research on fifth grade students show learning using audio visual based learning media in the form of videos influences critical thinking skills (Kris Hana Dewandaru, 2015). Meanwhile, according to Fatahullah

(Fatahullah, 2016) the ability to think critically grade IV elementary school students can be increased by the presence of audio-visual media that helps students to better understand learning by seeing examples directly through video. Likewise in class III, the results of the study showed that a scientific approach based on problem based learning assisted with audio visual media influences the ability to think critically in grade III elementary school students (Purbarani, Dantes, & Adnyana, 2018). In line with the results of the study, research results at the secondary school level also show that the use of audio visual media with contextual learning models has a better effect than the use of student worksheet media with contextual learning models on critical thinking skills of secondary school students (Siswanto & Mustofa, 2012).

However, when viewed based on aspects of critical thinking ability, the use of audio visual based media and text based or conventional media have their own power of influence. According to research by Reychav et al of undergraduate students in their last year at a major university in Israel, it was found that audio-based media in the form of video were more effective in the aspect of problem identification, while the text showed a better influence on the evaluation aspect (Reychav, Warkentin, & McHaney, 2015). Research on Harvard Medical School USA 2nd grade students also shows that there are weaknesses in the use of audio visual based media compared to text based material, the use of video based media in certain cases is associated with a reduction in deep thought (Roy & Mcmahon, 2012).

The difference in influence can be said to be related to the syntax of media use which may not be in accordance with the learning objectives to be achieved. Research conducted on 130 secondary school teachers in the USA found that teachers often use video media for non-educational purposes, including to fill time, to keep students quiet, as a break from learning, or as a reward for good behavior (Reychav et al. , 2015).

Not only in learning with face-to-face meetings, the use of audio-visual based learning media also influences critical thinking skills in distance learning. The results showed that by using audio visual based media in the form of interactive videos, there was no significant difference between the average scores of students 'perceptions for critical thinking opportunities in direct learning and the average scores of students' perceptions for critical thinking opportunities in distance learning (Hilgenberg & Tolone, 2000). Other research also shows that audio visual based learning media in the form of videos enhance critical thinking both face-to-face and virtual in PBL groups (Kamin, Sullivan, Deterding, & Younger, 2003).

D. CONCLUSION

Learning media is part of a learning process. Learning media act as an intermediary for information between educators and students. Audio visual based learning media is learning media that presents visual information that can be seen and audio information that can be heard. Both information is received simultaneously and presents information that is mutually supportive for one main information.

Audio visual based learning media has positive implications on critical thinking skills at various levels of education including elementary schools, secondary schools, and tertiary institutions. However, not all research results show positive implications. Most of the research that is found places the learning model or method accompanied by the use of audio visual based media. The accuracy of the selection of models or learning methods can be said to be one of the success factors of the use of audio visual based learning media in influencing the critical thinking skills of elementary school students.

In this article, in addition to the positive implications also found negative implications of the use of audio visual based learning media that are not discussed about the factors causing the gap. Therefore, the authors provide recommendations for further study of the factors that

influence the successful use of audio visual based learning media in an effort to improve critical thinking skills.

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Design Patterns for Basarnas HR Competency Development in the Era of Society 5.0 Through Classical and Nonclassic Training (Blended Learning)

Taufik Maulana[1], taufikmaulana1878@upi.edu
Cepi Riyana[2], cepi@upi.edu
Tris Sutrisno[3], tris.sutrisno@upi.edu
Curriculum Development of the Postgraduate School of Indonesian Education University

Abstract

The Competency Development based on the mandate of Law No. ASN 5 of 2014 is a right for all Civil Servants (PNS). The competency development is an urgent need to support public service innovation in line with demands in the disruptive era. The purpose of this research is to design an initial pattern of developing Basarnas Human Resources (HR) competencies by updating the education and training system through classical and non-classical training as an alternative in implementing competency development throughout Indonesia. The design pattern is a general program that can be a reference for the implementation of competency development and / or training in Basarnas. In this study involving internal respondents to obtain information input at the beginning of the analysis phase to get a pattern of competency development that suits individual needs. The results of this research will be used as input for the development of Basarnas HR competencies, that is the development of blended learning competencies with non-classical training patterns in the form of exchanges of civil servants with private employees, internships, and e-learning.

Keywords: competency development, classical and non-classical training

A. PENDAHULUAN

Manusia sebagai sumber daya yang berkarya di organisasi baik sebagai pegawai swasta maupun PNS akan menunaikan kewajibannya dengan menggunakan segenap pengetahuan, keterampilan, tenaga, dan sebagian waktunya. Di sisi lain organisasi akan memberikan imbalan atau kompensasi atas kinerja yang sudah diberikan, imbalan atau kompensasi tidak harus melalui materi tapi dapat pula berupa hak yang melekat pada pegawai. Dalam peraturan perundangan yang termaktub pada undang - undang Aparatur Sipil Negara (ASN) No. 5 Tahun 2014 dinyatakan bahwa salah satu bentuk hak ASN adalah Pengembangan kompetensi.

Dalam mendukung inovasi pelayanan publik di era distruptif yang menuntut pemerintah lebih cepat, responsif serta adaptif pada tuntutan kebutuhan masyarakat maka pengembangan kompetensi ASN sangat mendesak diperlukan sebagai bentuk upaya untuk mengimbangi perkembangan jaman yang begitu cepat dan dinamis. Pola manajemen pengembangan kompetensi ASN dituangkan dalam PP nomor 11 tahun 2017 yang menjelaskan bahwa setiap ASN berhak mendapat pengembangan kompetensi minimal 20 Jam Pelajaran (JP) setiap tahun. Pelaksanaan pengembangan kompetensi dapat dilaksanakan dalam bentuk pendidikan dan/atau pelatihan (Diklat) sebagai upaya dari pengembangan kompetensi dalam tinjauan manajemen sumber daya manusia aparatur yang berkontribusi dalam peningkatan kualitas kinerja aparatur. Menurut Mathis (2002), “Pelatihan adalah suatu proses dimana orang-orang mencapai kemampuan tertentu untuk membantu mencapai tujuan organisasi”.

Badan Nasional Pencarian Pertolongan (Basarnas) merupakan lembaga pemerintah non kementrian yang mempunyai jumlah pegawai pada saat ini sebanyak ± 3400 orang yang terdistribusi selain di Kantor Basarnas Pusat juga terdapat pada 35 unit pelaksana teknis (UPT) yang tersebar hampir di seluruh Propinsi di Indonesia dengan sebaran jumlah pegawai di wilayah Indonesia dan tuntutan yang diatur dalam Peraturan Kepala Basarnas nomor 16 tahun 2010 tentang Pedoman Pendidikan dan Pelatihan Basarnas menyatakan SDM Basarnas dituntut memiliki kompetensi yang tinggi untuk mencapai keberhasilan di dalam tugas pokok dan fungsi basarnas tentunya merupakan suatu tantangan dan peluang dalam mengembangkan kompetensi pegawainya.

Untuk membentuk PNS yang kompeten dan mampu berperan sebagai pembaharu menjadi pedoman dalam memperbaiki kualitas kompetensi PNS maka salah satu strategi dalam menciptakan SDM tersebut adalah melalui diklat yang terencana, terarah, terpadu dan berkesinambungan untuk memenuhi standar nasional dan internasional sehingga diperlukan penguatan penyelenggaraan sistem dan kualitas diklat. Penguatan sistem dan kualitas penyelenggaraan saat ini membutuhkan dilakukannya suatu pembaharuan diklat. Saat ini pengembangan kompetensi PNS tidak harus melalui diklat yang bersifat klasikal saja namun dapat disiasati dengan keikutsertaan kegiatan non klasikal, seperti penugasan, bimbingan, magang, dan sebagainya.

Beberapa alasan yang menjadi acuan perlunya dilakukan pembaharuan pelatihan antara lain kompetensi PNS yang masih terbatas, sebaran jumlah pegawai basarnas diseluruh Indonesia, terdapat berbagai jenis jabatan dilingkungan Basarnas sehingga membutuhkan jenis diklat yang beraneka ragam sesuai dengan kebutuhan tugas dan fungsi jabatan masing-masing, selain itu akses dan waktu adalah salah satu alasan lain karena UPT Balai Diklat Basarnas menjadi satu-satunya lembaga pengembangan SDM di Basarnas. Oleh karena itu untuk membangun SDM Indonesia unggul, kreatif, dan inovatif dalam menyongsong era distrutiptif upaya yang dapat dilakukan salah satunya melalui pelatihan non-klasikal yang akan menjadi terobosan dalam meningkatkan akses pelatihan yang bermutu ke seluruh wilayah Indonesia.

B. Metode Penelitian

Penelitian ini adalah penelitian pengembangan kompetensi SDM Basarnas melalui pelatihan klasikal dan non-klasikal. Berdasarkan maksud tujuan pada penelitian ini untuk memperoleh pola desain yang sesuai dengan karakteristik dan kebutuhan PNS serta dapat diselenggarakan secara non-klasikal.

2.1. Jenis Penelitian

Jenis penelitin yang digunakan menggunakan penelitian deskriptif. Metode penelitian deskriptif merupakan suatu metode dalam meneliti suatu objek, suatu kondisi, suatu sistem pemikiran ataupun suatu kelas peristiwa pada masa sekarang. Tujuan dari penelitan ini untuk membuat deskripsi, gambaran, atau lukisan secara sistematis, faktual dan akutual mengenai fenomena yang diamati.

2.2. Teknik Pengumpulan Data

Pada tahap pendahuluan yang dilakukan pada penelitian ini mengumpulkan dokumen-dokumen untuk dikaji kemudian menindaklanjuti dengan melakukan survei kepada responden SDM Basarnas yang berstatus PNS dengan menggunakan *google form* sebagai alat pengumpul data. Selanjutnya data hasil survei yang terkumpul dianalisis dan diinterpretasikan dalam bentuk presentase yang tergambarkan pada diagram dan tabel. Menurut ali (2014 : 190) penjelasan komperhensif mengenai hasil survei dapat ditampilkan dalam bentuk penyajian

statistik deskriptif, gambar, presentase, grafik, diagram, dan sebagainya. Hal ini dilakukan untuk melihat hasil yang dijadikan sebagai dasar dalam kecendurungan bagaimana persepsi dari responden terhadap keinginan pelaksanaan pengembangan kompetensi baik klasikal maupun non-klasikal untuk kemudian dijadikan bahan tahapan berikutnya dalam mendesain pola jenis pengembangan kompetensi.

C. Hasil dan Pembahasan

3.1 Hakikat Pengembangan Kompetensi SDM

Kompetensi mempunyai makna sebagai keterampilan hidup atau *"life skill"*, yaitu kecakapan-kecakapan, keterampilan untuk menyatakan, memelihara, dan menjaga dan mengembangkan diri. Sukmadinata & Syaodih (2014 : 18). Kemudian Sukmadinata membedakan spesifikasi kompetensi menjdai lima macam :

1. Kompetensi Dasar
2. Kompetensi Umum
3. Kompetensi Akademik
4. Kompetensi Vokasional dan
5. Kompetensi Professional.

National Consortium of Competency Based Education (NCCBE) mengemukakan mengenai spesifikasi kompetensi sebagai berikut :

1. Kompetensi didasarkan atas hasil analisis dari peran-peran professional atau rumusan teoritis dari tanggung professional
2. Rumusan kompetensi menggambarkan hasil sikap yang diharapkan dari performansi profesional (pengetahuan, keterampilan, sikap) yang sangat penting dalam performansi peran profesional.
3. Rumusan kompetensi mempermudah pengukuran dengan menggunakan acuan patokan (PAP).
4. Kompetensi merupakan prediktor tentatif dari efektivitas profesional.
5. Kompetensi disusun secara spesifik, sesuai dengan cara yang lazim digunakan dalam pembelajaran.
6. Menguasai program*Competency Based Education And Training* (CBET) menunjukkan profil kompetensi yang cukup luas.

Spencer and Spencer (dalam Pasolong,2007:93), kompetensi dapat dibagi atas 2 (dua) kategori yaitu "threshold *competencies"* dan "differentiating *compentencies". Threshold competencies* adalah karakteristik utama yang harus dimiliki oleh seseorang agar dapat melaksanakan pekerjaannya. Tetapi tidak untuk membedakan seorang yang berkinerja tinggi dan rata-rata. Sedangkan *differentiating competiencie* adalah faktor-faktor yang membedakan individu yang berkinerja tinggi dan rendah. (Irwan Faturrochman, 2017). Sedangkan Pengembangan adalah suatu usaha untuk meningkatkan kemampuan teknis, teoritis, konseptual, moral pegawai sesuai dengan kebutuhan jabatan. Tujuan pengembangan adalah untuk meningkatkan produktivitas kerja (Hasibuan: 2002: 69).

Pengembangan meliputi seluruh aspek peningkatan kualitas pegawai bukan hanya pendidikan dan pelatihan. Pengembangan lebih terfokus pada kebutuhan jangka panjang umum organisasi. Hasilnya bersifat tidak langsung dan hanya dapat diukur dalam jangka panjang. Pelatihan diarahkan untuk memperbaiki prestasi kerja saat ini sedangkan pengembangan adalah untuk mengembangkan keterampilan untuk pekerjaan masa depan. Berdasarkan penjelasan diatas maka dapat disimpulkan bahwa pengembangan kompetensi SDM diperlukan untuk memelihara

dan meningkatkan kemampuan *(ability)* atau kapasitas seseorang dalam mengerjakan berbagai tugas berkenaan dengan suatu pekerjaan, dimana memelihara kemampuan ini salah satunya dapat dilakukan melalui pelatihan.

3.2 Era 5.0 dan Pelatihan Non Klasikal

3.2.1 Konsep Era 5.0

Perkembangan teknologi yang begitu pesat, termasuk adanya peran-peran manusia yang tergantikan oleh kehadiran robot cerdas, dianggap dapat mendegradasi peran manusia. Hal ini yang melatar belakangi lahirnya Society 5.0. Melalui Society 5.0, kecerdasan buatan (artificial intelligence) akan mentransformasi big data pada segala sendi kehidupan serta internet of things akan menjadi suatu kearifan baru, yang akan didedikasikan untuk meningkatkan kemampuan manusia membuka peluang-peluang bagi kemanusiaan. Transformasi ini akan membantu manusia untuk menjalani kehidupan yang lebih bermakna. Suatu konsep masyarakat yang berpusat pada manusia (human-centered) dan berbasis teknologi (technology based). Society 5.0, sebuah masa dimana masyarakat berpusat pada manusia yang menyeimbangkan kemajuan ekonomi dengan penyeselesaian masalah sosial oleh sistem yang mengintegrasikan ruang dunia maya dan ruang fisik. Society 5.0 akan menyeimbangkan pembangunan ekonomi dan menyelesaikan masalah sosial. Society 5.0 adalah era dimana semua teknologi merupakan bagian dari manusia itu sendiri. Internet bukan hanya sekedar untuk berbagi informasi melainkan untuk menjalani kehidupan. Konsep society 5.0 ini tidak dipungkiri dapat pula diterapkan pada bidang teknologi pendidikan *(education technologi)* atau pendidikan dan pelatihan seperti dalam bagan dibawah ini yang merangkum konsep masyarakat 5.0 untuk Suistainable Development Goals (SDGs) dan gambar sistem dan teknologi utama untuk 5.0 dan 17 SDGs.

Source : Source: Prepared by the author based on material from the Japan Business Federation (Keidanren) “Society 5.0 for SDGs”.

3.2.2 Pengembangan Kompetensi Melalui Pelatihan Non Klasikal (Magang, *E-Learning,* Pertukaran Pegawai)

Salah satu bentuk program pengembangan kompetensi adalah dengan pendidikan dan pelatihan dimana dalam pelatihan terdapat dua jenis, yang pertama dalam bentuk klasikal yaitu pelatihan dengan tatap muka dan yang kedua pelatihan dalam bentuk non-klasikal. Berdasarkan ketentuan Pasal 212 ayat (3) Peraturan Pemerintah Nomor 11 Tahun 2017 tentang Manajemen

Pegawai Negeri Sipil, pengembangan kompetensi dalam bentuk pelatihan nonklasikal dilakukan paling kurang melalui *e-learning,* bimbingan di tempat kerja, pelatihan jarak jauh, magang, dan pertukaran antara pegawai negeri sipil dengan pegawai swasta.

Magang

Magang dalam dunia kerja dan pelatihan telah diatur dalam Undang-Undang No. 13 tahun 2003 tentang Ketenagakerjaan khususnya pasal 21 – 30. Dan lebih spesifiknya diatur dalam Peraturan Menteri Tenaga Kerja dan Transmigrasi Nomor Per.22/Men/IX/2009 tentang Penyelenggaraan Pemagangan di Dalam Negeri.

Dalam Peraturan Menteri tersebut, Pemagangan diartikan sebagai bagian dari sistem pelatihan kerja yang diselenggarakan secara terpadu antara pelatihan di lembaga pelatihan dengan bekerja secara langsung di bawah bimbingan dan pengawasan instruktur atau pekerja yang lebih berpengalaman dalam proses produksi barang dan/atau jasa di perusahaan, dalam rangka menguasai keterampilan atau keahlian tertentu. Pemagangan dapat dilaksanakan di perusahaan sendiri atau di tempat penyelenggaraan pelatihan kerja, atau perusahaan lain, baik di dalam maupun di luar wilayah Indonesia (Pasal 24 UU Ketenagakerjaan).

E-Learning

Onno W. Purbo 2002) menjelaskan bahwa istilah "e" atau singkatan dari elektronik dalam e-learning digunakan sebagai istilah untuk segala teknologi yang digunakan untuk mendukung usaha-usaha pengajaran lewat teknologi elektronik internet. Internet, Intranet, satelit, tape audio/video, TV interaktif dan CD-ROM adalah sebagian dari media elektronik yang digunakan Pengajaran boleh disampaikan secara "synchronously" (pada waktu yang sama) ataupun "asynchronously" (pada waktu yang berbeda). Materi pengajaran dan pembelajaran yang disampaikan melalui media ini mempunyai teks, grafik,animasi, simulasi, audio dan video. Ia juga harus menyediakan kemudahan untuk "discussion group" dengan bantuan profesional dalam bidangnya. Perbedaan Pembelajaran Tradisional dengan e-learning yaitu kelas "tradisional", guru dianggap sebagai orang yang serba tahu dan ditugaskan untuk menyalurkan ilmu pengetahuan kepada pelajarnya. Sedangkan di dalam pembelajaran 'e-*learning'* fokus utamanya adalah pelajar. Pelajar mandiri pada waktu tertentu dan bertanggung-jawab untuk pembelajarannya. Suasana pembelajaran 'e-learning' akan "memaksa" pelajar memainkan peranan yang lebih aktif dalam pembelajarannya. Karakteristik e-learning antara lain :

1. Memanfaatkan jasa teknologi elektronik; di mana guru dan siswa, siswa dan sesama siswa atau guru dan sesama guru dapat berkomunikasi dengan relatif mudah dengan tanpa dibatasi oleh hal-hal yang protokoler.
2. Memanfaatkan keunggulan komputer (digital media dan computer networks).
3. Menggunakan bahan ajar bersifat mandiri (self learning materials) disimpan di komputer sehingga dapat diakses oleh guru dan siswa kapan saja dan di mana saja bila yang bersangkutan memerlukannya.
4. Memanfaatkan jadwal pembelajaran, kurikulum, hasil kemajuan belajar dan hal-hal yang berkaitan dengan administrasi pendidikan dapat dilihat setiap saat di komputer.

Dalam Peraturan Lembaga Administrasi Negara Republik Indonesia Nomor 8 tahun 2018 tentang pedoman penyelenggaraan pengembangan kompetensi pegawai negeri sipil melalui *e-learning* dijelaskan *e-learning* adalah pengembangan kompetensi PNS yang dilakukan dalam bentuk pelatihan dengan mengoptimalkanteknologi informasi dan komunikasi untukmencapai tujuan pembelajaran dan peningkatan kinerja.

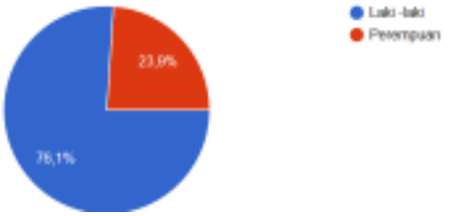
Pertukaran Pegawai

Pengembangan SDM berbasis kompetensi dapat memberikan hasil yang sesuai dengan tujuan dan sasaran organisasi dengan standar kinerja yang telah ditetapkan. UU No 11 tahun 2017 tentang Manajemen ASN menjelaskan bahwa setiap Pegawai ASN memiliki hak dan kesempatan untuk mengembangkan kompetensi, antara lain melalui pendidikan dan pelatihan, seminar, kursus dan penataran. Pengembangan kompetensi juga bisa dilakukan dengan praktik kerja di instansi lain di pusat dan daerah dalam waktu paling lama 1 (satu) tahun, juga bisa dilakukan melalui pertukaran antara PNS dengan pegawai swasta paling lama 1 (satu) tahun dan pelaksanaannya dikoordinasikan oleh LAN dan BKN. (Pasal 70 ayat 5)

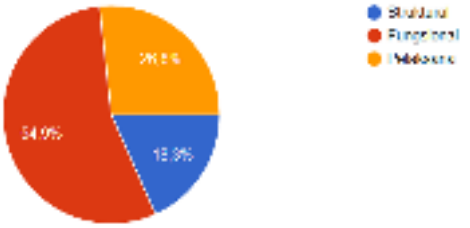
3.3 Desain Pola Pengembangan Komptensi SDM di BASARNAS

3.3.1. Identitas Responden

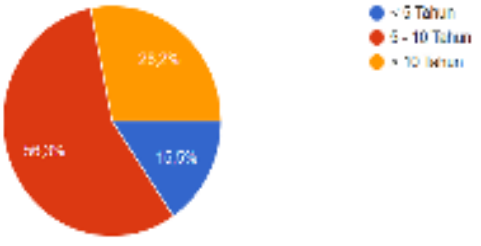
Dalam penelitian ini responden merupakan Pegawai Negeri Sipil (PNS) dilingkungan BASARNAS. Total responden yang mengisi kuesioner ini adalah 71 responden, adapun karakteristik responden adalah sebagai berikut:



Berdasarkan jenis kelamin sebesar 76,1 % adalah responden laki-laki dan sebesar 23,9% merupakan responden Perempuan.



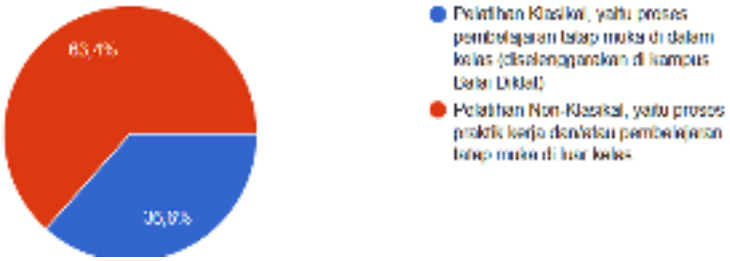
Berdasarkan Jabatan, sebesar 54,9 % responden adalah jabatan fungsional, sebesar 26,8% adalah jabatan pelaksana, dan sebesar 18,3% adalah pejabat struktural.



Masa kerja responden sebanyak 56,3 % telah bekerja dengan rentang waktu 5 – 10 tahun, 28, 2% telah bekerja lebih dari 10 tahun, dan sebanyak 15,5% masa kerjanya kurang dari 5 tahun.

3.4.2. Jenis Pengembangan Kompetensi

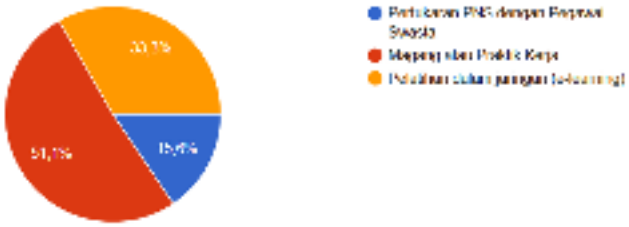
Dalam pengembangan kompetensi PNS terdapat dua jalur pengembangan, pertama melalui pendidikan yaitu seperti sekolah atau kuliah di universitas. Kedua melalui pelatihan, pelatihan sendiri terbagi atas dua jenis. Pertama pelatihan klasikal merupakan pelatihan yang dilaksanakan tatap muka di dalam kelas. kedua pelatihan non klasikal seperti, magang, e-learning, dan pertukaran pegawai.



Berdasarkan hasil pertanyaan kepada responden, sebanyak 63,4% responden memilih pelatihan non klasikal dan 36,6% memilih pelatihan melalui pelatihan klasikal.
Beberapa alasan ketika responden memilih pelatihan non klasikal adalah Seiring perkembangan zaman, lembaga diklat harus dapat menyesuaikan diri dengan perkembangan teknologi dalam kegiatan pembelajaran.

3.4.3. Jenis Pelatihan Non Klasikal

Dalam pelatihan non klasikal tersebut terdapat beberapa jenis pengembangan kompetensi melalui pelatihan klasikal. Seperti magang, pertukaran pegawai, e-learning, pelatihan jarak jauh, coaching dan mentoring.

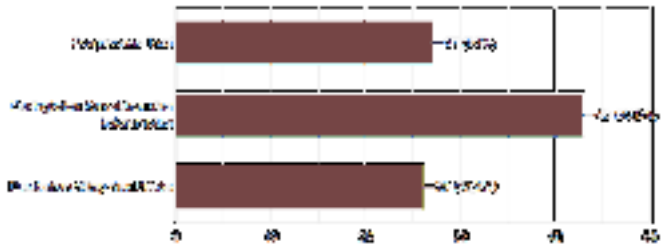


Sebanyak 51,1% responden memilih magang sebagai sarana untuk mengembangkan kompetensi, sebanyak 33,3% memilih e-learning, dan sebanyak 15,6% memilih jenis pengembangan kompetensi melalui pertukaran PNS dengan pegawai swasta.

3.4.4. Jenis Kompetensi Teknis

Sebanyak 86,7% memilih komptensi teknis substantif/ spesifik dan sebanyak 13,3% responden memilih kompetensi teknis umum.

3.4.5. Tujuan Pelatihan Nonklasikal



Berdasarka hasil kuesioner bahwa 95,6% responden menginginkan tujuan pelatihan nonklasikal adalah peningkatan kompetensi atau keterampilan.

3.4.6. Lamanya Pelatihan Non Klasikal

No	Jenis Pelatihan Non Klasikal	Lamanya Pelatihan	Respon Dari Responden
1	Pertukaran PNS dengan Peg. Swasata	1 bulan (20 hari kerja)	43,2%
		2 bulan (40 hari kerja)	38,6%
		Lebih dari 2 bulan	18,2%
2	Magang	1 bulan (20 hari kerja)	40%
		2 bulan (40 hari kerja)	37,8%
		Lebih dari 2 bulan	22,2%
3	E-Learning	2 hari	22,2%
		3 hari	31,1%
		5 hari	46,7 %

Berdasarkan tabel diatas mayoritas responden memilih 1 bulan untuk pelaksanaan pertukaran PNS dan pelaksanaan magang. Sedangkan untuk e-learning mayoritas responden memilih 5 hari untuk pelaksanaanya.

3.4.7. Model Evaluasi Hasil Belajar Pelatihan Non Klasikal

No	Jenis Pelatihan Non Klasikal	Jenis Evaluasi	Respon Dari Responden
1	Pertukaran PNS dengan Peg. Swasata	Tes Objektif	33
		Fortofolio	22
		Membuat Karya Tulis	20
		Membuat Infografis	6
		Ujian Sminar	23
2	Magang	Tes Objektif	28
		Fortofolio	20
		Membuat Karya Tulis	18
		Membuat Infografis	12
		Ujian Sminar	20
3	E-Learning	Tes Objektif	32
		Fortofolio	14
		Membuat Karya Tulis	14
		Membuat Infografis	10
		Ujian Sminar	20

Dari ketiga jenis pelatihan Non-klasikal di atas mayoritas peserta menginginkan penilaian hasil belajar dilakukan melalui tes objektif.

3.4.8 Desain Pola Pengembangan Kompetensi Pelatihan Klasikal dan Non- Klasikal Di BASARNAS

Pola 1 Pertukaran PNS dengan Pegawai Swasta

No	Metode	Keterangan	Materi	Waktu pelatihan
1	*Classroom*	Teori dan studi kasus	Pengenalan	1 – 5 Hari
2	Pertukaran Pegawai PNS dengan Peg. Swasta	Praktik di tempat kerja	Studi Kasus/ Praktik	20 hari kerja
3	*Assessmen*	Ujian seminar, publikasi infografis dan publikasi karya tulis popular (disesuaikan dengan karakter pelatihannya)	-	2 JP

Pola 2 Magang

No	Metode	Keterangan	Materi	Waktu pelatihan
1	*E-Learning*	System modular, audio visual yang diakses melalui aplikasi *e-learning* online dan *teleconference*	Pengenalan	1 – 5 Hari
2	*Classroom*	• Pemahaman atau disiplin ilmu spesifik • Tutorial/ workshop secara langsung	Studi Kasus/ Praktik	1 – 10 hari
3	Magang	Proses pembelajaran untuk memperoleh dan menguasai keterampilan dengan melibatkan diri dalam proses pekerjaan tanpa atau dengan petunjuk orang yang sudah terampil dalam pekerjaan itu (*learning by doing*). Tempat magang adalah unit yang memiliki tugas dan fungsi yang relevan dengan bidang tugas PNS Praktik Kerja/Magang		20 Hari kerja
	Assessmen	Ujian seminar, publikasi infografis dan publikasi karya tulis popular (disesuaikan dengan karakter pelatihannya)	-	2 JP

Pola 3 *E-Learning*

No	Metode	Keterangan	Materi	Waktu pelatihan
1	*E-Learning*	System modular, audio visual yang diakses melalui aplikasi *e-learning* online dan *teleconference*	Pengenalan	1 – 5 Hari
2	*Classroom*	• Pemahaman atau disiplin ilmu spesifik • Tutorial/ workshop secara langsung	Studi Kasus/ Praktik	1 – 10 hari
3	*Assessmen*	Ujian seminar, publikasi infografis dan publikasi karya tulis popular (disesuaikan dengan karakter pelatihannya)	-	2 JP

4. Kesimpulan

Desain pola pengembangan kompetensi ini merupakan rancangan awal bagi Basarnas yang dapat menjadi acuan untuk penyelenggaraan program diklat dan/atau pelatihan dimasa yang akan datang dengan model *blended learning*. Dari hasil survei yang diperoleh terdapat 3 (tiga) pola desain pengembangan kompetensi melalui pelatihan non-klasikal yang dapat diselenggarakan serta dikembangkan lebih lanjut dengan mempersiapkan dan menganalisis sesuai dengan karakteristik kebutuhan pada masing-masing pelatihan. Pelatihan *blended learning* ini merupakan pembaharuan sistem diklat dengan metode klasikal dan non-klasikal diharapkan dapat menjangkau seluruh wilayah Indonesia untuk memberikan kesempatan bagi semua pegawai Basarnas dalam memenuhi hak sebagai PNS agar dapat mengembangkan kompetensinya sesuai PP nomor 11 tahun 2017.

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DOES LEARNING INTEREST RELATED TO STUDENT ACHIEVEMENTS IN ELEMENTARY SCHOOL'S MATHEMATICS COURSE?

Uceu Nurhayati, uceu77@gmail.com

ABSTRACT

The development of society 5.0 era carries a large impact on student interest in learning. Learning activities no longer occur conventionally, but already involve technological devices that have negative impacts on the decline of students' interest in learning. This study attempts to examine the relationship between interest and student achievement in the current of society 5.0 era, especially in 5th grade elementary school students in mathematics cource. The data was obtained through distributing questionnaires to 43 students in several elementary schools in Garut Regency, West Java Province, and then analyzed using product moment's correlation techniques. The results showed a very strong relationship between learning interest and student achievement, with a correlation coefficient of 0.834 and a significance value of 0.000. As a recommendation, the teachers in improving student achievement need to foster student interest in learning with a variety of approaches and interactive learning models.

Keyword: learning intereset, student achievement

A. INTRODUCTION

Social order changes so fast, even these changes are very complicated in all aspects, including in education. Not long ago the concept of the industry 4.0 era was introduced, which carries the concept of a fundamental technological revolution that changes the way of life, work and connect with one another (Schwab 2016), the community has been introduced again with a new concept called soceiety 5.0.

Society 5.0 is a basic concept issued by the Japanese cabinet in increasing economic growth potential through an innovation strategy (Fukuyama 2018); Cyber physics (Shiroishi, Uchiyama, and Suzuki 2018); increase system resilience and value for the community by reducing risk and revitalizing and growing the community (Fukuda 2019). The essence of change in every age is human change itself, both aspects of behavior, perspective, social order, culture, and work and apply to all aspects of human life including education.

Apart from likes and dislikes, every change must cause a negative, specifically sectoral in the field of education such as schools. Schools must consider new methods in following up on changes that occur by utilizing and optimizing technology (Abdelrazeq et al. 2016).

Schools in the era of community 5.0, are seen as the most appropriate place in developing the potential and skills possessed by students. The school equips students to live in the community, accept work, and build a better socio-cultural order and make changes happen. Therefore, it is important for schools to educate students, it is necessary to pay attention to the conditions and readiness of student learning, specifically in terms of interest in learning. This needs to be done considering the interest in learning is very closed with student achievement (Aritonang 2008; Hude and Rohmah 2017; Nurhasanah, S. & Sobandi 2016; Ricardo and Meilani 2017).

Students with high interest in certain fields will more easily accept the lessons delivered by the teacher (Maesaroh 1970). Such as research (contributions) (Charli, Ariani, and Asmara 2019), mathematics (Köller, Baumert, and Schnabel 2001), and English (Rachman 2018).

Based on the results of evaluations of grade 5 elementary school students in Garut Regency, an indication is that there are still students who have low interest in learning about mathematics. Facts that discuss why students are not happy in learning mathematics, difficulty in receiving material, not concentrating, getting bored and not enthusiastic, and other problems such as opposing the tasks given.

The low interest of students in mathematics can be caused by factors that affect students 'perceptions of mathematics itself and students' understanding of the usefulness of mathematics in daily activities. Students' knowledge about the use of mathematics directly increases student interest (Sollu, Maupa, and Taba 2019). So, on this basis the researchers tried to examine more deeply the relationship between learning and learning with students in mathematics in several elementary schools in Garut Regency, West Java Province.

1.1. Learning Interest

The era where technology has become a part of life needs to be addressed properly and utilized appropriately for student progress in learning, not vice versa where the presence of technology actually decreases student enthusiasm for learning. Students with strong interests can solve even difficult material, and assume that the difficulties encountered are not something that should be avoided (Järvelä and Renninger 2014). Interest in learning is formed from the metacognitive abilities of students which are manifested in the form of likes, pleasures, and involvement (Tsai et al. 2018).

Interest is a form of strong motivation and provides energy for individuals to learn, be actively involved in academic activities, and support learning success (Harackiewicz, Smith, and Priniski 2016). The manifestation of students with high interest is that they are actively involved in class, pay attention to the material, study the material provided, increase knowledge independently and evaluate what has been done before (Abrantes, Seabra, and Lages 2007). Interest has a large role in student success. The role of interest is seen when students experience learning difficulties. Students who do not have an interest then, he will have difficulty and tend to fail in learning (Alhamdu 2016), given the concept of self-interest refers to an individual's inner tendencies. (Krapp 1999) defines interest as positive feelings about a particular topic, area, subject or activity that are expressed with pleasure or happiness when doing so.

Interest can be divided into two parts, namely subjective and objective interests (Krapp 2005). Subjective interest is more about feelings associated with experience,

including pleasant or unpleasant expectations of certain objects or activities. Whereas objective interest refers to positive reactions arising from the environment on certain objects or activities.

1.2. Student Achievement

Student achievement is influenced by a number of factors, such as student personalities, student interactions with teacher-staff, family, environment, policies and other factors that are more complex socio-culture (Bertolini, Stremmel, and Thorngren 2012). Defining "student achievement" is not easy, because it depends on the parameters used, whether measured from quantitative or qualitative.

In general, student achievement indicators refer to student achievements in academics such as reading, mathematics, science, art, language, and history as measured by test or exam instruments (Cunningham 2012). Student achievements are those who acquire the knowledge, skills and attitudes that will be used for the success of their lives (Lars Esdal 2016). The knowledge and skills and attitudes required are very broad and varied considering this includes skills in various disciplines such as art, language, mathematics, social, and science.

Referring to the concept of academic achievement, student achievement can be interpreted as the success of students in meeting short-term or long-term goals in learning (K12 2016). Long-term achievement refers to the achievement of a student's graduation or obtaining a certain degree after completing studies. While short-term achievement is the success of students in getting grades on semester exams or assignments in a subject.

In the concept of self-regulation, academic achievement emphasizes the process by which students try to organize themselves to achieve the expected learning outcomes, namely (1) choosing, organizing, or creating a learning environment that is beneficial to themselves, and (b) how students plan and controlling the shape and amount of material that they themselves want to learn (Zimmerman 1990).

Efforts to improve achievement can be done by building trust and motivation, improving learning skills, and providing the tools students need in learning (Edunova 2012).

B. RESEARCH METHOD

Researchers used a survey method to obtain the data needed by distributing questionnaires to 43 fifth grade students in several elementary schools in Garut Regency, West Java Province.

Determination of the sample is done by random sampling technique. The data that has been collected is then processed using the correlation technique. The

variables measured in this study are interest in learning as an independent variable and learning outcomes as the dependent variable in mathematics subjects.

C. RESULT AND DISCUSSION

The calculation result of Pearson Correlation is 0.834 with a significant level of 0.000. The value of this value indicates that interest in learning is strongly related to student achievement in mathematics. The findings of this study are in line with the findings of previous studies where interest in learning is very closely related to student achievement (Aritonang 2008; Hude and Rohmah 2017; Nurhasanah, S. & Sobandi 2016; Ricardo and Meilani 2017).

Students with strong interests are more likely to succeed in learning and achieving the expected achievements. Vice versa, students with weak interests have a tendency to fail in learning. The existence of interest in students is indicated by liking, fun, and involvement in learning. Students feel that what is learned is not bothersome or difficult, even to them it is fun and challenges that need to be solved. In this condition, students realize that what they learn will benefit themselves later. Student involvement as an indication of high interest can also be realized in the form of active participation in learning during class. Students engage and interact with the teacher, asking unknown material, looking for references that are relevant to the material being conveyed, trying to relate what is being learned with the experience they have, and the desire to provide arguments or opinions during the learning process.

Learning interest is indeed not the only factor affecting student achievement, there are many factors that influence this achievement. However, some experts agree that interest is a dominant factor in encouraging student achievement, especially in academics (Zimmerman 1990). Therefore, real efforts are needed especially for teachers so that interest in learning continues to grow and is there consistently.

D. CONCLUSION

The results of this study prove there is a strong relationship between students' interests and achievements. Interest is one of the factors that support student success in learning. Interest is manifested by the expression of joy, pleasure and involvement of students while attending learning activities at school.

As a factor that appears internally, interest encourages students to withstand the difficulties encountered and seeks to organize themselves and plan how to realize success in learning.

E. ACKNOWLEDGEMENT

Growing student interest as a motivating factor for student achievement is not enough with internal encouragement, but it must also be strengthened externally through the teacher's role in learning. Teachers should create a pleasant learning atmosphere that is able to stimulate student learning interest through the selection of appropriate models, methods and learning strategies.

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INSTILLING LEADERSHIP CHARACTER VALUES FOR EARLY CHILDHOOD

[1)] **Nur Habibah, bibah@upi.edu**
[2)] **Ocih Setiasih, setiasih@upi.edu**

Pendidikan Anak Usia Dini, Sekolah Pascasarjana, Universitas Pendidikan Indonesia
Bandung, Indonesia
E-mail : bibah@upi.edu

ABSTRACT

The character becomes a fundamental initial foundation in the process of early childhood development. Instilling character values becomes a provision to prepare children in facing global challenges, which aim to be able to compete and lead in the future. Therefore we need values that are aligned with the child's growth and development process. This article explains that the value of leadership can be instilled early on. Characteristics of leadership that can be instilled are the presence of self-confidence, strong mentality, empathy, sense of responsibility and have a good relationship with others. This is because the process of character building and early childhood development is developing rapidly, in terms of motor, cognitive, social, and language so that it takes an environment that can construct them into a unified whole in a child to have a leadership character. This article uses a literature review method that aims to help instill early childhood have a leadership character so that they can compete and are ready to become leaders with character in the future.

Keywords: character, leadership, early childhood

A. INTRODUCTION

Character education has been an objective of education in Indonesia from the beginning, as stated in Law Number 20 Year 2003. Character education is expected to be the output of education that has been held by the State in order to improve the quality of human resources in Indonesia. Therefore character education needs to be instilled early on in children. Character education is an appropriate education in child development, where the relationship between personal factors, behavior, and environmental factors is reflected in the formation of a person's character (Banks & Mhunpiew, 2012). Investing resources in early child development not only has a positive effect but also can develop the capacity of adolescents as people who are caring, competent and make them responsible citizens in the future (Battistich, 2005). So that childhood experiences at an early age can have a profound impact on the results of future development, as well as the nature of leadership (Elaine & Johnson, 2011). Another opinion states that the understanding of early development factors such as genetics, influence and early experiences of children becomes the framework for developing leaders as adults, although leadership is not only seen from innate talent or early life experiences but also the results of the training that have been passed (Conger, 2004).

The needs of leaders in each element will be greater along with a society that grows faster and more complex. So our task can be to create a broad educational and development environment

and encourage leadership abilities (Brungardt, 1996). Related to the effects from the start on leadership outcomes, the relationship between children and leadership or the participation relationship between stable traits developed in childhood and adult leadership outcomes (Amit, Popper, Gal, Levy, & Lisak, 2009). Research shows programs in early childhood have short-term and long-term benefits, such as higher graduation rates, good academics, and lower levels of delinquency in later days (Stipek and Ogana, 2000). This makes the inculcation of character values in early childhood, it becomes important to be implemented. So Indonesia is able to produce output in accordance with what is expected in the law, namely human character and able to lead the future.

B. RESEARCH METHODS

This article uses the literature journal method. Where we collect journals that discuss updates on leadership in early childhood. The analysis is used to explain the planning of character values in early childhood.

C. RESULT AND DISCUSSION

Children have sensitive periods for development that occur early in life. This period reflects the time in life where skills are easier and faster developed. Development in this period cannot be seen in the near future, but can only be seen in adulthood (Bornstein, 1989). Basically the focus of leadership is developed and also has natural influences such as childhood and adult experiences and leadership education interventions (McDade, 1994). Roberts (1981), describes activities designed to provide an environment for interaction that develops a level of order in leadership. So leadership is a continuous learning process that encompasses the entire life, a place of knowledge and experience that is built and enables more advanced growth and development. While the development of children to become leaders is a process that strengthens themselves. Like when someone is able to lead a large and believe can manage large groups, that people will be more involved in leadership experiences that will hone individual leadership abilities (Hannah, Avolio, Luthans, & Harms, 2008). The development of leadership abilities is also influenced by developmental and environmental factors that stimulate the character of this emerging leadership.

Skills in child leadership

The role of skills is important to develop early. This is a development that is easier to occur in childhood and adolescence than in adulthood because of the sensitivity, and skills that can form in young adults (Avolio & Vogelgesang, 2011). These skills can also be sharpened and improved in order to be able to maintain children can continue to develop into adulthood.

The role of language development

Language skills in children can be the focus of leadership success (Fu, 1982). This is because they have good verbal skills and abilities (Hensel, 1991), so children who are easily accepted into a group are children who can be explained by their peers, they are more supportive and able to support well (Hazen & Black, 1989). Help them. In addition, they are also sensitive to coworkers and their needs (Perez et al., 1982).

Social relationship skills with peers

Much of the literature describes social behavior as occurring in childhood (Hensel, 1991). A number of studies related to early childhood leadership also identify leadership characteristics including social and cognitive abilities (Fu, 1979) in addition to social, emotional, and cognitive development in children under five years old which are important aspects in establishing early social relationships with peers. (Hartup, 1992). The interaction of this relationship is ultimately able to make children who have leadership skills will be more prominent than others in their environment. So preschool education institutions are expected to be able to provide a comfortable, competent, safe space for children to interact with peers flexibly and freely (Shin, Recchia, Lee, Lee, & Mullarkey, 2004).

Social domination in groups

Age is one of the keys to leadership behavior seen by peers (French, 1984). Children who have a sense of leadership will give direction, instruction, persuasion with other children and make requests where they will have influence and can choose with whom they can work together (Fu, 1977). This young leader has a level of confidence and maturity with caring behavior and can help friends. But in some cases, they can use social power to exclude other friends.

In the study of the dominant social concept, leadership leads to this negative dimension because of the influence of peers and power that is formed through intimidation, aggression and the surrender of power (Strayer and Strayer, 1980). Preschoolers are even found to show physical attacks, threats, and resistance. Williams and Schaller (1993) broaden the concept of dominance to find three strategies that are often used by preschoolers, namely physical assertiveness, verbal assertiveness and disabilities specified by certain groups. Even so, this dominance can be controlled by the role of supervisors in the ongoing interaction.

Dynamism and self-awareness

Young leaders have behavioral and personal characteristics, with two different categories, namely a dynamic and strong personality and a high level of awareness (Shin et al., 2004). A dynamic personality makes them stand out from the crowd. This is because they tend to be creative, funny and can attract the attention of friends, then they are confident enough when talking in groups. Where when a verbal ability is high then they will look strong and dominant in some ways.

This leadership tendency makes high awareness in the surrounding environment, and sensitive to what is happening around him. They consciously regulate and try to make rules in various ways, so they feel dynamic in doing many things. Coupled with good cognitive, verbal and physical abilities they will show a high level of awareness in their surroundings.

Pro-social leadership

Other leadership studies look at pro-social processes such as compromise, negotiation and other attitudes to influence peers (Edwards, 1994). Where leadership in this view believes that socially children are involved in leadership behaviors that lead positively. Trawick-Smith (1988) suggests that leaders will use a more friendly, skilled and diplomatic way so that their ideas are accepted rather than acting decisively on their desires. Relationships between young leaders and peers and also teachers make them able to develop better. However, when these young leaders get older, they are more likely to display pro-social behavior based on the developed social awareness. Research related to pro-social leadership as a whole, that is, effective and competent leaders who will use skilled behavior as well as leading and following is complementary behavior.

Teacher awareness in child leadership

The concept of child leadership has long been studied but has not been financed and therefore the results of teacher research can see and support leadership planning when a child is 3 years old (Shin et al., 2004) or at the age of 5 years (Fukada et al., 1994) and challenges this will occur naturally without support or encouragement (Mullarkey et al., 2005). Bronfenbrenner (1979) says the teacher has an important role in the development of children's leadership through interaction and experience. For example, the teacher supports children in order to enhance children's cognitive development with interactions that support, support and encourage children's activities. Teachers can also identify the leadership of children, they recognize it by supporting, but their compilation does not recognize it they will be more disappointing. Teachers must have an awareness of how they respond to child leaders can support also prevent the development of motivation that is developing in children.

Activities to inculcate leadership values

The dynamic and fun personalities of children make them leaders in various games. They begin to initiate and expand game ideas, improve the quality of games and regulate social interaction (Hazen and Black, 1989). Verbal assertiveness and communication that are used well by them also hone their abilities in managing and directing others, besides that they also use reasoning skills in negotiating while playing. One of the ways to instill leadership skills is through creative drama activities. Through this activity social skills, problem-solving and conflict resolution can be developed. Skills in the early social aspects of leadership can also be included in the early childhood education curriculum. As we get older, the frequency of play in children will decrease. While at the same time, education, experience, early childhood development in leadership continues to develop (Bass, 1990).

In addition to activities that are playful, play facilities and children's play evaluation-evaluation can also be a factor influencing leadership behavior in children. After the evaluation process in playing activities to see the character of children's leadership, play curriculum planning is needed for early childhood education. This is because children's social characteristics will be exposed through play when they formulate strategies to engage, influence, or be influenced by peers and also in order to develop leadership skills. Leadership development and utilizing this game-based curriculum can also support and promote leadership in early childhood classrooms.

D. CONCLUSION

The inculcation of leadership character values for early childhood is needed in order to prepare future leaders. The more developed a country will need leaders who have mature characters to lead. This is what makes investing in values important because educational outcomes at an early age have a great influence on one's adulthood. The importance of planting from an early age is because, at this time, children are experiencing a sensitive period and rapid development in every aspect of its development.

Among the factors that can instill the value of this leadership in social skills, verbal and communication skills, dynamism and self-awareness, also supporting environmental factors such as the role of teachers, activities, and curriculum in schools needed to stimulate the relationship of characters that are interested in children's leadership early child. Where one way of looking at the character of leadership with children playing, because of playing it will look like aspects of the development needed in leadership are clearly seen.

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USE OF MOTION GRAPHIC TO IMPROVE STUDENTS 'ABILITY IN HIGH ORDER THINGKING SKILLS

Ramdani, Muhammad Ikhsan Ramadhan, Rudi Susilana, Cepi Riyana
Kurikulum dan Teknologi Pendidikan
Fakultas Ilmu Pendidikan
Universitas Pendidikan Indonesia
Email: ramdani799@gmail.com

ABSTRACT

The importance of the use of digital media of learning in the learning activities is one option that can be used by teachers in learning. Digital learning media will be very easy in terms of space, flexibility and efficiency better than learning media convensional. This research aimed to test whether the media motion graphic can increase students' ability in higher-order thinking in social studies on VII grade School Labs UPI Bandung? he specific objective of this research is to test whether the media motion graphic can boost the cognitive aspects of learning outcomes analyzed (C4), evaluating (C5), and creates (C6) in social studies. Based on interviews with Dena Y. Sendi (teachers of social studies at Labschool UPI), nowadays many teachers need a media in digital form because in terms of efficient which is very easy to carry anywhere and flexible that does not consume a lot of space in the classroom is an option for use in the learning process. Requirement in this global competition, that every individual has the competence to compete with individuals all around the world, well-being grows out of knowledge, skills and their perspective. A quantitative approach used in this study with a quasi-experimental design methods times series. This research using test instruments description and questionnaire. Results of the research showed improvement of learning outcomes of students to think critically analyze aspects (C4), evaluating (C5), creates (C6) in social studies in VII grade School Labs UPI Bandung.

Keyword : High Order Thingking Skills, instructional Media, Motion Graphic

A. INTRODUCTION

Education in 21st century is a transformation of conventional education to modern education. Implementation of modern education is the use of technology in instructional activity at school. Instructional is a pattern acivity which is conducted by students to establish science by guidance of teachers. Instructional activities have competencies as indicators which are designed by teachers to look up the achievement of students' knowledge and to develop students competencies.

Curriculum 2013 is built to strengten students' competencies in knowledge, skill and atitude in a whole. Curricculum 2013 changes prior curriculum orientation, which tends to teori-based and rote memorization to the higher order thinking skills orientation. As Jarolimek and Parker stated in an online jurnal Kurniawan & Maryani (2015, p. 216) 'The objectives of social studies should be able to develop aspects of knowledge and understanding, aspects of attitudes and values, and aspects of skills in students. One of the current thinking skills needs to be developed in social studies learning is high order thinking skills (high order thinking skills). It means, most students in Indonesia are in the low category (only the level of knowing or *rote learning)* in the ability of solving problems. The demands of global competition in real lives require that every individual has competence. Students are expected to be able to face global competition, because one's well-being grows from the knowledge, skills and perspectives provided by a good education system.

Based on the results of the preliminary study, the researcher conducted an interview with the Social Sciences (IPS) teacher at the SMP Lab School UPI on May 17, 2016 stating that learning media for social studies subjects is very important, because the lesson is not only a theory or idea that is only a thought but also events that occur on the entire earth and the sky that can be seen by the human sense of sight and can also be felt. Problems that occur, based on the interview, show that the school does not yet have a flexible media. That is because the use of digital media is very low. Besides, rooms for social studies laboratory as a place of learning by using physical media are very lack. Teachers competence in making digital media is also not too good because teachers are not accustomed to develop digital learning media.

The results of observations from previous researchers based on Samsuri's research (2014) stated "*hasil belajar yang rendah diakibatkan oleh minat siswa terhadap mata pelajaran IPS rendah dan tingkat berpikir siswa masih berada pada tingkat* remembering *atau hafalan* ". Hence, the lack of students in interest in learning and categories of level thinking is due to the lack of teachers in utilizing appropriate media in learning. The teachers only utilize power point media that presents images and text for all learning materials. Even, teachers do not involve for students in teaching and learning activities well. These activities make students bored and often not pay much attention to the material. As the results of Umam's research (2015, p.2) that "there is a low interest in learning of SMAP XII IPS An-Nidhom Islamic High School students because the teacher's explanation which is difficult to understand causes students to feel bored in the lesson". The boredom of these students results obestacles in aquiring information and in reaching competence in higher-order thinking aspect.

To find solutions to the lack of high-level thinking aspects of students, researchers tried to utilize motion graphic media in teaching and learning activities. This motion graphic media is trending on the internet media youtube.com proved by the response of the audience and the large number of viewers because of their fondness for the appearance of the motion, visuals, and music. These are in line with research Yuniarsih (2016) *"penggunaan media animasi dapat meningkatkan aktivitas , minat dan hasil belajar IPS kelas VII"*. According to Krasner (2008, p. 75) "motion graphic can enhance the user's sensory experience if they are designed well and are logically integrated. Depending upon the complexity of interactivity, motion can enhance the navigational process by entertaining users while emphasizing the hierarchy of information". The statement proves that motion graphics can help students in processing information / material into knowledge. According to Anshor (2015, p.3) in his scientific journal. 'Technology in learning can be facilties of learning, media and learning resources for students. Among the many learning technologies, one of them is video media which has a good enough advantage for the implementation of learning'. The statement supports researcher in developing technology in learning.

Based on observations about the development of instructional media, learning media today must have innovations in terms of presentation, such as colors, music, motion and light presentation material. Therefore, a development of learning media is needed to deliver students to knowledge. Inaccuracy in the selection of learning media in the application of the learning process will have an impact on the low student learning outcomes, if done continuously it will have a negative impact on the future of students. The low student learning outcomes in certain subjects is a serious problem in the educational environment that should be considered and

found the best solution. Appropriate solutions need to be sought to improve student learning outcomes, so that learning objectives can be achieved.

The focus of the subjects studied is IPS. IPS is an integration of various branches of social sciences such as: sociology, history, geography, and economics. Social Sciences (IPS) are formulated on the basis of reality and social phenomena that embody an interdisciplinary approach from the aspects and branches of social sciences. Social studies education emphasizes the knowledge of the nation, the spirit of nationalism, patriotism, and community activities in the economic field within the territory of the Republic of Indonesia. Social studies were developed as integrative social studies subjects, not as disciplinary education. Basically, social studies subjects relate to physical objects or the environment around humans. Physical objects and the environment can be simulated with various learning media.

B. RESEARCH METODOLOGY

This study uses a quasi-experimental research method. The purpose of using a quasi-experimental research method is that the researcher wants to see an increase in cause and effect in a study group before and after the treatment of the use of motion graphics for high-level thinking of students. Therefore, this study uses a quasi-experimental research method.

The research design used in this study is the times series design. The purpose of using the Times Series Design research design is that the researcher wants to focus on the use of motion graphics for high-level thinking of students without any comparison with other media because there is no good or good learning media but learning media as an appropriate media. Therefore there is only one study group and it is not done randomly but using a predetermined study group. In this times series research design, the researcher will give a pre-test followed by treatment and end with a post test. The pattern was carried out three times to see the results of improvement between pre-test and post-test.

The research design used in this study is the times series design. The purpose of using the Times Series Design research design is that the researcher wants to focus on the use of motion graphics for high-level thinking of students without any comparison with other media because there is no good or good learning media but learning media as an appropriate media. Therefore, there is only one study group and it is not done randomly but using a predetermined study group. In this times series research design, the researcher will give a pre-test followed by treatment and end with a post test. The pattern was carried out three times to see the results of improvement between pre-test and post-test.

In this study, the instrument used was a description test and questionnaire. The description test will be used for the Y variable (HOTS) and the questionnaire instrument will be used for the X variable (motion graphic). The purpose of using the non-objective test instrument is to see an increase in cognitive learning outcomes at higher levels of thinking and the questionnaire is used to see students' opinions of the motion graphic media after being used in social studies subjects.

Table 1
Hubungan Antar Variabel Penelitian

Dependent variable Independent Variable	Increasing learning result in analysis (Y1)	Increasing students learning result in evaluating (Y2)	Increasing students learning result in creativity (Y3)
Instructional Media *Motion Graphic* (X)	XY1	XY2	XY3

Keterangan :

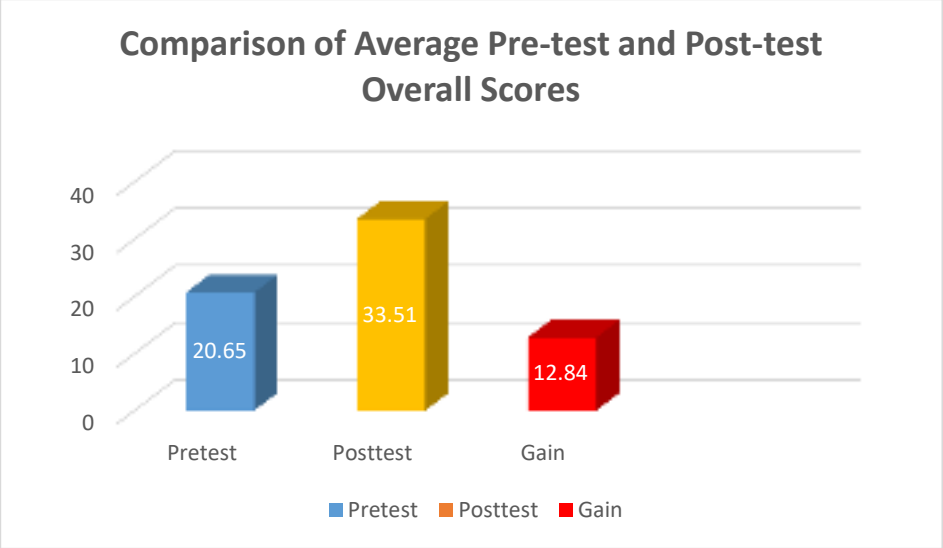
XY1 : Increasing learning result of IPS in analysis by motion graphic.

XY2 : Increasing learning result of IPS in evaluating by motion graphic.

XY3 : Increasing learning result of IPS in creativity by motion graphic.

C. RESULT

Based on the results of data processing obtained from the field, the comparison results or the difference in score from the overall average of three times the pre-test and three times the post-test carried out and get a gain of 12.84. The description is as follows:



Graphic 1

Graph Comparison of Average Pre-test and Post-test Overall Scores

The graph above shows the overall average score of the post-test is higher than the overall average score of the pre-test with a gain of 12.84. This shows that there is an increase in the overall average score of students' high-level thinking skills after being given treatment in the form of the use of motion graphic learning media in Social Sciences (IPS) subjects.

1. Generar Hypothesis

H_0 : $\mu_1 = \mu_2$

H_1 : $\mu_1 > \mu_2$

The results of the overall general hypothesis testing are as follows:

Table 2

Test Results Significance of General Hypotheses

Variable	Significance
The use of motion graphic media to improve students' ability to think at a higher level	20.984

From the results of the dependent t test that can be seen in table 4.1, the calculated t-value of 20.984 was obtained. T-table values are taken based on the number of samples in the study and are calculated using degrees of freedom (dk) with the following calculation:

dk = n_1 -1
= 32 - 1
= 31
α = 0,05

The acquisition of t-table is 1,695 and the t-value is 20,984 with a confidence level of 95% so that t-count> t-table. This shows that the null hypothesis H0 is rejected and the working hypothesis H1 is accepted.

It can be concluded that the calculated t value is in the rejection region H0 in other words H1 is accepted. Therefore, there was a significant increase in the skill to think of a high level, between before and after being given treatment by using motion graphic learning media on social studies subjects.

2. Special Hypothesis

Analysis and significance test specifically saw the increase in the skills of analying (C4), Evaluating (C5), and Creating (C6) between before and after using motion graphic media. Here are the results of data acquisition:

Table 3
Specific Hypothesis T Test Results

No	Aspect	Significance	Category
1	Analyzing (C4)	17.826	H_0 = rejected H_1 = accepted
2	Evaluating (C5)	13.968	H_0 = rejected H_1 = accepted

3	Creating (C6)	11.496	H_0 = rejected H_1 = accepted

a. Improving students' high-level thinking in analyzing, with the use of motion graphic learning media in IPS.

Data of the special test results showed that there was a significant increase in students' ability of high-level thinking analyzing (C4) between after and before the use of media for motion graphic learning in IPS subjects at UPI Middle School Lab School. It is seen from a significant increase in overall pretest gain and overall gain of the post test. The aspect of analyzing asks students to connect solved materials into a complete information structure. The description of aspects of analyzing such as differentiating, organizing and attributing.

b. Improving students' high-level thinking in evaluating, with the use of motion graphic learning media in IPS.

Special test data shows that there is a significant increase in students' high-level thinking skills in the aspect of evaluating (C5), between after and before the use of motion graphic learning media in social studies subjects at UPI Middle School Labs. This is seen from a significant increase in overall pretest gain and overall post test gain. In accordance with the scientific journal Sari and Samawi (2014) *"hasil belajar IPA siswa sesudah digunakannya media animasi dalam pembelajaran materi daun air mengalami peningkatan"*. This aspect of evaluating requires students to make decisions based on standards and criteria. According to Anderson and Karthwohl (2001, p. 125) "The evaluation category includes the cognitive process of checking (decisions taken based on internal criteria) and criticizing (decisions based on external criteria)".

c. Improving students' high-level thinking in creating, with the use of motion graphic learning media in IPS.

Special test data shows that there is a significant increase in students' high-level thinking skills in the aspect of creating (C6), between after and before the use of motion graphic learning media in social studies subjects at the UPI Middle School Lab School. This is seen from a significant increase in overall pretest gain and overall post test gain. This aspect of creating asks students to generalize new ideas, products or ways of thinking of students about an event.

d. Student responses to the use of motion graphic media in IPS.

The results of the study stated that the response of students to the motion graphic media on IPS subjects received a positive response. Students get a good impact from the use of motion graphic media in the learning process. A popping response that is, students can develop more information than without using learning media. Students are more focused on the material because using learning media can draw attention into learning and students can actualize themselves because in the learning process creating an active and communicative atmosphere.

D. CONCLUSION

The conclusion is that there is a significant increase in learning outcomes in the high-level thinking skills of students of Social Sciences (IPS) grade VII in SMP Lab School UPI.

Specifically on the ability to analyze aspects (C4), there is an increase in learning outcomes in higher-order thinking on the aspect of analyzing the use of motion graphic learning media

in Social Sciences (IPS) subjects. Motion graphic media helps students to analyze information from various small components into a complete information structure.

Likewise in the aspect of evaluating (C5), there is a significant increase in the learning outcomes of high-level students thinking in the aspect of evaluating the use of motion graphic learning media in Social Sciences (IPS) subjects. The use of motion graphics helps students in giving an assessment or criticism of the results of learning activities.

In the aspect of creating (C6), there is an increase in students' learning outcomes in high-level thinking in the aspect of creating by utilizing motion graphic learning media in Social Sciences (IPS) subjects. The use of motion graphics helps students create a work that results from the ideas after the learning process.

Student responses to motion graphic media show that students can develop information from the material compared without using learning media. Students are more focused on the material because it uses learning media that can draw attention into learning, and students can actualize themselves because in the learning process creating an active and communicative atmosphere.

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IMPLEMENTATION OF CHARACTER EDUCATION IN FACING THE DISRUPTION ERA IN SMP NEGERI 8 YOGYAKARTA

W.Banu Oka Sutresna , wbanuoka.2018@student.uny.ac.id
Dr. Nurtanio Agus Purwanto, M.Pd , nurtanio@uny.ac.id
Pascasarjana Universitas Negeri Yogyakarta
Yogyakarta, Indonesia

ABSTRAK

This study aims to determine how the implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta. This research uses descriptive qualitative method by looking at phenomena that occur in the field. The data obtained in this study were obtained through observation, documentation, and interviews. The results showed that the implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta was done through the integration of character education in (1) curriculum and learning, character values were integrated in various subjects and actualized in some of the questions made by the teacher, (2) self-development activities, in addition to extracurricular students are required to participate in various curricular activities, and extracurricular activities, (3) school rules and culture, character building with the existence of discipline, in addition to the habit of smiling, greeting, greeting so as to create a positive school culture culture . In strengthening character education in the era of disruption, schools collaborate with several parties such as the Ministry of Communication and Information, Telkomsel and the Police. Supporting factors for the implementation of character education are good role models of the characteristics of the principal and teachers, religious activities that are maximally carried out by school residents, adequate facilities and infrastructure. Inhibiting factors are the weakening of the consistency of teachers in educating students and the lack of attention and awareness from parties outside the school such as family or community environment about character education.

Keywords: Implementation, Character Education, Disruption Era

A. INTRODUCTION

The industrial revolution 4.0 is a concept in the world of technology that is very closely related to the era of disruption. The Industrial Revolution 4.0 was first introduced by Professor Klaus Schwab The famous economist from Germany in his book, The Fourth Industrial Revolution that the concept has changed the life and work of humans.

The first industrial revolution of era 1.0 occurred at the end of the 18th century. Marked by the discovery of mechanical loom production facilities using water power and steam. The 2.0 industrial revolution took place in the early 20th century. This industrial revolution is marked by the invention of electricity. Muscle energy which was replaced by a steam engine slowly began to be replaced again by electric power. In the early 1970s marked the emergence of the 3.0 industrial revolution. Starting with the use of electronics and information technology for production automation. Computer-based automation systems make industrial machines no longer human-controlled. 4.0 industrial revolution marked by cyber-physical systems. Now the industry is starting to touch the virtual world, in the form of human, machine and data connectivity, all of which are everywhere. This term is known as the internet of things. From the understanding of the concept of the industrial revolution, all sectors of life must adapt themselves to their development. The 4.0 revolution was often called the era of disruption.

The era of globalization is an era of disruption where something that has long been renewed in terms of technology, culture, politics, and others. From all that many perspectives from experts that globalization is very good for every change. However, on the other side, globalization also has an impact on one's character and ethics along with easy access to all available information. Globalization has both positive and negative sides of education. On one side, the current globalization is a hope that will provide

various facilities for human life. But on the other side, the era of globalization also has a very detrimental impact.

With the development of the technology and information sector, humans no longer have to wait for time to be able to access various information from all parts of the world, even the most remote ones. This condition makes the absence of barriers and limits that can obstruct the process of cultural transformation. John Neisbitt mentioned this condition as a global lifestyle, which was marked by the mixing of cultures between nations, such as the establishment of almost the same living procedures, the same hobbies, and the same tendencies, both in terms of food, clothing, entertainment and every aspect of life other humans. This kind of reality will have implications for the loss of the original personality and polished by a culture that tends to be more powerful. In this context, the western culture which has gone far in the field of industry and information technology, is the only choice, as a standard of modernization, which will be followed and made an orientation by each individual. Globalization causes social change which gives rise to values that are pragmatic, materialistic and individualistic. No exception, for Indonesian people who already have a local culture, are forced to make western culture as a measure of their lifestyle, to be called modern society.

In the era of disruption of education, it is demanded to be able to balance the civilization of society. The era of disruption drives us to think fast and target-oriented. From the beginning who used a manual system now turned into a digital system. Until the education system also must immediately adjust to the development of increasingly recent times. The era of disruption provides an opportunity to obtain information in any form. Information that has been provided with a system that strongly supports the transfer of information does not create a barrier between the information maker and the recipient of the information. The era of disruption also facilitates knowledge transfer activities in the world of education. Examples of the availability of sophisticated learning media, adequate internet systems, online learning systems and various other worlds of informatics learning can be taken.

The various destructive behaviors that occur in education, especially students today such as alcoholism, free sex, spreading hoaxes, pornographic content, student brawls, violence, bullying, murder, pornography, drug use, and abortion are social diseases that are caused by the impact of the globalization era. These various social problems are a result of the low quality of education.

From the problems above it can be seen that the negative impact of the disruption era on education is very dangerous for students. So that education should not only print someone knowledgeable but also raises a good attitude and character in the life of society, nation and state. To produce students who excel in knowledge and have good character, education is always evaluated and improved. One effort to improve the quality of education is the emergence of ideas about the importance of character education in the world of education in Indonesia. This idea arose because the educational process that had been carried out was considered not yet fully successful in developing Indonesian people of character.

Character education is a national movement to create schools that nurture young people who are ethical, responsible and caring. Character education is also not just about teaching what is right and what is wrong. More than that, character education is an attempt to instill good habits (habituation) so that students can behave and act on the values that have become their personalities.

Character education consists of two words namely education and character. Education according to Ki Hajar Dewantara is an effort to advance character, mind, and body to advance life in harmony with nature and its people. Gunawan (2014) defines character as "a characteristic possessed by an object or individual (human)". These characteristics are original, rooted in the personality of the object or individual and is a driving machine for how someone acts, behaves, says, and responds to things. While Damayanti (2014) provides an understanding of character education is a national movement creating schools that foster ethics, take responsibility and care for young people by modeling and teaching good character through an emphasis on universal, values that we all believe in. Character education involves aspects of knowledge (cognitive), feelings and actions without these three aspects, character education will not be effective.

The values of character education developed in Indonesia are sourced from religion, Pancasila, culture, and national education goals, namely: (1) religious, (2) honest, (3) tolerance, (4) discipline, (5)

hard work , (6) creative, (7) independent, (8) democratic, (9) curiosity, (10) national spirit, (11) patriotism, (12) respect for achievement, (13) friendly / communicative, (14) peace-loving, (15) fond of reading, (16) caring for the environment, (17) caring socially, and (18) responsibility (Puskurbuk, 2011: 3). The implementation of character education is one thing that is done at any level of education. This is very reasonable because education is the main foundation for the growth and development of Indonesia's young generation.

Character education is a system of inculcating character values to school members that includes components of knowledge, awareness or will, and actions to carry out those values, both towards God Almighty (YME), oneself, others, the environment, and nationality so that become human beings Kamil (Triatmanto, 2010). In character education in schools, all components of education, especially school principals and teachers and school residents must be involved, including the components of education itself, namely the contents of the curriculum, the learning process and assessment, the quality of relationships, the handling or management of subjects, school management, implementation activities, empowerment of infrastructure, funding, and work ethics of all citizens and the school environment. Character education aims to improve the quality of implementation and educational outcomes in schools that lead to the achievement of the formation of character and noble character of students in full, integrated, and balanced, following graduate competency standards. Through character education, it is expected that junior high school students can independently increase and use knowledge, study and internalize and personalize the values of character and noble character so that it is manifested in daily behavior (Suyanto, 2010).

Character education plays an important role in overcoming the problem of cultural decline and weak national character caused by the era of disruption. Based on this the government made a national policy and movement namely Penguatan Pendidikan Karakter (PPK). In Presidential Regulation Number 87 Year 2017 concerning Penguatan Pendidikan Karakter stated in Article 1 that Penguatan Pendidikan Karakter hereinafter referred to as PPK is: The education movement under the responsibility of the education unit to strengthen the character of learners through harmonizing the process of heart, feeling, if thinking, and sports with the involvement and cooperation of education units, families and communities as part of the Gerakan Nasional Revolusi Mental (GNRM). PPK is an effort to grow and equip the next generation to have good character, high literacy skills, and have superior competence in the 21st century, namely being able to think critically and analytically, creatively, communicatively, and collaboratively.

Penguatan Pendidikan Karakter is a policy that has been implemented in schools and is a National Movement. Many practices have been developed by schools, but there are still many weaknesses that must be resolved to ensure that the culture process of character values runs and is sustainable. As for some of the weaknesses, namely: firstly the limited involvement of the public especially the assistance of parents at home in guiding and building the character of their children, secondly the exemplary factors of parents, teachers and school principals, and even community leaders who cannot become role models for children children, and the third is the harmonization between heart training (ethics), thought though (literacy), taste (esthetic) and sports (kinesthetic) is still not optimal, because schools still prioritize academic knowledge competition, without reinforced by character education. For this reason, the active role and participation of families, schools and communities are needed in character-building efforts to face various life dynamics and challenges in this era of disruption.

According to Batubara (2012), the implementation of character education in schools can be done through (1) integration into teaching and learning activities in each subject; (2) habituation in daily life in the education unit, meaning by creating a school culture that has good character; (3) integration into extracurricular activities such as Scouting, sports, written works, or others; and (4) the application of daily life habits at home is the same as at school.

Based on the description above it is known that character education must be implemented and then integrated into school life, both in the context of learning in the classroom and outside the classroom. SMP Negeri 8 Yogyakarta is one of the best schools in Yogyakarta in the implementation of character

education. SMP Negeri 8 Yogyakarta is an environmentally friendly school that can shape its students to become religious, rational, communicative, responsive, reflective and prospective human beings. Education at SMP Negeri 8 Yogyakarta is intended to prepare strong human resources so that they can live in harmony with the changing times concerning good character education. Based on the background of the school, the researcher wants to carry out research to identify strategies and implement the implementation of character education in the face of the era of disruption in SMP N 8 Yogyakarta.

B. RESEARCH METHOD

This research uses descriptive qualitative research method. A descriptive qualitative method is a research that is intended to gather information about the status of symptoms that exist that are symptoms according to what they are at the time the study was conducted. Bogdan and Taylor (1975) define the qualitative methodology of a research procedure that produces descriptive data in the form of written or oral words from people and observed behavior. This qualitative descriptive approach aims to describe and interpret phenomena that occur in the field. So it can be concluded that this study seeks to describe a phenomenon in which researchers conduct research. (Moleong, 2005).

In this study, researchers examined the implementation of character education in the face of the era of disruption. The object of this research is SMP Negeri 8 Yogyakarta. Education in SMP Negeri 8 is intended to prepare strong human resources so that they can live in harmony with the changing times concerning good character education. This school was chosen because the researchers looked at SMP Negeri 8 Yogyakarta as one of the best Junior high school in Yogyakarta that had succeeded in implementing character education.

Data collection techniques used in this study were interviews, observation, and documentation. Interviews are used to capture data or information relating to various policies undertaken by schools in implementing discipline character education. Observations were made to see the implementation of discipline character education through classroom learning. The documentation technique is used to obtain data about school rules and learning plans made by the teacher. To obtain data that can be scientifically justified, in this study an examination of the validity of the data was conducted. In this study, the validity of the data checking technique used is the triangulation technique, which is the crossing of information obtained from the source so that in the end only valid data is used to achieve the results of the study (Arikunto, 2006). Triangulation technique is done by triangulation methods, namely by checking information from interviews with documentation and observation.

C. RESULT AND DISCUSSION

C.1. Result

The implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta is done by integrating on:

3.1.1 Curriculum and Learning

Every subject teacher at SMP Negeri 8 Yogyakarta is required to develop a curriculum by integrating the values of strengthening character education in the face of the era of disruption into the learning process when preparing documents or learning tools in the form of syllabi and learning implementation plans. The lesson plan is prepared by paying attention to the interrelationships and cohesiveness between core competencies and basic competencies, learning materials, learning activities, learning methods, assessments, and learning resources in one whole learning experience. In the RPP insert character education learning through attitude, culture, patriotism and several other values of character education.

Based on the results of an interview with Sutarto, S.Pd. as curriculum tool in SMP Negeri 8 Yogyakarta it is known that the implementation of PPK in the face of an era of disruption through integration in the curriculum and learning can be done in many ways such as: revealing the values contained in learning materials, using parables and making comparisons with events similar in the

lives of students, changing negative things into positive values, expressing values through discussion, and using national songs to integrate the values of strengthening character education.

3.1.2 Personal Development Activities

Personal development activities through extracurricular aims to develop the personality and talents of students following the interests and abilities of students. SMP Negeri 8 Yogyakarta requires students to take part in extracurricular activities. Nanang Sahid Wahyudi, S.Pd. as student vice president and assisted by Ibnu Agus Triwidigda, S.Pd. responsible for managing extracurricular activities. He explained that there were several extracurricular activities held by SMP Negeri 8 Yogyakarta, namely:

No	Kegiatan	Hari	Jam	Tempat	Ket
1	Karya Ilmiah Remaja	Jumat	13.00 – 14.30	Ruang Kelas	Pilihan
2	Karawitan	Jumat	13.00 – 14.30	R. Karawitan	Pilihan
3	Olimpiade IPA	Selasa & Jumat	15.00 – 16.30	R. Lab. Fisika Bawah	Seleksi dilaksanakan bagi siswa yang sudah mendaftar
	Olimpiade Matematika	Selasa & Jumat	15.00 – 16.30	R. Lab. Fisika Atas	
	Olimpiade IPS	Selasa	15.00 – 16.30	R. Lab. Biologi	
4	English Speech/ Story Telling	Selasa	15.00 – 16.30	R. Kelas & Outdoor	Pilihan
5	Tari Kreasi Baru	Selasa	15.00 – 16.30	Ruang Tari	Pilihan
6	PMR	Selasa	15.00 – 16.30	Ruang Kelas	Pilihan
7	Volley Ball	Rabu	15.00 – 16.30	Lap. Volley	Pilihan
8	Futsal	Rabu	15.00 – 16.30	Lap. Basket	Pilihan
9	Tonti	Selasa & Jumat	15.00 – 16.30	Lap. Volley	Seleksi bagi semua siswa
10	Pencak Silat	Rabu	15.00 – 16.30	Hal. Depan	Pilihan
11	Karate	Rabu	15.00 – 16.30	Aula Sekolah	Pilihan
12	Bola Basket	Selasa & Jumat	15.00 – 16.30	Lap. Basket	Pilihan
13	Bulutangkis	Jumat	13.00 – 14.30	Lap. Bulutangkis	Pilihan
14	Pramuka Kelas VII	Kamis	13.00 – 14.30	Lap. Upacara	Wajib
15	Pramuka Kelas VIII	Senin	15.00 – 16.30	Lap. Upacara	Wajib
16	Paduan Suara	Jumat	13.00 – 14.30	R. Lab. Musik	Pilihan
17	Orkestra	Rabu	15.00 – 16.30	R. Lab. Musik	Pilihan

Scout extracurricular activities are activities that must be followed by all students. The activity was considered very necessary because it studied the code of honor of the Boy Scout movement in the form of Tri Satya and Dasa Darma Scouts who were able to describe the character values developed. The character values include Religious, Nationalist, Independent, Mutual Cooperation, and Integrity. Achievements obtained from the scout extracurricular activities are the highest award for scout garuda class raiser submitted on 18 September 2019. In addition to scouts there are other achievements obtained from extracurricular activities such as: Macapat Contest at the CITY Champion 2, Basketball in the context of Lustrum SMA Negeri 2 Yogyakarta Champion 3, Intelligent Mathematics OSN CITY level Champion 2, OPSI in the field of Natural Sciences 02 September 2019 Champion 3, OPSI in Social Sciences, City level Champion 2, OPSI in Engineering and Engineering Sciences level CITY Champion 2. Champion 1 Flssn Traditional Dance City and Province Level, Champion 3 Traditional Music City Level.

3.1.3 School Regulations and Culture

Implementation of the strengthening of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta, namely through school culture which is the knowledge and work of the school community that must be informed to students. The knowledge in question is manifested in the attitudes and real behavior of the school community, thus creating a color of school life that can be a mirror for anyone involved in it. SMP Negeri 8 Yogyakarta is a school that upholds religious values because in their daily prayers are always held before the lessons begin, for those who are Muslims should be together, Catholics, Christians, and Hindus also pray together in their respective rooms, so before the teaching and learning process creates an atmosphere that is conducive and full of faith in God-fearing God Almighty. After praying for 10 minutes followed by singing the national anthem "INDONESIA RAYA" 3 stanzas, after that at 07:15 the activities of the "LITERATION" Movement read books, until 07:30 when the first hour began.

Sutarto, S.Pd. revealed that the development of school culture is done through exemplary activities or examples through good behavior to students, for example, discipline, cleanliness and tidiness, compassion, courtesy, attention, honesty, and hard work. He also added that in terms of school culture, the school strived to carry out the Strengthening of Character Education in an optimal way, such as providing supporting facilities (honesty canteen, suggestion, and complaint boxes), trash bins, traditional playing arts, and other facilities that could support walking character education well because of these small things can have a good impact if accustomed. Based on the explanation, the integration of the Strengthening of Character Education values into the School Culture concluded that the school culture is something that the school community usually does and because it is often done, these habits become a habit that is already entrenched by the school community.

In addition to habituation through the culture of SMP Negeri 8 Yogyakarta school also has rules and regulations that must be obeyed by school residents, especially students. With this regulation, it is expected that all students can obey so that the learning process can take place properly so that it can help obtain maximum learning achievement. Besides, the application of rules and regulations in schools can shape the character of discipline in students. As for the rules that must be obeyed, such as order must enter clothes, dress neatly, hair is not long, students must use shoes complete with socks. Then students are also asked not to be late for school. Disposing of trash in its place, and many more forms of school rules. Sanctions or penalties given to students for violating school rules do not use physical punishment but rather give students an understanding that what they are doing is wrong so the teacher gives guidance to students who violate.

In facing the era of disruption, SMP Negeri 8 Yogyakarta also involved several parties in shaping the strengthening of student character. The school cooperates with outside parties such as the Ministry of Communication and Information and Telkomsel in overcoming problems related to the use of social media. Besides, the police are also involved in shaping the character of students in facing the era of disruption. The police always guide all good and bad actions so that students can avoid crime. The army also guides students to form the character of the defense of the State and love of the Indonesian homeland. Some of the aforementioned parties routinely come to school according to the invitation of the school to reinforce character education in the face of the era of disruption.

Supporting and Inhibiting Factors The implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta

a. Supporting Factors

There is a good example of the character of the principal and teachers, commitment, cooperation, strong communication between school members to carry out character education, religious activities that are maximally carried out by school residents, adequate facilities and infrastructure to support the success of character education.

b. Inhibiting factors
Weak teacher consistency in educating students and lack of attention and awareness from parties outside the school such as family or community environment about character education.

3.2 Discussion

Character education is an attempt to instill good habits (habituation) so that students can behave and act based on values that have become their personalities (Kemendiknas, 2011). Character education shapes one's personality through school education whose results are seen in concrete actions, namely good behavior, honesty, responsibility, respect for the rights of others, hard work, and so on. Character education plays an important role in overcoming the problem of cultural decline and national character. Based on this the government made a national policy and movement namely Penguatan Pendidikan Karakter (PPK).

SMP Negeri 8 Yogyakarta has implemented the KDP program based on Presidential Regulation No. 87 of 2017 concerning Penguatan Pendidikan Karakter. The implementation of the program to strengthen character education at SMP Negeri 8 Yogyakarta is integrated into curriculum and learning, self-development activities, and regulations and school culture. This is similar to research conducted by Maya Rusmayanti (2016) that character education can be carried out through 3 steps: integrated subjects, self-development through extracurricular activities, and school culture through habituation. The various programs are then designed to be able to instill existing character values.

3.2.1 Curriculum and Learning

Implementation of the strengthening of character education in the curriculum and learning activities is done by instilling the values of national character and culture in students, so that the learning activities will lead to the character of students who are instilled. The implementation of character education in learning activities is done by incorporating 18 values of national character and culture in all subjects. Character values are determined based on Core Competencies / Basic Competencies and are included in the RPP or syllabus. For example in learning science with the subject matter of flora and fauna integrated the character values of loving the motherland, caring for the environment and curiosity. So all subjects emphasize character values and are adapted to activities and learning material.

Teachers at SMP Negeri 8 Yogyakarta have developed and understood the integration of character education into subjects and can develop core competencies and basic competencies into learning indicators by linking several subjects. Likewise with the achievement of competencies, approaches and methods, teaching materials, learning activities, assessment and assessment instruments, media, tools, materials and learning resources.

This is in line with what was stated by Yaumi (2014) that the integration of character and culture values through learning activities can be done in various stages, namely: learning analysis, determining character values, selecting tasks, choosing methods, determining media, testing and revising. Kemendikbud (2016) reinforces that the steps for implementing Character Education Strengthening through integrated classroom learning in the curriculum by conducting basic competencies analysis, designing lesson plans, selecting relevant learning methods and classroom management, implementing learning according to the Learning Implementation Plan, conducting authentic assessments, and reflect and evaluate the learning process.

3.2.2 Personal Development Activities

Personal development activities through extracurricular activities are schools outside of learning that function to develop students themselves. Integrating character education in the face of the era of disruption through extracurricular activities aims to shape the character of students by self-introduction and ability development in addition to understanding learning material. Also, extracurricular activities become a forum for the implementation of strengthening of character

education. In extracurricular activities, there are self-introduction education and development of students' soft skills. This is consistent with what was revealed by the Kemendikbud (2016) that extracurricular activities are character development activities carried out outside of learning hours. Extracurricular activities function to channel and develop the interests and talents of students by taking into account the characteristics of students, local wisdom, and the carrying capacity available.

Character values are integrated through various extracurricular activities, for example, an attitude of confidence, responsibility, creative, innovative, independent and leadership are embedded in scout extracurricular activities and student council management.

Scout extracurricular activities can strengthen students' character education because they learn about the honor of the scouting movement in the form of Tri Satya and Dasa Darma Pramuka. This is in line with the opinion of Wiyani (2012) which states that Trisatrya and dasadarma are guidelines for members of the scout movement both in speech and in actions that are able to make students become good personalities and are expected to be able to apply character values in social life activities, such as morality noble in association and discipline in carrying out religious norms in relation to others.

Various types of self-development through extracurricular activities developed at SMP Negeri 8 Yogyakarta aim at providing opportunities for students to develop and express themselves according to their needs, talents, and interests. This is following the Concept and guidelines for Strengthening Character education (Kemendikbud: 2016) which explains that extracurricular activities are character development activities carried out outside of learning hours (extracurricular). In line with these activities by Samani (2014) reinforces that any extracurricular activities, depending on the specific types and objectives of the extracurricular activities, there are always character values developed.

3.2.3 School Regulations and Culture

Habituation through school culture is an activity outside of learning which is used as a vehicle for planting character values. The PPK program through habituation in SMP Negeri 8 Yogyakarta can be divided into 4 namely exemplary, routine activities, spontaneous activities, and conditioning. This is following the Kemendikbud (2016) that habituation activities through school culture are formed in the process of routine, spontaneous, conditioning, and exemplary activities of school residents. The activity is carried out outside of school hours to strengthen character formation following the situation, conditions, availability of facilities and infrastructure in each education unit.

Habituation through exemplary behavior and attitudes of teachers by giving examples of good actions so that they are expected to become role models for students. This is demonstrated by the teacher and all school members actively participating in routine activities organized by the school. Another form of habituation through example is to dress neatly, arrive on time, speak politely, responsibly. Various forms of teacher modeling are expected by students to be able to emulate these good attitudes and behaviors. This shows that the implementation of strengthening character education is not only carried out by students but involves various parties.

Habit through routine activities at school through the 3s culture (smile, greetings, greetings), state defense activities which were filled from the Koramil and the local police at the flag ceremony. In addition, the routine activities at SMP Negeri 8 Yogyakarta is that in daily activities they always hold a prayer before the lesson begins, for those who are Muslims should be together, Catholics, Christians, and Hindus also pray together in their respective rooms, so before teaching and learning an atmosphere that is conducive and full of faith in God Almighty is created. After praying for 10 minutes followed by singing the national anthem "INDONESIA RAYA" 3 stanzas, after that at 07:15 the activities of the "LITERATION" Movement read books, until 07:30 when the first hour began. Through various routine activities, students are expected to be able to have noble character following the values of character education derived from religion and Pancasila.

Habit through spontaneous activities such as social service and violation points for students who violate the rules. In addition to the teacher's point also gives direction and understanding to students so that students no longer repeat behaviors that deviate from character values.

While habituation through conditioning includes strengthening local culture in schools by making joglo houses and making puppet displays that will foster students' pride in cultural diversity so that they will reflect character values. Local culture as part of the wisdom of the nation that lives during the environment of Indonesian society is the main reference for the formation of noble cultural values of the nation. It is a noble identity and personality of the Indonesian people that must be continuously protected, developed and passed on to future generations on an ongoing basis. In the era of disruption, various local cultures must be able to build, color and strengthen the national identity and character of students in schools, families, and communities, and be able to grow and develop into a major player in the global arena and have a competitive advantage to appear in the international community. These activities are expected to instill and support the strengthening of character education so that values can be integrated comprehensively into students.

Supporting and inhibiting factors in the implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta

a. Supporting Factors
   Supporting factors for the implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta include a good example of the character of the principal and teachers, commitment, cooperation, strong communication between school residents to carry out character education, a conducive environment, and maximum religious activities implemented by school residents, adequate facilities and infrastructure to support the success of character education.
b. Inhibiting factors
   Based on the results of the interview there are several inhibiting factors in the implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta including diverse student backgrounds, weakening teacher consistency in educating students and lack of attention, concern, awareness and commitment from parties outside the school such as family or the community environment about character education.

Of the various inhibiting factors, schools make various efforts to minimize the existing obstacles so that the strengthening of character education can run well so that character values are embedded in learners to the fullest. The efforts undertaken by the school are to strengthen various PPK programs that have already been carried out such as: (extracurricular activities, habituation, religious activities), increasing socialization or direction to all school residents and surrounding communities especially parents of students of the importance of character education, improving quality teachers (training), working together with outsiders (police and army), building commitment and establishing good communication to all school members.

D. CONCLUSION

Based on the description of the results of research that has been done, it can be concluded as follows:
The implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta is done by integrating on:

4.1 Curriculum and Learning
   Integration of character values in the learning process or subjects, classroom management, and learning methods, learning evaluation/guidance, development of local content curriculum following regional characteristics.
4.2 Personal Development Activities
   Integrating character values into extracurricular activities at SMP Negeri 8 Yogyakarta is carried out through Scouting, TONTI, Palang Merah Remaja (PMR), English, Karate and Taekwondo, Karya

Ilmiah Remaja (KIR), Volley Ball, Basketball, Futsal, Art Dance, Macopat Javanese, Al-Qur'an reading, Mathematics / Sciences, Journalism, Choir, Music Ensemble and Karawitan.

4.3 School Regulations and Culture

Integrating character values through the school culture shown by four activities, namely routine activities, spontaneous activities, exemplary, and conditioning.

Supporting and Inhibiting Factors The implementation of character education in the face of the era of disruption in SMP Negeri 8 Yogyakarta

Supporting factors for the implementation of character education in SMP Negeri 8 Yogyakarta are good examples of the character of school principals and teachers, commitment, cooperation, strong communication between school residents to carry out character education, a conducive environment, religious activities that are maximally carried out by school residents, adequate facilities and infrastructure to support the success of character education. Meanwhile, the inhibiting factors for the implementation of character education are diverse student backgrounds, weakening teacher consistency in educating students and lack of attention, care, awareness and commitment from parties outside the school such as family or community environment about character education.

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USING PHOTOMATH LEARNING TO TEACH 21ST CENTURY MATHEMATICS SKILLS: A CASE STUDY IN TWO-VARIABLE LINEAR EQUATION PROBLEM

Sugi Hartono
Universitas Negeri Surabaya, Surabaya, Indonesia
Email: sugihartonounesa@gmail.com

ABSTRACT

Technology-based learning is one of the most helpful lessons for teachers to increase student motivation in learning mathematics. Many students feel bored and lazy in learning mathematics, especially in the material of two-variable linear equations. For this reason, the best solution is for teachers to teach using technology-based learning methods, using photomath applications. This paper describes some activities that the author has designed using Photomath learning to teach mathematics skills in two-variable linear equation problem. This study used a quasi-experimental method with a one group pretest-posttest quantitative research design. The subjects in this study are 30 students of class VII in SMP Negeri 1 Ngoro, Mojokerto, Indonesia. The data collected using a questionnaire and a test. The validity of students' response used product-moment correlations and the reliability test used the Cronbach's Alpha formula, and the hypothesis was tested using the t-test (one sample t-test). The results showed that the positive response of students using photomath learning design, namely 85.83%. Furthermore, there was a difference in the students' learning outcomes before and after they learned through the photomath learning design, indicated by pretest the mean of score is 38.30 and a posttest mean score is 67.17. Besides that, tobserved of pretest is 15.931 and tobserved of posttest is 34.655, both are greater than ttable with a significant level $\alpha = 0.05$ is 2.042. Thus, we concludes that there as a difference the understanding of two-variable linear equation students' outcome before and after learning with photomath learning design.

Keywords: Photomath learning, mathematics skills, two-variable linear equations

A. INTRODUCTION

Technology is very important for human life, especially for education in schools (Niemi, 2002). By using technology, the learning process in schools can be more interesting and easier for students in the process of understanding a material. In addition, technology can assist teachers in delivering material (Ennis-cole & Lawhon, 2004), assignments through the internet that can be accessed by students both at home or at school (Teeter, 1997).

In the 21th century era, technology has spread widely in many schools, especially to students (Millar, 2006). In Indonesia, almost every day students use technology at home or at school (Machmud, 2018). By only using mobile phones, they can access various tasks and materials through browsing on the internet. So it is not surprising in class, many students feel bored in learning mathematics, especially the two-variable linear equations if they are given a conventional learning. Students need to be given a learning that can increase student motivation in learning, namely by providing a learning based on Photomath technology.

Photomath is a free mobile app that can read and solve mathematical expressions using your smartphone camera in real time (Hamadneh, 2015). According to Owano (2014), Photo Math, from the software development company Micro Blink, will make the student's phone do math homework. Just point the camera towards the mathematical expression or you can write the

mathematical problem in this aplication, and Photo Math displays a result. More important, Photo Math is not just a camera-based calculator. Its value is not just in giving the phone user the answer but in being able to display the solution in steps taken to solve the problem. The user can understand the process that was used to solve the problem and can improve her mathematical skills (look Picture 1).

Picture 1. How to use photo math

In other hand, Photomath may sound like it is simply helping kids cheat, but the app also provides a step-by-step guide showing how each of the problems are solved. The step-by-step guide is beneficial to students that do not have access to a tutor and struggle with solving math problems. PhotoMath currently supports basic arithmetics, fractions, decimal numbers, linear equations and several functions like logarithms. The steps to use photomath design are as follows: 1) please download and install the Photomath application on PlayStore of Android smartphones, 2) after the application is installed, then open the application, 3) furthermore, you will go directly into camera mode. Please hold the camera closer to the math problem you want answered or resolved. Then the application will answer the question automatically. Don't forget to make sure your Android smartphone is connected to the internet, 4) to find out more details about the answer. You can click on the answer. Then the step or the way to solve the math problem will appear.

B. RESEARCH METHOD

2.1 Research Design

This study is a quantitative study with quasi experimental design using one-group pretest-posttest design that focuses on improving students' understanding in learning statistics to better outcomes before students get Photomath learning. This research was conducted in class VII of SMP Negeri 1 Ngoro, Indonesia. This study is implemented for 2 months, February-April 2015.

2.2 Research Sample

The participants of the study were 1 class who were selected from cluster random sampling from 10 classes in the same grade from a junior high school at Mojokerto city, Indonesia. The subjects in this study are 30 students of class VIIH, there are 15 are males and 15 are females. All students are in grade VII and aged between 12-13 years. Class VII H is the grade with the lowest average mathematics score compared to the other grade of the previous semester grade data.

2.3 Research Instruments and Procedures

The data collected using a questionnaire and a test. Pretest and posttest are the same questions consisting of 9 essays items. In our study, student activity categories to be observed include: 1) Listening or paying attention to teacher or friend explanations; 2) Observing, listening to, or view problems, events, or explanations in students worksheet; 3) Discussing or solving students worksheet or finding ways and answers in students worksheet; 4) Presenting the results of the discussion, providing feedback in groups; 5) Asking about the results of the discussion or observations to friends or teachers; 6) Making conclusions or summarize the learning materials in groups or together with teachers.

2.4 Data Analysis

The data analyses of our study are using validy, reliability, and hypothesis. The validity of students' response used product-moment correlations and the reliability test used the Cronbach's Alpha formula, and the hypothesis was tested using the t-test (one sample t-test).

C. RESULT

The results showed that the questionnaire of students responses filled by 30 students after following Photomath learning on two-variable linear equations materials obtained as follows:

Table 1. The Results of Response Students toward Photomath Design

No	Responded aspect	Percentage (%)	
		Agree	Not Agree
1	Photo math will help me in doing mathematical tasks successfully.	100	0
2	When I have trust in photo math results, I'll give it most of my interest	90	10
3	I am going to learn everything about photo math	96.67	3.33
4	I'll try participating with ideas that might advance photo math application	90	10
5	I'll enjoy seeing mathematical problem solving steps through photo math	70	30
6	I believe technology will replace teacher's role	63.33	36.67
7	I believe that individual differences among students are going to disappear when photo math application takes place in the classroom	100	0
8	I expect photo math to perform an alternative role of math teachers	76.67	23.33

	TOTAL	85.83	14.17

Based on the criteria of students' responses to instructional tools, it can be concluded that the overall percentage of students' responses to learning tools amounted to 85.83% which means that students' responses are positive to follow Photomath lessons in two-variable linear equations materials. The results of pretest before given Photomath learning is presented in the following table:

Table 2. Frequency Distribution of Student Learning Outcomes before Photomath learning

The values	Frequency	Percentage (100%)	Information
0-20	4	13, 34	very less
21-40	13	43,33	less
41-60	11	36, 66	enough
61-80	2	6, 67	good
81-100	0	0	very good
Total	30	100%	

Based on the above table of 30 students who follow the learning there are 4 students or 13.34% which includes very less qualifications, there are 13 students or 43.33% which includes less qualification, there are 11 people 36.67% which includes enough qualification, and 2 persons or 6.67% good qualification. The overall average score is 38.3 and is in less qualification. While for posttest result data of student after given Photomath learning is presented in the following table:

Table 3. Frequency Distribution of Student Learning Outcomes after Photomath learning

The values	Frequency	Percentage (100%)	Information
0-20	0	0	very less
21-40	0	0	less
41-60	8	26.67	enough
61-80	20	66.66	good
81-100	2	6.67	very good
Total	30	100%	

Based on the above table of 30 students who follow the learning there are 8 students or 26.67% which includes sufficient qualification, there are 20 students or 66.66% which includes good qualification, and 2 persons or 6.67% including very good qualification. The overall average score is 67.2 and is in good qualification. Different test results of student learning before and after given Photomath learning are as follows:

Table 4. Comparison of the Average Value of Pretest and Posttest

	Pretest	Posttest

Maximum value	62	88
Minimum value	17	50
Average	38.3	67.2
Standard deviation	13.1	10.6

Based on the above table shows that the average value posttest results are higher than the average value of pretest results with a difference of 28.9. Improvement of learning outcomes can also be seen in t-test results that there are differences in student learning outcomes before and after learning using the Photomath design, this is evidenced by the t-test as follows.

Table 5. The Results of T-Test

The value	Mean	$T_{observed}$	t_{table}	Significant	Sig (2-tailed)
Posttest	67.17	34.655	2.042	0.185	0.000
Pretest	38.30	15.931			

Based on the above table, the result of one sample t-test shows t-test pretest is 15.931, while tobserved of posttest is 34.655. If the result of the calculation is compared with ttable (2.042) then t-test count is greater than price t table. Because t observed > t table then there are differences in student learning outcomes before and after learning using Photomath.

D. DISCUSSION AND CONCLUSION

Response is an idea or feeling of students after following the lesson. According to Poerwadarminta (2003), response means reaction or idea that is acceptance or rejection, as well as indifference to what is communicated by the communicator in the message. Student responses are traced through a questionnaire filled after students follow this Photomath lesson. Based on the result, students' responses in PBL lessons in statistics materials is 85.83% which means that students' responses are positive.

Then we give the test, the average value of pretest results before the learning of Photomath is 38.3 and the average value of posttest results after the learning of Photomath is 67.2, of the two average scores are in good qualification. Based on the value seen difference, the average value after learning of Photomath is better than the average value before learning of Photomath.

Based on the above results, we can conclude that students' opinions about the use of photomath learning in improving students' mathematics skills can be shown by the student's response is positive. While for difference of learning result of student before and after given Photomath study can be shown with pretest average value is 38.30, mean value of posttest is 67.17. The difference in mean scores indicates that there is an increase in student learning outcomes. For test result tobserved pretest and posttest value show bigger than ttable, that is t count pretest=15.931, t-count posttest=34.655, and ttable=2.042. Thus it can be concluded that there are differences in student learning outcomes before and after learning Photomath, so that Photomath can give effect to students' mathematics skills so that student learning outcomes increase compared to previous tests.

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VALIDATION ASSESMENT OF LEARNING RESULT TEST ON LEARNING PROGRAM OF HIGHER EDUCATION, FACULTY OF TEACHER TRAINING AND EDUCATION IN SOUTH SUMATERA

Evy Ratna Kartika Waty

Program Studi Pendidikan Masyarakat, FKIP, Universitas Sriwijaya
Jl.Raya Palembang-Prabumulih Indralaya, Ogan Ilir 30662
evyrkwaty@gmail.com

ABSTRACT

This research has a specific purpose to elaborate on the problems related to the validation assessment of the results of the study made by the lecturers in higher education programs. It is necessary to study in depth about 4 (four) problems as follows: (1) How is the test of students learning results created by the FKIP lecturer, (2) What steps are conducted by the lecturer in drafting test of students learning result, (3) How the steps undertaken by the lecturer in the process of validation of the test result, and (4) How the quality level of the test of the learning results by the lecturer. The research object is the Semester final exam (UAS) made by the lecturer on the Education Fundamentals Group for Introductory Education courses and Student Development courses. Data is collected using documentation techniques and questionnaires. Collected Data is analyzed in a quantitative descriptive. The results showed that 1) 55.42% of FKIP lecturers made a question of the learning results in the form of essays, 13.03% made an objective test question, and 31.55% made the question in the form of a combination of essay and objective tests; 2) test questions development: 35.87% of lecturers make questions outline and 23.92% did not make, while writing about only 13.59% of lecturers made new questions and 2.74% of lecturers took about last year question and 46.19% combination of new questions and previous year questions; 3) 54.89% lecturers do re-review/re-study and 3.73% is not re-study, 25.50% did its own study and 17.85% were studied with the Faculty of the field and 2.18% were carried out entirely by other lecturers. For a theoretical test of quality study conducted by 32.85% lecturer while for objective tests only partially a small 11.18% lecturer, and 4) theoretically, the quality of all essay test devices and the objective tests made by lecturers are assessed based on the rules of good matter about 87%. In addition, there are some disadvantages, such as the scoring guidelines for each item (for the essay test) and the short uniformity of the statement between the answer options (for objective tests).

Key words: validation assessment, learning result

A. INTRODUCTION

Assessment of learning results by lecturers is the process of collecting information/evidence about the achievement of students ' learning in the competence of spiritual attitudes and social attitudes, knowledge competencies, and skills competence conducted in a planned and systematic, during and after the learning process.

The form of assessment that requires students to display attitudes, using knowledge and skills gained from learning in performing tasks in the actual situation.

The assessment of students ' learning results in the achievement of course graduation; (1) Daily Task/Quiz is the assessment done every completing the theme of the lecture, (2) The Middle Semester Exam (UTS) is the assessment done after the completion of 7 to 8 times the lecture, (3) Final Semester Exam (UAS) is a summative assessment conducted after completion of one semester of lectures. One indicator that has always been the main benchmark for assessing the success of education and teaching is the achievement index of learning outcomes achieved by the students. Achievement Index is the final value describing the quality level of student learning outcomes.

Therefore, each FKIP lecturer is required to have adequate ability to develop and make a test of learning outcomes. Lecturers ' ability to develop learning outcomes can affect students ' learning quality. In this regard, we need to reveal further how the FKIP lecturers validate the student learning results test to meet the demands of quality management system requirements. This needs to be done and important in the effort to anticipate the implementation of quality policy of the learning program according to the planned (Custer, 2000:128).

According to Suryabrata, (2017:28), a number of skills that the lecturer must have in order to make a good test of learning outcomes, among others: (1) mastering the materials to be tested, (2) understanding the underlying values of education, (3) understanding the characteristics of learners, (4) able to use effective language, (5) mastering the technique of writing questions, and (6) awareness of strengths and weaknesses in writing questions. Two interrelated activities in the process of evaluation of learning outcomes are measurements and judgments. Measurement is comparing the results of observations with the criteria while the assessment is explaining and interpreting the measurement results (Mardapi, 2008). Measurement is defined as a numerical giving to a particular attribute or characteristic that a person, thing or object belongs to, according to a clear rule or formulation (Asmawi and Noehi, 2015).

Tests made by lecturers are interpreted as an assessment both in writing and orally that are not produced for commercial purposes or standardized, a test tailor-made for learners. Tests made by teachers or lecturers usually have a diverse format, both of type and kind.

The lecturer's made tests can be grouped into: (1) according to the item form of description and objective, (2) based on the stimulus material type, verbal and non verbal, (3) based on objectives, such as achievement and performance based on the

description , it can be said that the lecturer's made tests can affect the effectiveness of learning programs as well as learning outcomes of learners. Therefore, lecturers are required to make their own tests, both descriptions and objectives to measure student learning outcomes.

A test will give an important meaning if the test has an item of matter that tests an important purpose and represents the realm of knowledge, skills and skills in a representative. For that it is necessary planning a good test preparation. According to Asmawi and Noehi (2015:19) There are six things that need to be considered in the test planning, namely: (1) sampling and selection of items, (2) the type of test to be used, (3) the aspect to be tested, (4) the format of the question item, (5) the number of items, and (6) distribution of item difficulty.

Development of learning results test can be done with the following steps: (1) Development of test specifications, (2) Writing questions, (3) Examination of the problem, (4) Testing of the items empirically, (5) Administration of the final form test for the purpose of construction (Spector, 2012:8 and Sumadi,2017:2). Ministry of National Education (2009:23) and Brennan (2006:17) describe the general steps of test development as follows: (1) test objectives, (2) the preparation of the test outline, (3) the writing of the question, (4) the study of the questions, (5) test questions including the analysis, (6) assembly into the test device, (7) the test presentation, (8) scoring, (9) reporting of the test results, and (10) the utilization of the test results.

The step in the process of measuring and assessing is writing the test of learning outcomes. This form of learning test can be a description and objective. In order to test the problem has quality need to be observed rules in writing questions. According to Ministry of National Education (2009), writing about the test of the learning process needs to take into account the rules relating to material problems, construction, and language.

The purpose of this research is; (1) How is the form of student learning test made by FKIP lecturer, (2) What steps conducted by FKIP Lecturer in drafting the test result of student learning results, (3) How are the steps performed by the FKIP lecturer in validation process of learning results test, (4) How the quality level of the test of the learning results made by the FKIP lecturer is reviewed from a theoretical (qualitative) study.

B. RESEARCH METHOD

The subject of this research is FKIP lecturers at Higher Education (PT) located in Palembang, Prabumulih City, Kayu Agung City, Pagar Alam City, and Baturaja City in Province of South Sumatera. The object of this research is the learning results of students from students in the 1st and 3rd semester of the Education Introduction and Student Development. Research object is the quality of test results of Ganjil semester 2019/2020.

The research population as data source is the FKIP lecturers who teach in Ganjil semester 2019/2020 for courses in Semester 1 and 3rd semester in the course of Education Introduction and Student Development, as many as 90 people. The research samples were determined using the proportional random sampling technique.

Data collection using documentation techniques and questionnaires. The documentation is used to collect the manuscripts that are documented in the teaching section of the course. Questionnaires are used to capture data about the steps in the creation of study results tests and the steps in the validation process to be tested. Collected data is analyzed in a quantitative descriptive. The analysis focuses on descriptize in the form of a percentage of measures conducted by the lecturer on the planning and development process and the results of a theoretical (qualitative) study.

C. RESULT AND DISCUSSION

C.1. Results

Analysis of research results focused on the form of questions made by the lecturer, the steps in drafting the questions, the steps to validate the questions, and the quality of the questions based on theoretical review. The description of the analysis results are as follows.

1. Form of question

In a descriptive form, the development of the test of learning results conducted by the lecturer is as follows.

1. Essay form ,42%
2. Objective form 13,03%
3. Combination of Essay and Objective 31,55%

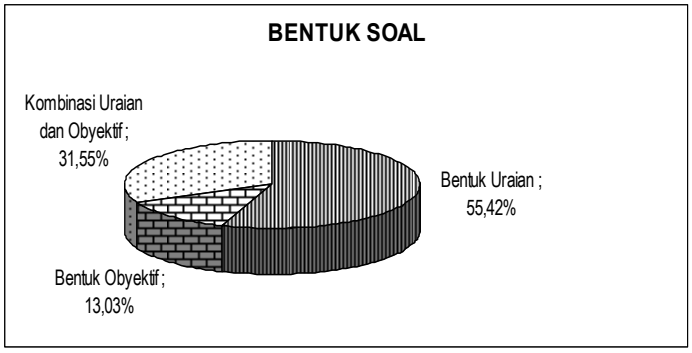


Figure 1.
Percentage of Question Form Used by Lecturer

Based on the results of the analysis in Figure 1 it appears that more than half of the FKIP lecturers make a test of learning results in the form of a description, while about 13% make an objective test form, and the other third makes a combination of a test description and an objective test. The preparation of test results that tends to form the description is done given the nature of the courses of study in the field of the humanities that are applicative.

2. Drafting Test Question

In the process of drafting there are two activities conducted by the lecturer that is the development of the outline and the writing of question items.

5. Outline Development

Preparations made by the lecturers before making the test questions can be described as follows.

1. Writing question's outline 35,87%
2. Not writing question's outline 23,92%
3. Not clear (no response) 40,21%

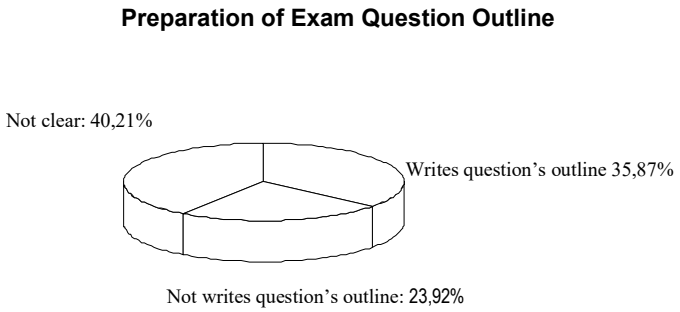


Figure 2.

Percentage of Lecturer that Writes Question Outline

Based on the results of the analysis shown in Figure 2 it can be suggested that only about one-third of the FKIP lecturers pay attention to the process of drafting the test results, while about a quarter do not create an outline. 40% of lecturers do not respond whether to create outline or not on the grounds that the manufacturing process already pays attention to the competencies of the prescribed learning outcomes.

6. Writting Questions

Analysis results of how lecturers make questions to measure students ' learning results can be seen in the following descriptions

7.	Create a new question	13,59%
8.	Using the questions of last year	2,74%
9.	Combination of last year's questions and new question	46,19%
10.	Not clear (no response)	37,48%

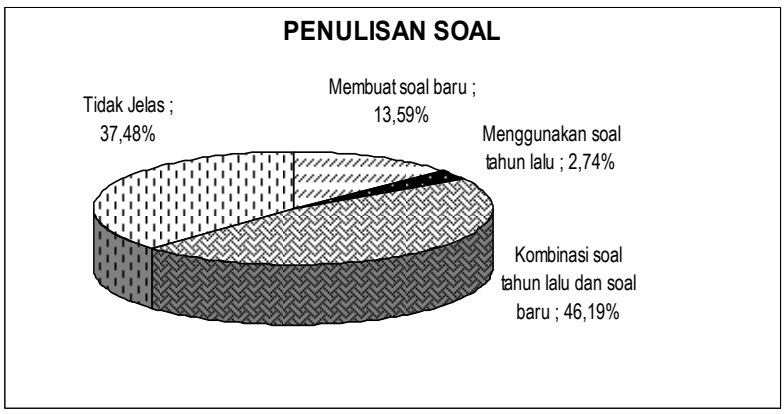


Figure 3.

Percentage of Lecturer that Writing Questions

Based on the data description in Figure 3, it appears that only about 13.59% of FKIP lecturers have made a new question for the semester final exam of student, while 46.19% of lecturers made a combination of last year's questions and new questions and only a small fraction of the using a question last year.

In addition, there are about one-third of the lecturers do not respond to the problem creation.

1. Theoritical Validation

The results of the analysis on the way lecturers in validating the quality of the problems that have been made can be described as follows.

1. Did re-review 54,89%
2. Did not re-review 45,11%

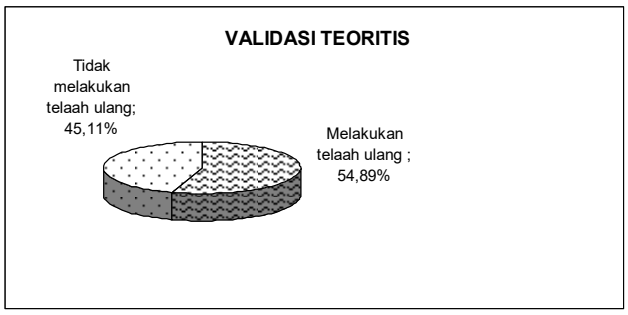


Figure 4.

Percentage of Lecturer that Did Re-review

Based on Figure 4, only 54.89% of lecturers are re-reviews the questions that have been arranged in order to prepare the test of quality learning outcomes. The remainder, 45.11% of lecturers did not re-reviews on the grounds that this study was conducted during the creation of the question.

A. Aspects re-reviewed at the test description

Conformity of item with competency	97%
Clarity of questions and expected answers	85,50%
The accuracy of the question Word/command	71,37%
Clarity of instructions on how to work about	70%
Conformity of item with competency	61%
Clarity of questions and expected answers	49,50%
The accuracy of the question Word/command	63%

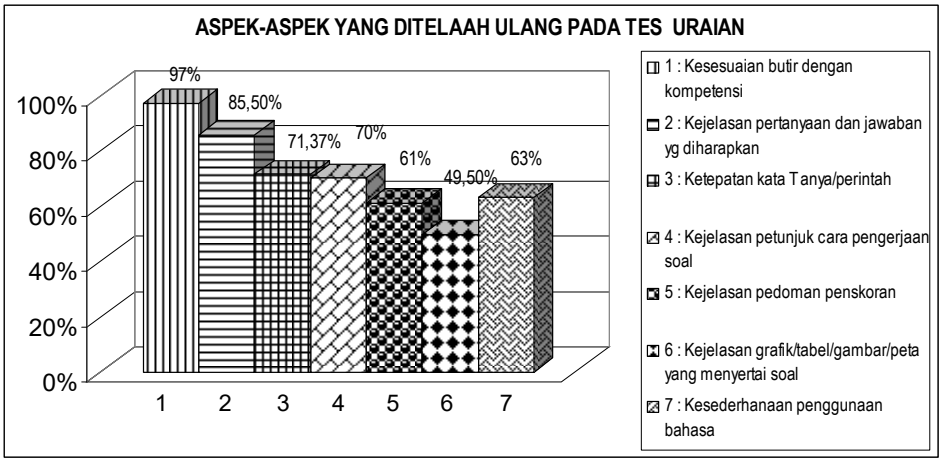


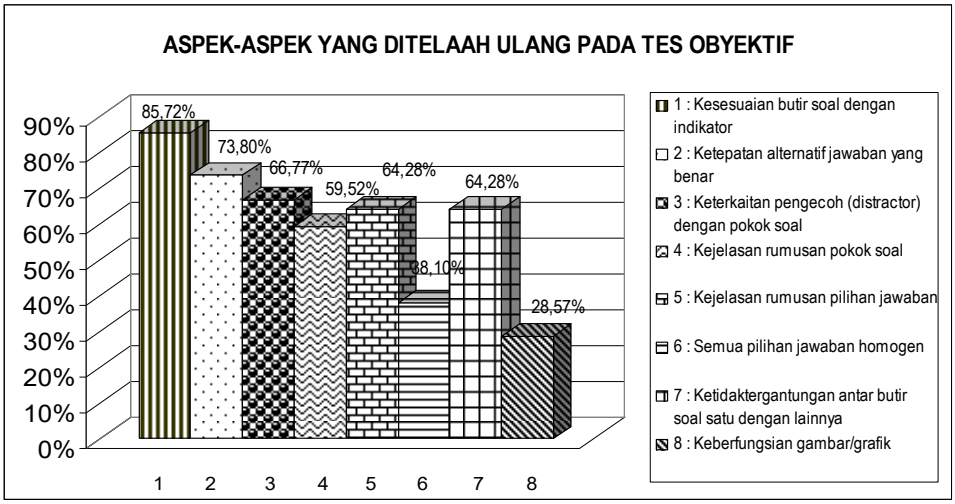
Figure 5.

Percentage of Lecturer that Did Re-review the Quality of Essay Questions

Based on a description of the above data can be suggested that important aspects related to the quality of test form the description has been reviewed by lecturers even in percentage of the amount that is not optimal. One important aspect related to the quality of the questions is the conformity of material questions with the competence of learning outcomes has also been reviewed by almost all lecturers who made the description test (97%).

B. Aspects Re-reviewed at Objective Tests

1. Conformity of items with competency indicator 85.72%
2. Correctness alternative correct answer 73.80%
3. Distractor with the subject matter of 66.77%
4. Clarity of principal matter 59.52%
5. Clarity of the answer option 64.28%
6. All options homogeneous answer 38.10%
7. Interdependence between items of one with another 64.28%
8. Image/Graph function 28.57%



Gambar 6.

Percentage of Lecturer that Did Re-review the Quality of Objective Questions

Based on a description of the data from Figure 6, all aspects relating to the quality of the objective form are re-examined theoretically by lecturers although not all lecturers do so. However, one of the most important aspects of the objective test has been examined by most of the lecturers (85.72%).

2. Question Quality Based on Theoretical Review

Based on the descriptions of the data in Figure 5 and Figure 6, it can be argued that by having done a theoretical restudy of the aspects relating to the quality of the problem, it can be said that overall the test of learning results made by lecturers 85% good. As such, the results of analysis conducted by researchers still find some disadvantages as shown in table 1 and table 2 follows.

Table 1. Percentage of Number of Essay Questions

No	Weak-assessed aspects	Number of Questions (%)
1	There are no value-weighted criteria for each item.	36%
2	Freedom to choose the question to be done (the number of questions made more than you have to do).	28%

Based on Table 1, it can be suggested that 36% of all essay question forms do not list the weighted value of each item, 28% of the problem gives freedom to choose what to do, and 18% of the devices that are assessed weakly on the images that accompany the question.

Tabel 2. Percentage of Number of Objective Questions

No	Weak-assessed aspects	Number of Questions (%)
1	Layout between question points and answers is not a single page	35%
2	Obscurity of images accompanying	15%
3	Assessment of learning outcomes is still inclined in the realm of knowledge and understanding	34%

The table 2 shows that it is still found in 35% of the questions devices that some of the subject matter is not one page with a choice of answers, 15% of the problem still has images accompanying problems including unclear. In addition, there are 34% of the devices that only assess the competency of learning outcomes are limited to the realm of knowledge and understanding.

D. DISCUSSION

Based on these explanation of the data description in advance can be expressed four fundamental things that are the problem in this research. First, more than half of the FKIP lecturer (55.42%) makes tests in the form of an essay or explanation. This is understandable because the characteristics of academic field courses are more inclined on application and understanding on students ' aspects of education. With the form of essay test, students are expected to develop their reasoning ability. However, it does not mean that the test cannot be made in the form of an objective test.

To make an objective test on an applicative subjects requires expertise and special care so that the problem is not inclined to uncover the memorization ability

alone. Therefore, it is not surprising that only 13.03% of lecturers make a question of learning outcomes in objective form which generally have regular multiple choice. By sparingly, it will be more meaningful if the test results are made with a combination of an essay test and an objective test.

Secondly, in developing and making a question, only 35.87% of lecturers made an outline of questions, 23.92% did not make an outline of questions and even 40.21% of lecturers were unclear whether to create an outline of questions or not. Seeing the data can also be said that in planning and developing the test result of the learning results, the lecturers have not complete the initial steps of test making as expected.

It is certainly not optimal because it is to be able to make good questions then the questions outline is very necessary. With the questions outline, the question is not deviated from basic complications that have been established. In addition, about 46.19% of the FKIP lecturers made a question by combining new questions and previous year question.

It would be better if all the question test were made new because it is possible that previous year is still easy to remember by students who happen to repeat, unless there are modifications to the year's questions. Based on data analysis only 13.59% of FKIP lecturers are making a completely new question. This percentage is considered still low because all lecturers should be able to develop new questions test in accordance with the demands of competence and development of science.

Third, in the process of validation and verification of the quality of questions can be said is good enough. A total of 54.89% of FKIP lecturers have re-reviewed/restudied the test results before being tested. However, it will be very good and means that if all lecturers are restudying/re-reviewing the test questions that have been compiled.

The study includes three things of material, construction and language aspects. Because almost half of lecturers do not re-review/re-study theoretically then it is understandable if there are still some devices about the test of learning results made by the lecturers have not fulfilled the rules as a good test. In addition, a good re-review/re-study is done together with other lecturers who are in the field, not done by themselves. Based on data analysis, only a small part of the reviews was done with another lecturer in the field of about 17.85%. In fact, if reviews/restudy all done with

other lecturers who are a piece of inaccuracy language and substance test can be solved because of the input and advice from various parties involved in the study.

In examining the questions that have been made can be said to have been done to all aspects that should be examined. However, there are still some aspects less noticed by lecturers. For example, for an essay test, the clarity of the image was only done by 49.50% of lecturers and noted the accuracy of the language by 26.50% of lecturers. It can be said that in studying both aspects are still less complete. In fact, if the sentence (subject matter) accompanying the item is less obvious will affect the accuracy of the students in answering the test problem. Also in terms of language should not lead to interpretations or a variety of interpretations. Likewise, the study of objective tests, apparently there is no separation from the FKIP lecturers who do theoretical study of all aspects that should be observed.

There are three aspects that are still very poorly noticed by the lecturer in making an objective-form test, which is the homogeneity of the answers (17.75%), the alternative length of choice of answers is relatively equal: (16.75%), and study alternative functionality (14%). Based on data, it can also be said that the theoretical study of the essay-form test is more noted than the study of objective form tests.

Fourth, based on the results of a research analysis of the questions documents that were made samples were found some weaknesses. The most dominant drawback is that the questions test is more likely to measure the aspects of knowledge and understanding, not much penetrated in the application aspect, analysis, synthesis and even evaluation. In fact, for the degree of student measurement skills ranging from application to evaluation is a must and main thing done. In addition for essay test, the description still found a question (Stam) that is less obvious, freedom to choose the question to be done, and the weight of the value for each item. This will all affect the accuracy of the assessment results on the level of learning competency.

Otherwise, for an objective test, there is an unhomogenization of the answer options (a short length statement of all the answer options), and the separation of the underlying questions page with the answer page indicates that the study has not been implemented deeply. In other words, there is a relationship between the activities done in the process of question quality with the various weaknesses used for the exam.

E. CONCLUSION

a) Conclusion

The tendency of the FKIP lecturer makes the test of learning results in the form of an essay based on the characteristics of subjects that are understanding the field of education. With the form of the essay test is more easily developed question that can reveal the ability of applicative, analysis, synthesis, and evaluation of students from the objective test.

In the development of the test of learning results not all lecturers (about 76%) create an outline of questions that are used as reference for writing items. Although it is very important means in the process of writing good questions. In addition, in writing the questions, most of the lecturers did a combination of previous year's question and new question. Creating a new question will be more meaningful with regards to the development of science.

Not all FKIP lecturers have a theoretical review / restudy of the quality of the questions that have been made. However, there is one thing that is quite good and positive in the study that has been done by most of the lecturers are the most widely reviewed aspect of the material conformity with the competence of learning outcomes.

Still found some disadvantages on a number of devices, namely the weighted value of each item and the freedom to choose the questions, for the essay test. For the objective test, the still weak aspect is the lack of a long statement, and of statements between the answers, the separation of the main page about the answer page. Another weakness to the two forms of the test is that there is still questions that accompanies a less obvious question.

b) Suggestion

Based on the conclusion, it can be suggested that there is a program or policy in the development and preparation of the study results of the students so that the test is obtained by quality learning results. The institute needs to conduct a refreshment program for lecturers to equalize insight into the measurement and assessment of student learning outcomes.

Some concrete steps that need to be done, among others, are (1) implementing validation on all the questions that have been compiled so that the questions meets the

criteria of substance, construction and language; (2) Create the rubric to facilitate the scoring process on the description-shaped questions; and (3) Measurement of learning outcomes need to be focused on the application aspects, analysis, synthesis, and evaluation.

F. Acknoledgement

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CAREER PLANNING AS A LIFE SKILL FOR THE 21ST CENTURY: THE ROLE OF SCHOOL COUNSELORS

Diar Rizki Ashar [1]✉ (e-mail) diarizki@student.upi.edu

Amin Budiamin [2]✉ (e-mail) abudiamin@upi.edu

Universitas Pendidikan Indonesia

✉ (e-mail) diarizki@student.upi.edu

✉ (e-mail) abudiamin@upi.edu

ABSTRACT

Career is one of the important aspects in an individual's life. Every individual has the desire and hope to be able to achieve success in the career field. Individual-career success starts from proper career planning and their own potential. The career planning process begins with skills in self-understanding and understanding of information about the work area. Career planning is important for students, especially to build attitudes in pursuing a future career. Teenagers in high school are encouraged to have career planning skills in order to achieve success according to their potential. School counselors have a role in the process of developing the potential of students at school. In accordance with its function, school counselors have a strategic position to provide support and direction in developing students' career planning skills. Therefore, the role of 21st century school counselors to improve students' career planning abilities is very necessary. This study provides information that can be utilized by teachers and school counselors to develop the appropriate career planning programs for students. Further research on various career topics can enrich studies on career planning for students in Indonesia.

Keyword: *career, career planning, school counselor*

A. INTRODUCTION

The development of the 21st century is marked by the use of information and communication technology globally in every aspect of life. The flow of information that moves very quickly influences human life globally, both individually and in groups. According to Hyot and Wickwire (2001, Nurillah, 2017, p. 67), the development and progress of knowledge information are interrelated with changes in aspects of social, economic, governance, career, education, employment, and other systems. The development in the world of technology requires a change and increases in the qualifications and competence of the work area. This change certainly has an impact on the pattern of career needs of individuals who are moving along with increasingly complex problems.

In response to changing patterns of career needs especially in terms of labor and system progress, schools need to be prepared and prepare themselves to face the challenges of the 21st century. Understanding of 21st century life skills is important to convey to students. An educational institution must not only ensure the birth of qualified individuals, but also provide opportunities to acquire the knowledge, skills and attitude systems needed for career development that are systematic and efficient for careers (Reardon, Lenz, Sampson, Peterson, 2000; Sampson, Reardon, Peterson, Lenz, 2004; Pukelis, 2007; Kalvaitienė, Senčila, 2013, p. 24-31).

In school settings, a counselor has an important role that is needed in education in developing the potential of students. A school counselor must provide services in accordance with current development. The school counselor should understand and master 21st century life skills marked by technological mastery.

Guidance and counseling are not an exclusive service that must be separated from education. Guidance and counseling services basically have the same degrees and goals as other educational services, namely to deliver students to obtain optimal self-development. Career guidance and counseling and career planning development services are programs that can be provided by school

counselors to ensure that every student can easily access high-quality information and advice relating to lifelong learning for the future career.

According to the International Labor Organization (ILO), choosing work and planning a career to be chosen are not enough to provide good advice for students because they still have some limitations in career planning. The information submitted must be adjusted to the conditions that students already have (a) ideas implanted by families and communities on what are considered appropriate employment and educational choices, (b) poor economic reality that prevents them from attending their chosen education, and (c) the lack of access to educational facilities (2011, Muhammad, 2016, p. 3).

Career planning is important in determining an individual's future. Career planning is an individual planning about a career that will be taken in the future, especially the students of senior high school. Planning or choosing a career or job for the future is one of the developmental tasks that must be passed by a teenager. Youth work is something that is socially recognized as a direct or indirect mean to meet the satisfaction of various needs that have not been fully met in the previous period (Yusuf, 2006). To be able to do that, teens must learn to develop and maximize their cognitive, affective, and psychomotor potential.

Super divides the stages of career development into five stages, namely: (1) the stage of growth, (2) the stage of exploration, (3) the stage of establishment, (4) the maintenance phase, and (5) the decline stage (Osipow, 1983, p. 157, Sharf, 1992, p. 169; Manrihu, 1988, p. 27-29). From this opinion, it can be seen that the career development of adolescents is at the stage of exploration. Characteristics of adolescent career development are in accordance with career characteristics at the exploration stage (the age of 15-24 years). The exploration phase is marked by starting to conduct self-examination, trying to divide various roles, as well as exploring work or vocational work both at school, at leisure or through the apprenticeship system.

Sulaeman (1995, p. 83) explains that senior high school has a very strong influence in shaping teenage concepts about who they are and what they will become. Senior high school touches almost all aspects of young people's lives in their transition from adolescents to adults. Senior high school is the first gateway to a wider world that teenagers will enter and will determine their future. In reality, many students are less able to plan their careers. The result of Youthmanual research shows more than 400,000 profiles and data of students of senior high school and university throughout Indonesia, 92% of senior/vocational high school students, are confused and do not know what they will be in the future and 45% of students feel wrong in taking majors (available on the site: http://www.skystarventures.com/ youthmanual). The problem of career development related to career planning is the phenomenon of student confusion when being asked to choose majors and colleges and his/her unpreparedness when entering the workforce.

B. STUDY OF LITERATURE

Career Planning

Career is a choice on life, so an individual must have a mature career planning to undergo his/her career. Getting a career or a decent job is the right of all individuals. The 1945 Constitution article 27 paragraph (2) states that every citizen has the right to work and live properly for humanity so that getting a career or a decent job as expected is one of the most important aspects of human life wherever and whenever they are.

Getting a career that suits your potential and values requires an appropriate planning process. Career planning is an important thing for individuals. Career planning can reduce the tension and confusion of individuals in finding information and making a career decision in the future. The ability of career planning allows individuals to understand themselves and their environment so they can adjust to a development in the community.

The Department of Education and Culture (Walgito, 2005, p. 206) has revealed that career planning includes matters relating to information about self in considering alternatives, deciding and planning the most appropriate career. The understanding of career planning starts from the individual stages of recognizing and understanding the state of self, considering job alternatives, and it is ended by choosing one of the jobs that suits their own circumstances and planning the steps towards an expected career.

Witko, Magnusson, Bardick, Bernes (2008, p. 81) states that career planning is a process that must be passed by every individual before they make career decisions. Career planning becomes very important, because with career planning, tension and confusion in the search for career information and career decision making will be reduced.

Winkel and Hastuti (2006, p. 683) has stated that career planning goals consist of short-term goals and long-term goals. Short-term goals are short-term plans that must be achieved immediately. These short-term goals include the selection of majors in schools, the determination of universities, and the selection of training programs or joined certifications in order to prepare themselves to occupy a certain position. Short-term goals are also commonly called administrative requirements for example, if someone wants to become a doctor, he must take major in Natural Sciences at the time of specialization in school and then take major in medicine at the university. While Long-term goals are the goals of career planning that are achieved in the future in a long period of time, such as the lifestyle to be achieved in the future and the values of life to be realized in life.

The benefits of career planning for students are (a) the increasing of knowledge and understanding of oneself, (b) knowing various kinds of career, (c) capable of making career decisions effectively, (d) obtaining directed information about available careers, and (e) proficient in utilizing career opportunities according to ability (Dillard, 1985, p. 111).

The Role of 21st Century School Counselors

In facing the changing of globalization era, Robert B Tucker, 2001 (in Surya, 2011) has identified ten challenges in the 21st century, namely: (1) speed, (2) convenience, (3) age wave, (4) choice, (5) variety of life style, (6) discounting, (7) value added, (8) customer service, (9) techno age, and (10) quality control. The 21st century life skills are (1) life and career skills, (2) learning and innovation skills, and (3) Information media and technology skills (Yuni, Agus, Nyoto, 2016, p. 267)

In facing challenges faced by students in the 21st century, school counseling has been influenced by paradigms and practices that lead to renew the providing assistance and support to students to achieve academic achievement, advocacy for social justice, and counselor accountability (Rakhmawati, 2017, p. 60). School counselors must be able to overcome existing challenges with commitment and creativity in the 21st century.

Winkel & Hastuti (2006) suggested, the main functions of the role of school counselors are 1) Distribution Function, which has a function in helping students to get courses that are appropriate for them in the framework of the teaching curriculum provided at school, choosing extracurricular activities that are suitable for him as a student at the school concerned, determining the appropriate advanced study program for him after graduation, and planning areas of work that are suitable for him in the future (decision making); 2) The adjustment function, which has a function in helping students to find a way in positioning themselves appropriately in a variety of circumstances and situations encountered such as students must be helped to get along satisfactorily by determining attitudes in the middle of their family life (adjustment); and 3) Adaptation function, which has a function as a resource for other educators in the school, especially school leaders and teaching staff, in terms of directing a series of educational and teaching activities to suit the needs of students. This service is not directly given to students but the guidance staff provides information and proposal to fellow educators for the success of the school education program and fostering the welfare of students.

According to Paisley, McMahon (2001, Rakhmawati, 2016, p. 61), the roles of counselors in schools are (1) providing counseling sessions for individual and small groups; (2) conducting classroom guidance interventions; (3) doing consultation with parents, teachers, administrators, and representatives of community institutions; (4) giving advocating for all students to improve their

educational experience and outcomes; (5) carrying out partnerships in building teams in and outside of school; (6) being a member of the school leadership and policy making group; (7) providing individualized, focused, and intensive interventions for students at risk; (8) being a developmental expert in the school environment; (9) being a mental health specialist in the school environment; (10) providing family counseling interventions; (11) coordinating the program schools, including mediation programs, conflict resolution, violence prevention, character education, and teachers; (12) preventing suicide, pregnancy, dropping out of school, drug use, and other moral damage; and (13) maintaining the level of expertise required in all fields in above to ensure quality in all interventions and programs

Suherman (2008, p. 220) explains that the role of the guidance and counseling teacher or school counselor is reflected in attitudes and behaviors towards students, in the form of (a) The treatment of students as individuals who have the potential to develop and progress and are able to direct themselves to be independent; (b) positive and reasonable attitude towards students; (c) treatment of students in a warm, friendly, humble, and pleasant manner; (d) student empathetically understanding; (e) student appreciation of the student dignity as individuals; (f) Appearance sincerely in front of students; (g) concreteness in expressing themselves; (h) Acceptance of students as they are; (i) students' treatment openly; (j) awareness that the purpose of teaching is not limited to students' mastery of the material but it involves the development of students into mature individuals; and (k) adjusting to special circumstances.

The development of career planning capabilities will continue to develop following the development of career needs in the world. Career problems will be increasingly diverse and complex; therefore, school counselors need to have special knowledge, skills, attitudes and values. The role of school counselors will have a positive impact on students if school counselors continue to develop themselves so that they have new skills that can help reduce current problems and needs.

C. CONCLUSION

Career planning is a process that begins with getting to know and understand self; then realizing opportunities and various choices with all the consequences; identifying options; making decision; developing goals and making plans that function to achieve the desired goals. Appropriate education and training programs that develops experience is needed to make the program work properly. The globalization of the 21st century with the development of fast-moving information technology has a profound effect on the types of jobs and career needs. Properly planning a career to suit your abilities is one of the life skills that students must have. In following the 21st century developments, school counselors must be able to tailor guidance and counseling services in order to be able to respond to existing challenges. School counselors that are able to adapt quickly, commit, and have creativity are expected to help students develop their career planning skills.

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QUALITY LEARNING MANAGEMENT AT PRIVATE ELEMENTARY SCHOOL YOGYAKARTA

Ike Prastya Utami,
Email : ikeprastya.2018@student.uny.ac.id,

Setya Raharja
Email : setya@uny.ac.id

Universitas Negeri Yogyakarta

ABSTRACT

To be successful, learning objectives can be achieved more effectively, efficiently, and productively, starting with the determination of strategy and planning, and ending with assessment. So learning management plays an important role in the learning process. The purpose of this research is to find out; (1) learning planning, (2) learning implementation, and (3) learning assessment at Elementary School Depok Sleman Yogyakarta. This study used descriptive qualitative method. The subjects of this study were the principal and teachers at Elementary School Depok Sleman Yogyakarta. Data collection techniques through interviews, observation, and documentation. The results showed that; (1) learning planning conducted by the teacher has been planned properly. (2) The implementation of learning in Primary Schools is oriented towards the quality of learning that is inspiring, enjoyable, challenging, and motivates students to actively participate, and provides space for initiative, creativity, and independence with the approval of the principal, (3) assessment of learning conducted by Elementary school teachers can be categorized as good, the assessment conducted by the teacher is done objectively on the results obtained by students. . Assessment is done to see the progress of student learning in terms of mastery of teaching material that has been learned.
Keywords: Management, Quality, Learning, Elementary School

A. INTRODUCTION

Education is an important component in human life which is a benchmark in the development of a country. Education plays an important role in shaping humanity to become better personalities, because education is expected to produce qualified young generation, able to adapt to society, nation and state. According to Tyas (2014) Education definition is education as a basic and systematic effort to achieve a better standard of living and progress. With the mindset formed from science, a person will be able to develop and empower themselves in every situation and environment that can change very quickly.

Through formal education in schools is expected to be able to provide good educational services to students and implement learning that has been planned in order to become students who are intellectually, socially, spiritually, and have a fighting intelligence so that it can have a good impact on the State in prospering the community. According to Fattah (1996) Education is the process of a person developing abilities, attitudes, and other behaviors in the community

where they were born. Every country expects the young generation to become a quality society, therefore the State is very concerned with education by continuing to improve, maintain and maintain systemically and consistently to achieve progress, prosperity and be able to compete with other countries.

The important thing that must be considered in education is not only in the application of learning, but education must be able to plan learning and have good quality values as well. This is why every school must be able to prepare learning in such a way, especially in the management of learning quality. schools are expected to be able to manage and implement a well-structured learning system so that when the learning process is carried out it will take place effectively and efficiently. Through learning quality management is one of the school's efforts to facilitate teachers in developing the potential of students. But what remains a problem is that not all schools are able to provide quality learning. While schools are demanded and entrusted by the community to be able to provide quality learning to students.

Quality learning management is a process of managing which includes planning, organizing, controlling (directing) and evaluating activities related to the process of learning students by including various factors in order to achieve goals. In managing learning, the teacher as a manager implements various steps of activities ranging from planning learning, organizing learning, directing and evaluating the learning done. Learning management is the main key in managing the learning process. To produce quality learning, good management is needed that can support the achievement of educational goals.

B. RESEARCH METHOD

The research method in this article is descriptive qualitative research. According to (Sugiyono, 2016) qualitative descriptive research focuses on the description of data in the form of sentences that have profound meanings derived from informants and observed behaviors. The data of this research are in the form of facts found at the time in the field by researchers. In this research the strategy used by researchers is a case study. Researchers make special observations contained in the school environment. The subjects of this study were the school principal and teacher in one of private elementary schools Depok Sleman Yogyakarta. Data collection techniques used by researchers using 3 (three) techniques; interview, observation and documentation. The main instrument of data collection in this study is the researcher himself with a tape recorder, camera equipment, interview guidelines and other tools needed incidentally. Data that has been obtained by researchers using three methods, the method of observation, interview methods, and documentary study methods will be processed or analyzed through existing data analysis techniques. Analysis of the data used by researchers in research relating to the quality management of learning.

C. RESULT AND DISCUSSION

3.1 Learning quality management planning

The initial stage before carrying out the learning process in the classroom is to prepare the application of learning quality management by preparing learning plans in advance which are

part of the quality management of learning. In Permendikbud No 65 of 2013 it is stated that compiling a syllabus of learning, of course this syllabus was prepared by the central government, but one of the private elementary schools in Yogyakarta does not only stand by the government, the principal contributes by implementing learning quality management, so that schools can continue to improve quality by focusing on improving the quality of graduates produced, the school should be able to understand the concepts and objectives of learning quality management so that its application can achieve its objectives in order to support the implementation of education and produce quality graduates.

Syllabus is a basic plan before conducting the learning process which will be developed into a learning implementation plan (RPP) made by teachers based on learning material by adjusting to core competencies and basic competencies of subjects. The results and learning activities will go according to the objectives if the planning is well arranged as well. Terry in his book Principle of Management (1977) defines planning as follows, "planning is the choosing and relating of facts and making of using of assumptions regarding the future in the visualization and formulations of proposed activities that are necessary to achieve desired results" . Then the implementation of this learning quality management starts at the time of the new school year in work meetings. Discussion at the meeting regarding the division of labor, the division of classes for teaching teachers, and of course all matters that have, have not, and will be carried out in the future taking into account customer needs, school conditions such as infrastructure and human resources.

Learning quality management planning is an important activity in all schools, be it the school principal, deputy headmaster, curriculum staff, teaching staff and education. All have the responsibility and success of an institution not only involve a few people, but because it has the right to be involved in decision making, schools need creative ideas from all parties to advance the school and provide solutions to problems that have occurred up to the estimate of problems that might occur in the future. Dimyati and Mudjiono (in Nurhani, 2015, p. 142) suggested that learning is a preparation prepared by the teacher to attract and provide information to students, so that the preparation designed by the teacher can help students in meeting goals. In a work meeting conducted by one private school at the elementary school level in Yogyakarta discussing the division of labor, the division of classes to teach also always make learning plans based on the syllabus and curriculum of learning and then afterwards the task is adjusted to the teacher.

Before implementing it, schools make preparations to support the readiness of curriculum implementation by means of teachers participating in training or workshops related to the implementation of Elementary School level curriculums organized by the government and foundations. Learning planning must also be arranged by the teacher to help the ongoing learning process to be effective and fun so that the classroom situation is not monotonous. The syllabus that has been prepared by the central government will be studied first by the school principal before it is developed into a lesson plan. Therefore, to maintain the quality of schools, especially in the planning of learning it is necessary to continuously improve the school. And do all school programs in accordance with predetermined quality procedures, especially in improving the quality of learning. Each school component is equipped with an understanding of

the quality of learning management obtained through outreach activities such as workshops and training.

3.2 Implementation of learning quality management

In carrying out the quality of learning of private elementary schools in the Depok area, Yogyakarta students carried out in accordance with the plans that were made at the beginning to ensure the learning went well. Based on the results of interviews conducted with the principal and several teachers, information was obtained that the implementation of the quality of learning was scheduled but still had to be controlled so that the objectives could be achieved. Thanks to the principal's involvement in the education and training programs implemented by the government and foundations, teachers have the opportunity to improve the quality of themselves. Not only that, if the school needs something that is still considered lacking in the management of learning quality, the school will invite resource persons from the supervisor to conduct a workshop.

The results of the interview with the principal at Private Elementary School, Depok Sleman Yogyakarta :

"As a principal, I don't only participate in developing plans related to learning. But all of my teachers make sure to take part in professional development training such as training and training held by the government and foundations. If schools still feel they need more training, then we invite resource persons from supervisors. With all the training, it is hoped that the teachers will become more professional. "

Qualified and professional teachers are very helpful when implementing learning to students. To support the implementation of quality learning, fellow teachers also help one another regarding understanding of the curriculum and other plans. Then at the teaching stage in the classroom, even though the method applied by the teacher differs but it remains on their main goal in carrying out quality management of learning. The teacher does not focus students on books or modules but rather invites students to think creatively by using media such as pictures, watching films and inviting students to practice directly the field they call a mini trip. The goal is that students feel learning is something fun, the implementation also gets full support from parents.

The results of interviews conducted with several teachers at private elementary school in sleman depok Yogyakarta are:

"Overall the implementation in the class is different but our basic is based on problems, students are given problems. So the learning material obtained by students does not go directly to the destination, such as Indonesian language lessons related to indirect advertising oh such advertisements but gives students the opportunity to observe first. Then students are invited to reason how to solve problems in the surrounding environment. We do not use media in all lessons, because not all can use media. Examples that can use the media, such as IPS on historical lessons, might be to watch a movie or give a sample picture. For other lessons you can use props or by utilizing the surrounding environment, and we also make a schedule of

visits in once a year students are invited to visit from grade 1 to grade 4 only to visit around jogja, grade 5 to central java. Our visit according to the material. For example art lessons, grade 1 to grade 4 are invited to the Kasongan area to make pottery, for grade 5 regarding production materials, we take the cimory in Semarang to make yogurt, milk, and the botol sosro. Students participate in practice and we work with parents to include parents on the visit. After the visit, students are asked to make a simple report during the lesson or during the social studies lesson on production material in grade 5, assignments can be done in groups or individually but more often the tasks are done individually. "

In addition to the implementation of learning, good learning implementation also requires good classroom management. According to Baharun (2016) explained that to see the effectiveness of a learning program, it can be seen through assessment. Through this method, weaknesses and strengths from the implementation of learning programs in the classroom can be identified. Guidelines contained Permendikbud Number 65 of 2013 regarding the implementation of learning revealed that teachers must master in terms of classroom management. The last thing in implementing learning is the final or closing activity. This activity is carried out by the teacher with students both individually and simultaneously reflecting on self-evaluation, aiming at planting student character education. Not only applies to students and teachers, this activity is also carried out for principals, teachers and other staff on every Saturday. The principal determines this activity in order to maintain good education and relations with all parties in the school.

3.3 Learning Assessment

Each learning activity will certainly have an assessment to find out the extent of student understanding of the material that has been conveyed. The assessment as contained in the lesson plan made by the teacher includes (1) process assessment, namely the assessment conducted by the teacher when students carry out or do the assignments given by the teacher, and does not rule out the possibility of an assessment of learning outcomes; (2) verbal assessment, namely the assessment by the way students are asked or appointed to answer questions raised by the teacher; (3) Written assessment is an assessment that requires students to work on a worksheet based on the material or questions made by the teacher based on modules. The types of learning assessment conducted by teachers are daily tests, mid-semester and semester exams. By covering aspects of assessment such as cognitive aspects, affective aspects, and psychomotor aspects.

Alfian et al (2015) assessment is an integral part of learning. By conducting an assessment, educators as managers of activities can find out the abilities possessed by students, the determination of the learning methods used, and the success of students in achieving predetermined competencies. Assessment cannot be passed away, assessment has become part of the curriculum. According to Abdullah (2015) assessment is a form of evaluation with the conception of measuring the achievement of educational programs, planning an educational program including curriculum and implementation, procurement and improvement of teacher skills, education management, and overall education reform.

However, assessments made by private elementary school teachers in Depok, Yogyakarta sleman to students experienced a little problem, where the assessment is done once a week after all the sub themes have been discussed. Learning appraisal should be done every time but many of the teachers experience shortages such as time off, the automatic learning on that day cannot be carried out so that tomorrow's learning becomes two themes while the material must be finished when the exams arrive. So get around with the decision with other teachers to conduct an evaluation every 1 week. After that, there will be a next stage carried out by the school in measuring student learning abilities, at the end of the school year, the teacher and the principal conduct a class promotion meeting which is conducted to decide whether students should go to class or stay by taking into consideration and mutual agreement.

D. CONCLUSION

Based on the results of research and discussion it can be concluded that training and workshops are very important, teachers become more understanding about many things such as understanding curriculum and making lesson plans. The role of the principal is very wise and able to maintain communication with all parties related to the school, especially in the school environment, making teachers to always try to be professional. Then by involving parents in making decisions on the planning of learning quality management is very important, support from parents also has a big influence on the implementation of quality management learning.

E. Acknowledgement

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ANDROID-BASED LEARNING MANAGEMENT INFORMATION SYSTEMS

Ahmad Tahalli, Universitas Negeri Yogyakarta
ahmadtahalli10@gmail.com, Jl. Colombo 01 Daerah Istimewa Yogyakarta
Lantip Diat Prasojo, Universitas Negeri Yogyakarta
lantip@uny.ac.id, Jl. Colombo 01 Daerah Istimewa Yogyakarta

ABSTRACT

This study aims to (1) develop a learning management information system for Android-based students to find out and provide information about the concepts and learning styles of students in each class, (2) find out the quality of software developed based on ISO / IEC 25010 standards on functional aspects suitability, compatibility and usability. This research uses the Research and Development (RnD) research method and the Rational Unified Process (RUP) software development procedure which consists of 4 stages, namely conception, elaboration, construction and transition. The results of this study are 1) Android based learning management information system for students to find out and provide information about the concepts and learning styles of students in each class, a system developed using VAK Learning Styles Questionnaire from Sarah (2015), 2) the results of device testing software using ISO / IEC 25010 quality standards in aspects (1) functional suitability results in all functions can run 100% and in the learning style function test there is a match between the results of the system with the VAK Learning Styles Questionnaire used, (2) compatibility of compatible software 100% in terms of co-existence, various operating systems, device types, and screen sizes, (3) usability of the software gets a score of 79.83% and gets a worthy predicate.

Keywords: information systems, learning management, android

A. PRELIMINARY

Learning is the obligation of students to find and instruct knowledge in the brain (Sriyanto, 2007). One of the characteristics that influence the effectiveness of learning is the learning style of students, where after the learning style is known it can be determined that learning strategies are easier and more enjoyable (Mansur, 2013). According to Bobbi (2010) learning style is a way for someone to absorb information easily which is then called a learning modality which is grouped into three groups namely Visual Learning, Auditory Learning, and Kinesthetic Learning. Learning following the learning style makes a person can easily accept lessons and improve learning outcomes (Widiyanti, 2013). A teacher is required to recognize the learning characteristics of students in his class as part of the realm of pedagogical competencies that must be possessed by a teacher (Mansur, 2013). Each student has a different ability to absorb the learning material delivered by the teacher while at school. Some students master all the things they read or see, some other students by listening

or by practicing directly. By knowing the trends of student learning styles in a class, teachers can determine strategies or learning methods that are more effective and efficient.

Based on the results of observations made at the Private Vocational School in Yogyakarta, several students revealed that they did not yet know the intended learning style. Learning styles that they know so far are reading, writing, or memorization. The teacher does not know one by one the learning styles of the students in each class, because to know the learning styles of all students in each class certainly requires more process and time.

There are several ways to find out the learning styles of students, namely by observing, giving assignments, or by conducting a learning style test (Wijaya, 2009). The learning style test method uses an instrument in the form of a list of questions related to the characteristics of learning styles to identify students' learning styles (Mansur, 2013). The use of technology in the learning style test method needs to be maximized. Learning style tests conducted on students one by one and still using the manual method requires more effort, time, and cost in conducting tests and calculating the test results.

The need for the development of media that helps students in learning styles while also helping teachers in learning the learning styles of their students in each class. Therefore developed a media that utilizes information technology to find out and provide information about the learning styles of students from each class with the research title Management Information System for Student Learning Based on Android.

The formulation of the problem in this research is how the development of learning management information systems for Android-based students to find out and provide information about the concepts and learning styles of students in each class and how the quality of the software developed. While the purpose of this study is to find out how the development of learning management information systems for students to be developed and find out the quality of the system.

There are several benefits of this research, namely, for researchers/students, as a form of application of knowledge gained from lectures, increasing the ability and understanding of students about the management of student learning used, increasing students' knowledge and ability in developing an Android-based information system and project. For parties at school, helping students find out about the learning management of students, helping students know learning strategies according to learning styles, making it easier for teachers to know learners' learning styles, helping teachers know additional information to determine learning strategies according to learning styles of students in each class.

B. RESEARCH METHODS

Research and development of android-based learning style information systems using Research and Development (R&D) research methods. According to Sugiyono (2010), research and development (R&D) methods are research methods used to produce a particular product and test the quality of the product.

The time of the study was conducted in September 2019. The research site for software development is at one of the campuses and schools in Yogyakarta.

The research subject is used to test the functional aspects of the suitability and usability of the software developed. For functional suitability aspects, the subject uses several experts and lecturers who have the ability and understanding of software development, especially Android-based mobile software. As for the usability aspect, using respondents from the educational element, namely teachers and students at SMK Muhammadiyah 1 Wates.

Development of learning management information systems using the Rational Unified Process Model. RUP has the principle of Iterative and Incremental which means the development process carried out is divided into several iterations and additions. At each iteration, additions, corrections, and improvements to the device are developed from the beginning of development until the whole system is produced according to the needs that have been analyzed (Raul, 2013). In the Rational Unified Process, software development activities are wrapped in stages or more commonly referred to as phases owned by the Rational Unified Process. Activities of developing software are carried out in all phases from the beginning to the end but in different portions. Rational Unified Process consists of several stages or phases, namely inception, elaboration, construction, and transition.

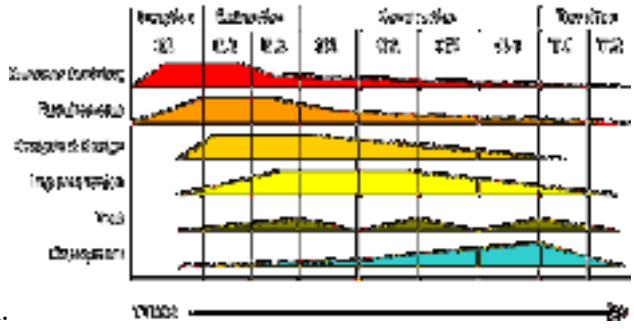

Figure 1. Stages of the Rational Unified Process Model

The conception stage is the first phase of the Rational Unified Process which explains the main requirements of the system and what the system will be like. The output or target of this stage is the preliminary conceptual model, the requirements document in the form of high level use cases and supplementary specifications as well as the system development schedule.

The elaboration stage is the stage where a more detailed needs analysis is done by expanding the use cases, making sequence diagrams, class diagrams and making improvements to the conceptual model with each use case more detailed.

The construction phase, in this stage, is carried out the coding process and testing of the developed program or system. In this study the system developed is a mobile-based

application with the Android platform. Tests conducted to determine the quality of the feasibility of the application using the ISO 25010 standard.

The transition phase is the final stage where the final tests and distribution or distribution of the system have been developed to the users of the system. Distribution of the system is done so that the system that has been developed can be used by its users.

The variables in this study are aspects that exist in software testing conducted according to the ISO 25010 standard including functional suitability, compatibility, and usability.

Data collection methods used in the study of developing learning styles information systems are interviews, observation and use of questionnaires.

To obtain data in this study used several research instruments. In the usability aspect the USE Questionnaire research instrument was used (Lund, 2001).

Tabel 1. Instrument *USE Questionnaire*

No	Statement
1.	This application helps me be more effective.
2.	This application helps me be more productive.
3.	This application is useful.
(ect…)	

The functional suitability aspect uses an instrument in the form of a test case that contains the functions of the software developed.

Table 2. Test Case Function of SIMB Application

Function	Expected results	Achievement
Register Account	1. A successful notification list appears. 2. The login page opens.	Yes/No
Account Login	1. Notification appears successful login. 2. The home page opens.	Yes/No
(ect…)		

The compatibility aspect is tested on various operating systems, device types, screen sizes and software co-existence testing is done directly using an Android device and in the cloud using test tools from TestDroid.

The data analysis technique used is descriptive analysis with the following calculation formula.

$$Persentase\ Kelayakan(\%) = \frac{Skor\ yang\ diobservasi}{Skor\ yang\ diharapkan}\ x\ 100\%$$

The percentage of results obtained is then converted into a statement in accordance with the criteria for interpreting the score (Sudaryono, 2011).

Table 3. Scoring Interpretation Criteria

No	Percentage	Interpretation
1	0% – 20%	Very Inadequate
2	21% – 40%	Inadequate
3	41% – 60%	Decent enough
4	61% – 80%	Worthy
5	81% – 100%	Very decent

C. RESEARCH RESULTS AND DISCUSSION

Inception Stage

At this stage the project title, project description, project requirements, project scheduling and use case functions of the project to be developed are obtained.

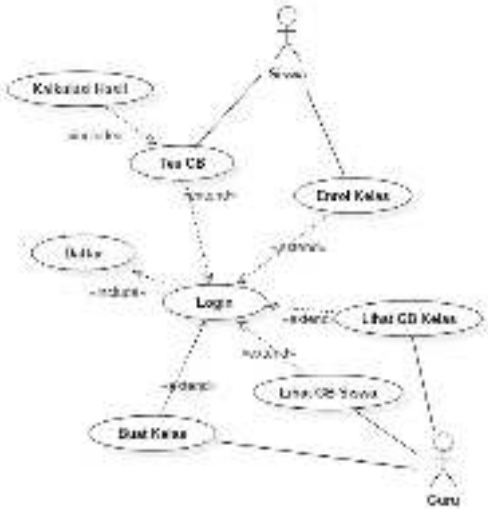

Figure 2. SIMB Application Case Use Diagram

Elaboration Stage

At this stage an expanding use case is carried out, the use case that has been made is then detailed by making a description of each function. At this stage also made sequence diagrams, activity diagrams, class diagrams, ERD databases, and software mockups from the software to be developed.

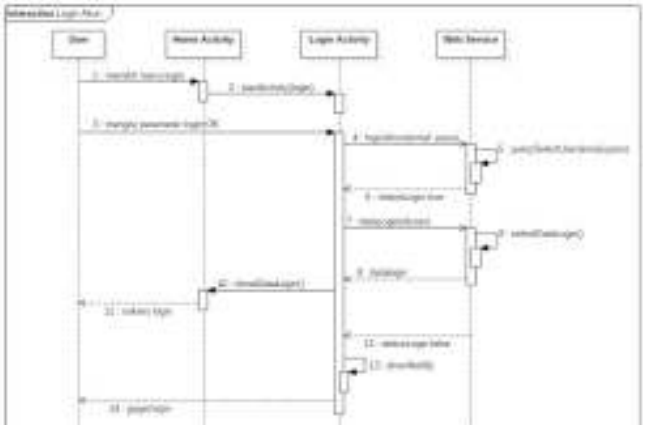

Figure 3. SIMB Application Login Sequence Diagram

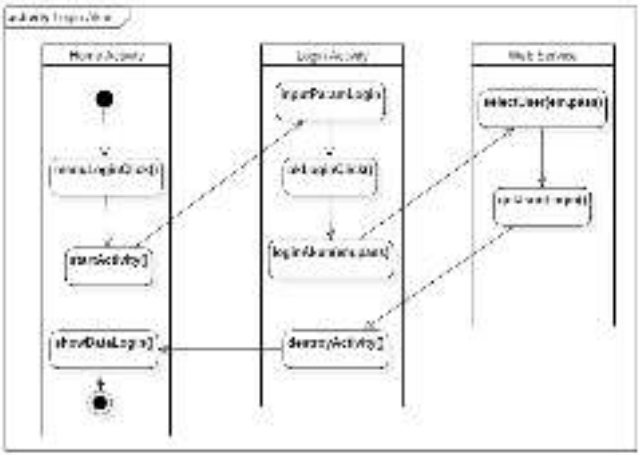

Figure 4. SIMB Application Login Activity Diagram

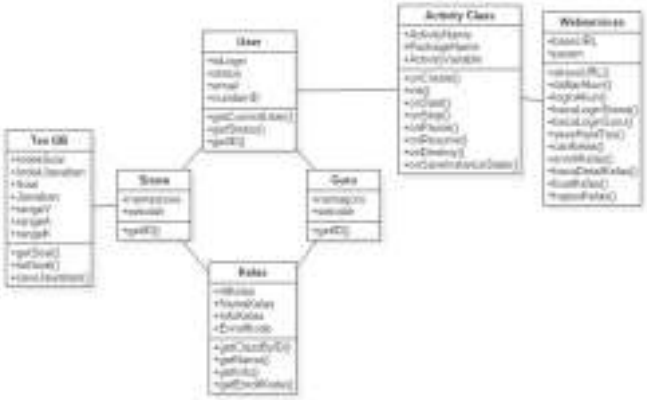

Figure 5. SIMB Application Class Diagram

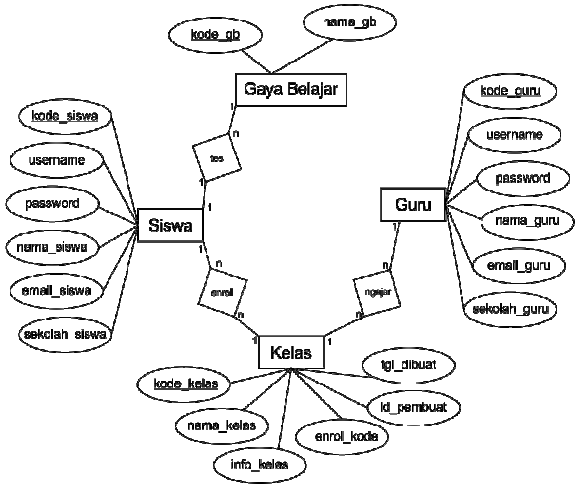

Figure 6. ERD Database SIMB Application

Figure 7. SIMB Application Mockup Interface

Construction Stage

At this stage, layout construction, program logic construction, interface construction, database construction, and software debugging process are carried out.

Figure 8. SIMB Application Interface

Figure 9. Results of SIMB Application Database Implementation

Transition Stage

At this stage a final test is conducted by experts and end users of the software developed.

Functional Suitability Aspects

Table 4. Functional Testing Expert Respondents

No	Nama	Profession	Agency
1	Muh Izzudin M., M.Cs.	Lecturer	Universitas Negeri Yogyakarta
2	Zulfinda Edah Tahdin	TKJ teacher	SMK Muh 1 Wates
3	Fauzi Sholichin	Developer	Qiscus Ltd.
4	Ridho Febby	Programmer	Nyi Ageng Serang

Table 5. Functional Suitability Test Results

No	Fungsi	Skor yang diperoleh					Skor Max
		1	2	3	4	Jml	
1	Open the application	1	1	1	1	4	4
2	Register an account	1	1	1	1	4	4
3	Account login	1	1	1	1	4	4
4	Logout akun	1	1	1	1	4	4
5	Hint	1	1	1	1	4	4
6	About	1	1	1	1	4	4
7	GB test	1	1	1	1	4	4
8	Test results	1	1	1	1	4	4
9	Study tips	1	1	1	1	4	4
10	Search for classes	1	1	1	1	4	4
11	Class info	1	1	1	1	4	4
12	Enrol class	1	1	1	1	4	4
13	Create class	1	1	1	1	4	4
14	Delete class	1	1	1	1	4	4
15	Class list	1	1	1	1	4	4
16	Class details	1	1	1	1	4	4
17	GB students	1	1	1	1	4	4
18	Learning tips	1	1	1	1	4	4
Total						72	72

The results above show all SIMB application functions can run 100%. These results are correlated with the score interpretation criteria and show that the functional suitability of the SIMB application gets a very decent predicate.

Compatibility aspects

Table 6. Co-Existence Test Results

No	Application that is run		Keberhasilan
1	SIGB	*Whatsapp*	1
2	SIGB	*Messengger*	1
3	SIGB	*Facebook Lite*	1
4	SIGB	*Chrome*	1
5	SIGB	*Camera*	1
6	SIGB	*Mobile Legends*	1
7	SIGB	*Gmail*	1
8	SIGB	*Youtube*	1
9	SIGB	*Tokopedia*	1
10	SIGB	*Maps*	1
Total			10

Table 7. Test Results on Various OS Versions

No	Nama Perangkat	Sistem Operasi	Keberhasilan
1	Samsung Nexus S	Android 4.1.2	1
2	LG Nexus 4	Android 4.2	1
3	Smartfren AD688G	Android 4.3	1
4	Samsung Galaxy Nexus	Adnroid 4.3	1
5	Asus Zenfone 5	Android 4.4.2	1
6	LG Nexus 5	Android 5.0	1
7	HTC Nexus 9 (Tablet)	Android 5.0.1	1
8	Asus Nexus 7 (Tablet)	Android 5.1.1	1
9	Huawei Nexus 6P	Android 6.0	1
10	Asus Zenfone 2 Laser	Android 6.0.1	1
Total			10

Table 8. Test Results on Different Types of Devices

No	Nama Perangkat	Model	Keberhasilan
1	Samsung Nexus S	I9020	1
2	LG Nexus 4	E960	1
3	Smartfren Andromax	AD688G	1
4	Samsung Galaxy Nex	I9250	1
5	Asus Zenfone 5	T00F	1
6	LG Nexus 5	D820	1
7	HTC Nexus 9 (Tablet)	4GLTE	1
8	Asus Nexus 7 (Tablet)	APQ8064	1
9	Huawei Nexus 6P	H1511	1
10	Asus Zenfone 2 Laser	Z00RD	1
Total			10

Table 9. Test Results on Various Screen Sizes

No	Device Name	Screen Size (px)	Success
1	Samsung Nexus S	480 x 800	1
2	LG Nexus 4	768 x 1280	1
3	Smartfren AD688G	480 x 800	1
4	Samsung Galaxy Nexus	720 x 1280	1
5	Asus Zenfone 5	720 x 1280	1
6	LG Nexus 5	1080 x 1920	1
7	HTC Nexus 9 (Tablet)	2048 x 1536	1
8	Asus Nexus 7 (Tablet)	800 x 1280	1
9	Huawei Nexus 6P	1440 x 2560	1
10	Asus Zenfone 2 Laser	720 x 1280	1
Total			10

In the compatibility aspect, several sub-tests above were carried out and obtained the following results.

Table 10. Details of Compatibility Aspect Testing

No	Sub Compatibility	Test Score
1	Co-Existence	100%
2	Various Operating Systems	100%
3	Various Types / Models	100%
4	Various Screen Sizes	100%

From the results of the test details above it can be concluded that the SIMB application compatibility gets 100% compatible results. These results are correlated with the score interpretation criteria and show that the SIMB application compatibility gets a very decent predicate.

Usability Aspect

Table 11. Usability Test Results

No Respondent	Rating Score	Maximum Score
1	106	150
2	118	150
3	122	150
4	123	150
5	128	150
6	124	150
7	97	150
8	124	150
9	122	150
10	122	150
11	130	150
12	135	150
13	104	150
14	129	150
15	128	150
16	122	150
17	117	150
18	125	150
19	117	150
20	121	150
21	119	150
22	130	150
23	110	150
24	122	150
25	130	150
26	122	150
27	104	150
28	120	150
29	107	150
30	121	150
31	118	150
32	115	150
Total	3832	4800

Testing on the usability aspect was conducted with 27 student respondents and 5 teachers. From the calculation of the results above it can be concluded that the SIMB application usability score got 79.83%. These results interpret the usability of the SIMB application to get a decent title.

Learning Style Results

Learning style of respondents obtained from SIMB. Each respondent has a score of V, score A and score K that has been saved by the system when the respondent conducts a learning style test using the system. The accumulation of the three scores is then used as a determinant of the learning styles of the respondents.

Table 12. Results of Respondent Learning Styles

No Rsp	Score V	Score A	Score K	The Supposed Results	Results of the System
1.	9	7	6	Visual	v
2.	8	6	7	Visual	v
3.	9	7	7	Visual	v
4.	11	6	9	Visual	v
5.	7	8	7	Auditory	a
6.	9	7	12	Kinesthetic	k
7.	7	11	9	Auditory	a
8.	10	8	8	Visual	v
9.	8	7	9	Kinesthetic	k
10.	9	9	8	Mixed / VA	va
11.	8	6	5	Visual	v
12.	9	9	9	Mix / VAK	vak
13.	3	8	7	Auditory	a
14.	9	9	7	Mixed / VA	va
15.	9	5	7	Visual	v
16.	9	6	8	Visual	v
17.	8	8	4	Mix / VA	va
18.	4	8	5	Auditory	a
19.	6	9	9	Mixed / AK	ak
20.	6	6	7	Kinesthetic	k
21.	6	8	6	Auditory	a
22.	8	7	6	Visual	v
23.	7	10	9	Auditory	a
24.	7	8	6	Auditory	a
25.	5	3	8	Kinesthetic	k
26.	6	4	8	Kinesthetic	k
27.	9	7	6	Visual	v

Table 13. Number of Respondents per Learning Style

No	Learning style	amount
1	Visual	10
2	Auditory	7
3	Kinesthetic	5
4	Mix	5
	Total	27

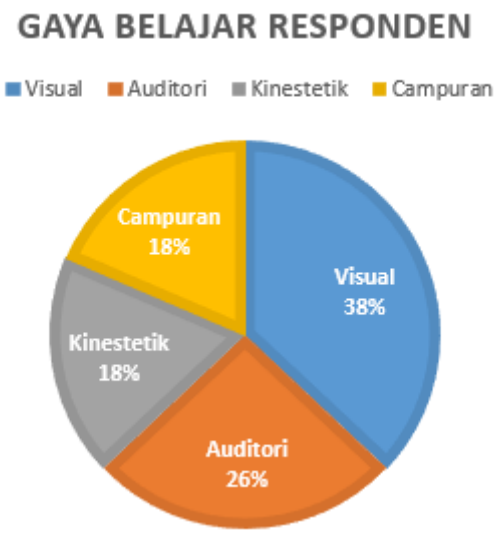

Figure 10. Learning Styles of All Respondents

The results above show that visual learning styles are owned by the most students, then followed by auditory learning styles as well as kinesthetic and mixed. Table 12 shows the VAK scores obtained from respondents by conducting a manual learning style test and using the SIMB application. From this table can be seen the compatibility between the results that should be with the results given by the system. This proves that the results of the learning styles provided by the SIMB application are appropriate.

D. CONCLUSIONS

This research resulted in the application of SIMB as an information system used to find out and provide information about the concepts and learning management of students in each class. The resulting software is developed on the Android platform and uses the Android Studio application development tool. The results of SIMB application quality analysis using ISO 25010 quality standards and obtaining test results on functional suitability aspects are very feasible because all functions can run 100% after being tested by 4 respondents who know about the procedures for software development. Whereas the compatibility aspect gets very decent test results because the application can run side by side with other applications (co-existence), can run on various versions of the Android operating system, can run on various types and sizes of screens on Android devices. Finally, the usability aspect that obtained the proper test results with a value of 79.83%.

E. ACKNOWLEDMENT

The Learning Management Information System was developed on different platforms such as Windows Phone and iOS so that not only Android users can use it. In addition to the mobile platform, a website-based Learning Style Information System is developed so that the system or software developed is available in various platforms to meet the needs of use.

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THE IMPLEMENTATION OF LEARNING MODEL OF ISLAMIC VIDEO PROJECT IN PAI COURSES AT MEDAN STATE UNIVERSITY

Hapni Laila Siregar[1,2], hapnilai@gmail.com
Syihabuddin[2], syihabuddin@upi.edu
Kama Abdul Hakam[2], kama.hakam@gmail.com
Kokom Komalasari[2], kokom@upi.edu
[1]Universitas Negeri Medan, [2]Universitas Pendidikan Indonesia

ABSTRACT

This study aims to develop a learning model of Islamic video project in PAI course as an alternative solution to the problem of PAI learning in the current digital era. This research is considered important because generally the learning of PAI in Higher Education is still indoctrinative, only focuses on normative matters and has not fully developed strong rational thinking skills and independence. The development of innovative learning and utilizing advances in information technology (IT) in PAI learning is very urgent to do now. This research is Research and Development (R&D) and uses an empirical approach that emphasizes data collection and analysis. There are four benefits of using this learning model, namely: 1) PAI learning becomes more interesting and meaningful for students; 2) PAI lectures develop the 21st century skills and knowledge; 3) the availability of attractive PAI learning media; 4) the availability of various Islamic videos on youtube that can be widely used by the public.

Keyword: Islamic video project, Islamic religious education, 21st Century knowledge and skills

A. INTRODUCTION

Islamic Religious Education is an educational program that instills Islamic values through a learning process, both in the classroom and outside the classroom, packaged in the form of subjects named Islamic Religious Education abbreviated as PAI (Syahidin et al, 2009). PAI courses aim to form the values of faith and devotion to Allah SWT and noble morals. This PAI course is also expected to be able to develop the spiritual potential and attitudes and behavior of students so that they become human beings who have individual and social piety.

To achieve the objectives of PAI in Higher Education, lecturers should apply innovative learning methods and strategies that activate students. The more active the student, the more meaningful the learning is in the hearts of students because multi-sensory, dramatic, unusual or emotionally strong experiences will be remembered for much longer than regular routine experiences. But in reality the PAI learning in Higher

Education is generally still indoctrinative even though Islam is not just a belief system formed by dogmas as historical facts (Nurudin, 2007). PAI instructors still often interpret PAI as limited to memorization and understanding, or just dwelling on normative matters (Mulyana, 2013). According to Tan (2011) the weakness of PAI learning in Indonesia is that its implementation has not yet fully developed strong rational thinking skills and independence.

The development of learning models of Islamic video projects is adapted to the development of intellectuals, morals and thinking sequences of students in Higher Education who have far developed (Yusanto, 2014). With this learning model, students studying PAI no longer only listen to lecturers' lectures then take notes and memorize, but they are trained to take advantage of advances in information technology (IT) for Islamic creativity and to use the internet to spread goodness and Islamic teachings. According to Yousif (2001) there is a relationship between information technology and Islam. Although the Quran is not a scientific text book, it is a guide containing universal principles of science which are the main domain of information technology. So by implementing information technology, especially the internet for Islam, it means applying Islamic principles. Furthermore, with this learning model, the role of PAI lecturers also varies from facilitator, motivator and tutor.

Based on the background above the development of PAI learning models of Islamic video projects is very urgent to do in this digital era. In this paper, the author will describe how the implementation of learning models of Islamic video projects in PAI course at Medan State University.

B. RESEARCH METHOD

This research is Research and Development (R&D) and uses an empirical approach that emphasizes data collection and analysis. Research in this R&D is carried out with literature studies and field studies (needs analysis). Product development in this R&D is done by developing models design, validating models from experts, testing models in a limited scope and testing the effectiveness of the models in a wider scope. This paper is developed from the results of research and development but is limited to the development of model design to the model testing in a limited scope. In this paper the author will explain the implementation of the learning model of Islamic video projects in PAI courses.

This learning model has been validated by a number of experts implemented in a Forum Group Discussion (FGD). The model improvement was then carried out based on suggestions and input from these experts. The locations of this research are in the Department of PTIK, the Department of Mathematics Education and the Department of Fashion, Medan State University. The study was conducted in the first semester of the academic year 2018-2019.

C. RESULT AND DISCUSSION

3.1. The Learning model of Islamic video projects in PAI Course

The Learning model of Islamic video projects in PAI course is the application of project-based learning (PjBL) in PAI courses where students are assigned to create Islamic videos that are interesting, substantive, actual, factual and contextual. Substantive means that it is directly at the core of the problem, actually means following the development of the direction and orientation of the cultural community, factual means it must be based on empirical facts, whereas contextual in the sense is relevant and concerns the problems being faced by the community.

The application of PjBL in PAI lectures needs to be done because of the various advantages of PjBL when compared to other learning models, which will make PAI lectures more interesting and meaningful for students. Some of the PjBL advantages: with PjBL students no longer learn by listening but they will learn by doing (learning by doing) (Stauffacher et al., 2006); with PjBL students will be trained to think at a high level (Haigt, Kelly, R., & Bogda, B., 2005) and find solutions to problems in real life (Blumenfeld et al., 1991); in PjBL the lecturer will play more as a 'facilitator' (Otake et al., 2009), 'manager' (Stauffacher et al. (2006), 'mentors' (Meehan and Thomas, 2006) and 'tutors' (Donnelly and Fitzmaurice, 2005). In addition, with PjBL students will be trained to work in teams or groups (Van Kotze & Cooper, 2000), so that they will develop their abilities in communication, planning and team working (Hanney and Savin Baden, 2013). The other advantages, the end result of PjBL is in the form of a qualified product (Danford, 2006), or it can also be a presentation or appearance (Donnelly and Fitzmaurice, 2005).

The selection of Islamic video making as a project task in the PAI course was motivated by the importance of utilizing the advances of information technology for Islamic creativity, as well as the existence of a digital life trend in the 21st century marked by increasingly massive use of the internet. Internet has now become a global

phenomenon that affects all aspects of human life, even now internet access activities have become part of the lifestyle of modern humans. World Stats 2018 Internet data shows that 132.7 million people from the total population of Indonesia, which now stands at 265.4 million people are internet users (Sholihin, 2018). This means that about 50% of the population in Indonesia has used the internet, where an increase in the number of social media users is around 49% of the Indonesian population (Firdausnetpreneur, 2018). This number also makes Indonesia the fifth largest internet user in the world after China, India, the United States and Brazil (Buol, 2018). Therefore Muslim students should be trained to be able to use the internet to spread the goodness and Islamic teachings. In this Islamic video making project, the internet will be used for two things, firstly as a medium to search for information, data and materials for making Islamic videos, and secondly as a medium for storing and distributing Islamic videos produced by the students. Islamic videos that have met the criteria of good Islamic video criteria will be uploaded on youtube so that these Islamic videos can be useful for Muslims and the world community.

3.2. The design of Learning Model of Islamic Video Projects in PAI Course

To facilitate the implementation of this learning model, various learning tools have been made, including the design of learning models of Islamic video projects. The process of making Islamic video is divided into four phases, namely: preparation, making Islamic videos, consultation and revision, and finally reporting. More details can be seen in the learning model design below:

Design of Learning Model of Islamic Video Projects

Learning Stage		Description of Activities	Officer
Opening section		Explaining about the project of making Islamic videos including: its understanding, background, benefits, ect	Lecturer
		Dividing students into several groups.	Lecturer
Doing the Islamic Video Project	1. Preparation	Determining theme/ topic of the Islamic video.	Students
		Making framework of the Islamic video, classifying the data needed.	Students
		Doing research. Gathering information/ data from various sources: books, magazines, encyclopedias, journals, internet, social media, etc.	Students

	2. Making Islamic Videos	Writing a narration / script from the beginning till the end of the Islamic video.	Students
		Searching image of narration or recording images according to the script.	Students
		Editing. Bringing together and compiling the best and selected information/ data/ images/ video footage into Islamic videos	Students
		Sound Editing. Putting music or sound on Islamic videos.	Students
	3. Consultation and Revision	Consulting with PAI lecturers	Lecturer & Students
		Revising the Islamic video based on the input and suggestions from PAI lecturers	Students
	4. Reporting	collecting and presenting the final video	Students
Closing section		Providing clarification/ reflecting values from the Islamic video making project as well as from Islamic videos created by students	Lecturer

3.3. The Implementation of Learning Model of Islamic Video Project in PAI Course at Medan State University

In implementing this learning model in PAI course, the author refers to the design of learning models of the Islamic video project mentioned above.

3.3.1 Openign section. In the opening section of the lesson, PAI lecturer explained the project of making Islamic videos, including its understanding, background, steps to make a good Islamic video, its benefits, including the allocation of time for the completion of the Islamic video project. To provide a clear picture of this Islamic video, PAI lecturer displayed several examples of Islamic videos made by previous students.

PAI lecturer gave an explanation about the Islamic video project

In this opening section, the lecturer also divided students into several groups which each group is recommended no more than 5 students.

3.3.2. Doing the Islamic video project. This section consists of four phases namely preparataion, making Islamic videos, consultation and revision and the last reporting. In the preparation phase, each group discusses the topic/ theme of their Islamic video. After the topic is determined, it is continued by making a title and a video framework, and arranging an Islamic video project completion design.

Students discussed in groups

The students also do research on the topic of their Islamic videos. They collect much information and data raised from various sources such as books, magazines, encyclopedias, journals, internet, social media, etc. It is hoped with this activity, students' insights on the topic of their Islamic video become broad and developing.

3.3.3. Making Islamic videos. In this phase the students compile narrative/ script, narration for slideshow video, script for live video. After the narration or script is completed, the next process is to find/ record images. Students look for the most interesting and appropriate images for each narration of the slideshow video or students record pictures according to the script that has been compiled (live video). In this phase, students also look for the most appropriate music for Islamic videos.

A.3.4. Editing. In this phase, students bring together and compile the best and selected information / data / images / video footage into an Islamic video.

A.3.5. Sound editing. Students put music or sound on Islamic videos. It's also the last phase of making Islamic videos. All these phases of making Islamic video are done by students outside the PAI class.

A.3.6. Consultation and revision. After an Islamic video is created, the next step is consultation and revision. In this consultation, PAI lecturers give some input and suggestions for improvement of the Islamic videos that have been made by students.

Lecturer gave input and suggestions for improvement of Islamic videos


After the consultation, students revise their Islamic videos based on the suggestions and input from PAI lecturers. It is expected that this phase of consultation and revision will run a maximum of three times. If its process runs well, it will be able to produce an interesting, informative and meaningful Islamic video.

Students revised Islamic videos


A.3.7. *Reporting.* It is the final step of doing the Islamic videos project. In this step, the Islamic videos that have gone through the process of consultation and revision are collected and presented in front of the class. This is the phase the most eagerly awaited by students where they can display their Islamic videos proudly and also watch Islamic videos made by other students.

Students presented their Islamic videos in front of the class


Students watched Islamic videos together


A.3.8. Closing section. It is reflection and clarification of values. Here lecturers give clarification of values or extracting values from the process of making Islamic videos as well as from the Islamic videos produced by students.

PAI lecturer gave a reflection and clarification of values


A.4. Islamic videos created by students of Medan State University

This research was conducted in the Departments of PTIK, Departments of Mathematics Education and the Department of Fashion, Medan State University. In this research, the students created 22 Islamic videos with details, from PTIK and Mathematics Education, each class produced 8 Islamic videos and the Department of Fashion produced 6 Islamic videos. Each video is then judged based on the Islamic video rating rubric that has been prepared. Following are the titles and values of Islamic videos created by students.

Department	Titles of Islamic videos	Value
PTIK	Autonomy Is the Key to Success	A
	Hard Work & Dream Big	A
	The Meaning of Honesty	A
	The ethic of Hang out in Islam	A
	Creative for Success	A-
	The Importance of Responsibility for Humans	A-
	Patience in Facing Problems	B+
	Tolerance among Religion Believers	B+
Mathematics	Tips on Becoming an Autonomous Person	A

Education	The Fruit of Honesty	A
	Your Youth Your Responsibilities	A
	Plurality in Religion	A
	The Meaning of Friendship	A-
	The virtue of Reading the Koran	A-
	Social Care	B+
	Hard Work in Islam	B+
Fashion	Religious Tolerance	A
	Difference is beautiful	A-
	Building a Happy Family	A-
	Social Care	B+
	Hard Work	B+
	Cheating in Exam	B

After being valued, all these Islamic videos were then uploaded on youtube in channel "Hapni Laila Siregar". This channel is specifically made for storing Islamic videos made by students in the PAI project at Medan State University. The Islamic videos that are uploaded in that channel are only Islamic videos that get values A or A+. Islamic videos that get values below them such as A-, B+, B, B- will not be uploaded on that channel. Based on this provision, there are only 9 videos that were uploaded in channel "Hapni Laila Siregar", namely 1. Autonomy Is the Key to Success; 2. Hard Work & Dream Big; 3. The Meaning of Honesty; 4. The ethic of Hang out in Islam; 5. Tips on Becoming an Autonomous Person; 6. The Fruit of Honesty; 7. Your Youth Your Responsibility; 8. Plurality in Religion; 9. Religious Tolerance.

3.5. Benefits of Learning Model of Islamic Video Projects in PAI Course

There are four benefits of the learning model of the Islamic video project in PAI course, namely: 1) PAI learning becomes more interesting and meaningful for students; 2) PAI learning develops the 21st century skills and knowledge; 3) PAI learning produces many interesting PAI learning media; 4) the availability of various Islamic videos on youtube that can be widely used by the public.

There is no doubt that this Islamic video making project will activate students, because from the start of planning, conceptualization, searching data till the implementation of Islamic video making, students are very required to think and move actively. If it is viewed from the learning theory, this is what is highly recommended, namely learning that is capable of involving multiple senses and even also doing. The

more active the student, the more interesting and meaningful the learning will be in the hearts of students (Ginnis, 2008).

The Islamic video making project also develops 21st century skills and knowledge, specifically making students literate in media, information and technology. Media literacy is that students become trained to use existing media as a source of learning and as a tool for work, and creativity. Information literacy, namely students trained to access information effectively and efficiently, competently assess and critique information, and are able to use information accurately and creatively. Technology literacy is that students become trained to use technology effectively, especially as a research and communication tool.

As a project assignment, the end result of this learning model is the availability of various interesting, informative and meaningful Islamic videos. These Islamic videos can be used as PAI learning media ranging from basic education to higher education. In this regard, the project of making Islamic videos is very helpful for PAI teachers/ lecturers because in reality not all lecturers / teachers of Islamic religion courses have high ability and creativity as well as enough free time to create PAI learning media. By posting the Islamic videos on youtube and spreading them via various social media, this also means broadcasting Islamic teachings on the internet and the public can utilize these Islamic videos both for self-education and for education in their family and community.

D. CONCLUSION

The learning model of Islamic video project is very appropriate to be applied in PAI course in Higher Education because with this learning model the problems commonly found in PAI lectures namely monotonous, indoctrinative and normative learning can be overcome. The learning model of the Islamic video project in accordance with the intellectual, moral development and thinking order of students in Higher Education who have highly developed. With this learning model the role of PAI lecturers also varies from facilitator, motivator and tutor. Based on all of this explanation, it is hoped that the learning model of the Islamic video project will become an alternative solution to the problem of PAI learning in Higher Education in the current digital era.

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IMPLEMENTATION OF STUDENT ATTENDANCE APPLICATION FOR CENDEKIA ISLAMIC JUNIOR HIGH SCHOOL *BOARDING SCHOOL*-CIANJUR USING ANDROID SMARTPHONES

Eka Destiawati Wulan, eka_destiawati@upi.edu
Rusman, rusman@upi.edu
Universitas Pendidikan Indonesia

ABSTRACT

This study aims to explain the implementation of student attendance applications at Cendekia Islamic Junior High School *Boarding School*-Cianjur using android smartphones. Student attendance activities at Cendekia Islamic Junior High School *Boarding School*-Cianjur using the JIBAS application are considered to be less effective because the students' fingerprint process makes the queue quite long and it is not uncommon for students to forget or are lazy to do fingerprints because of their busyness at school, so there is no SMS getaway that should reach the parents of the students as their children enter school on that day. Attendance using an android smartphone can help teachers in the process of good attendance and rapid recapitulation and parents of students can easily monitor their child's presence through their respective android smartphones. The research method used is a qualitative method with a descriptive approach. The research subjects were 6 students, 6 teachers and 2 parents of students at Cendekia Islamic Junior High School *Boarding School*-Cianjur. Data collection used was interviews and observation, and technical analysis used needs analysis. The results showed that the application of attendance applications on android smartphones was successfully built using a combination of a database and programming. The database uses MySQL and programming for android uses Kotlin with the framework using React Native, while programming for websites uses PHP and HTML with web page layouts using CSS. The application that was built successfully did student attendance and recapitulated automatically, and made it easier for teachers and parents to supervise student attendance at school.

Keywords : Application, Attendance, Android

A. INTRODUCTION

The presence of students in schools is one of the factors that influence the achievements, so the presence of students in schools is an important thing to note. The problem that occurs in the system that has been implemented at this time in Cendekia Islamic Junior High School *Boarding School*-Cianjur lies in collecting student attendance data. Student attendance activities at Cendekia Islamic Junior High School *Boarding School*-Cianjur using the JIBAS application are considered to be less effective because the student's fingerprint process makes the queue quite long and it is not uncommon for students to forget or are lazy to do fingerprints due to their busy schedule at school, so there is no SMS getaway that should reach the parents of the students as their children enter school on that day.

The use of an Android-based online attendance application is one of the ways that can be implemented to overcome problems, help with a good attendance process and fast recapitulation. School users or teachers no longer need to recap the attendance of all students,

users can find out the results of the attendance recap in real time and do early detection on students who are often absent from school for further handling. For parents students can monitor student attendance every day anywhere and anytime using a smartphone connected to the internet network.

The growing use of smartphones today has created many useful applications and facilitates human work (Restuningsih, 2019: 7). There are several products that can be used freely for educational purposes and can be used free of charge. Student attendance application using an Android smartphone that is made using a combination of database and programming. The database uses MySQL and programming for android uses Kotlin with the framework using React Native, while programming for websites uses PHP and HTML with web page layouts using CSS. The purpose of making this application is to provide an effective solution in recording student attendance at school as well as the use of inexpensive and free technology.

The problem in terms of ease and speed is what drives the thought of making an online attendance application using an android smartphone that can be used quickly and easily to use. A smartphone is a cellphone that has an operating system embedded in it, the latest technology and has various functions that can facilitate daily activities (Jocom, 2013). Applications can be accessed through various devices connected to the internet, for example: Smartphones, Tablets, Laptops, and Personal Computers.

Application is a program that is ready to be used that is made to carry out a function for users of application services and the use of other applications that can be used by a target to be addressed (Juansyah, 2015: 2).

According to Setiawan and Kurniawan (2015: 44), attendance can be said to be a presence data collection that is part of the reporting activities that exist within an institution. Attendance is arranged and arranged so that it is easy to find and use when needed by interested parties.

According to Nazruddin (2012), android is an operating system application for cellular phones based on Linux. Android provides an open platform for developers to create their own applications for use by a variety of mobile devices. (Sulihati and Andriyani, 2016: 19).

Henry and Zuliarso (2012: 128) explain that MySQL is an implementation of a relational database management system (RDBMS) that is distributed free of charge under the GPL (General Public License) license. Each user can freely use MySQL, but with the limitations of the software may not be used as a derivative product that is commercial. MySQL is actually a derivative of one of the main concepts in a pre-existing database; SQL (Structured Query Language). SQL is a database operation concept, especially for the selection and entry of data, which allows data operations to be done easily automatically.

Kotlin is a Java Virtual Machine (JVM) based programming language developed by JetBrains (Sibarani, et al, 2018: 320). Kotlin is a pragmatic programming language for Android that combines object oriented (OO) and functional programming. Kotlin is also an interoperability programming language that makes this language can be combined in one project with the Java programming language. This programming language can also be used for desktop, web-based application development and even for backend. Some of the advantages that might be gained if the application development switch to use Kotlin to develop applications on the JVM platform are as follows (Sibarani, et al, 2018: 320):

a. Can overcome the Null Pointer Exception that is generally found in Java.
b. Code writing is more concise and easier to read than code written using the Java language.
c. Easy to learn.
d. IDE support to make programming easier.

React Native is a JavaScript-based framework for creating mobile-based applications, both Android and iOS. React Native is a collection of JavaScript-based libraries developed by Facebook. The syntax of React Native is a combination of JavaScript and XML which can be called JSX (Eisenman, 2017). React Native is a framework developed by Facebook in 2015. React Native was created with the aim of making it easier for web developers to create mobile-based applications, both Android and iOS. React Native has similarities with React for the web (ReactJS) (Masiello and Friedmann, 2017).

It can be concluded that React Native is a JavaScript-based framework that can be used to create or develop applications based on Android and iOS.

PHP (Hypertext Preprocessor), a server-side programming language (Apache, iss, or whatever) will be executed before the request, for example, is how it is possible to enter the current date on a web page whenever the date display is needed (Rubiati and Harahap , 2019: 63). In accordance with its functions that run on the server side, PHP is a programming language used to build web application technology. (Herny and Zuliarso, 2012: 128).

Hypertext Markup Language (HTML) is a markup language that is commonly used to create web pages. Actually HTML is not a programming language. When viewed from its name, HTML is a markup language or designation of a text document. The mark is used to determine the format or style of the text that is marked. (Suyanto in Lavarino and Yustanti, 2016: 74).

CSS (Cascading Style Sheets) is a way to make the format or layout of web pages more attractive and easier to manage (Husni in Pranata, et al, 2015: 26). CSS arises because of the difficulty of arranging the layout of documents made with pure HTML even though it has used various combinations of formats.

B. RESEARCH METHOD

The method used in this study uses a qualitative study with a descriptive approach. Data collection used was interviews and observation. Interviews were conducted with 6 students, 6 teachers and 2 students's parents at Cendekia Islamic Junior High School *Boarding School*-Cianjur as a material to help understand more clearly about the system that was running and to be made as well as documents or files as basic data. Observation in the form of direct observations at Cendekia Islamic Junior High School *Boarding School*-Cianjur and systematically recording the elements studied, especially regarding the student attendance data recording system.

Requirement analysis is very necessary to support the work of the system, where several needs in the system are used to help the process of making the system (Restuningsih, 2019: 9). This section will be divided into two parts, namely functional requirement and non-functional requirement.

a. Functional Requirements

Functional requirement is an analysis of what features will be applied to student attendance applications using this android smartphone, these features include:

1) Add, change, and delete student data.
2) Attendance by using an application on an Android smartphone.
3) Knowing whether students are present or not on the day.

b. Non-Functional Requirement

1) Internet connection
2) Hardware and OS: Android Smartphones and Laptop/PC (Windows, Linux, Mac OS).
3) Browser Chrome, Edge, Mozilla, Opera.

C. RESULT AND DISCUSSION

3.1 Architecture of The Application

In Figure 1 below explains the architecture and system flow of the attendance application. First, the homeroom teacher and parents of students must manually install the attendance application that was made before using the Kotlin programming language and framework using React Native. Attendance applications for homeroom teachers are different from applications made for students' parents, because their functions are different. Homeroom attendance application with the name Absensi SICC serves to enter student attendance data, while the attendance application for parents with the name SICC App is only to see the report of their child's attendance every day.

Input attendance starts after the teacher as the homeroom teacher logs in the Absensi SICC application, the homeroom teacher records student attendance at school and the data entered will be sent to the school server via the internet network. This school server was built using a MySQL database and programming language for its website using PHP and HTML with layout using CSS. Data is processed on the website that has been made with the address info.cendekia.sch.id and the output also displays the results of the attendance recap using the website. Only the picket teacher coordinator and the ICT team as administrators can enter the website and see the results of the daily attendance of students. Parents of students can see the child's attendance report every day using the SICC App application, they can log in with their respective accounts that have been notified in advance.

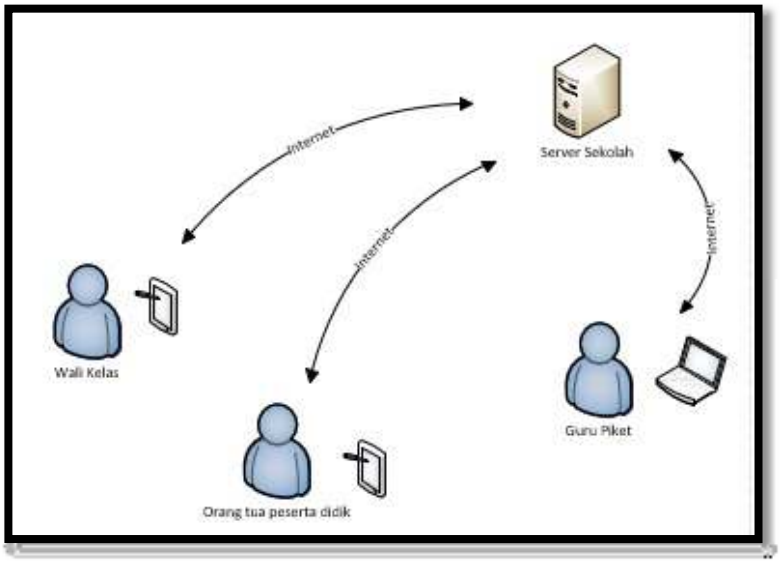

Figure 1. Architecture of The Application

3.2 Implementation

Figure 2 below is the application display of the Absensi SICC used by the teacher and Figure 3 is the application display of the SICC App used by student's parents after the installation phase on an Android device is successfully carried out.

Figure 2. Application Display of the Absensi SICC

Figure 3. Application Display of the SICC App

Homeroom teachers enter their respective username and password to be able to log in or enter the Absensi SICC application. Likewise, students' parents can log in using their Student Identification Number owned by their children and a predetermined password.

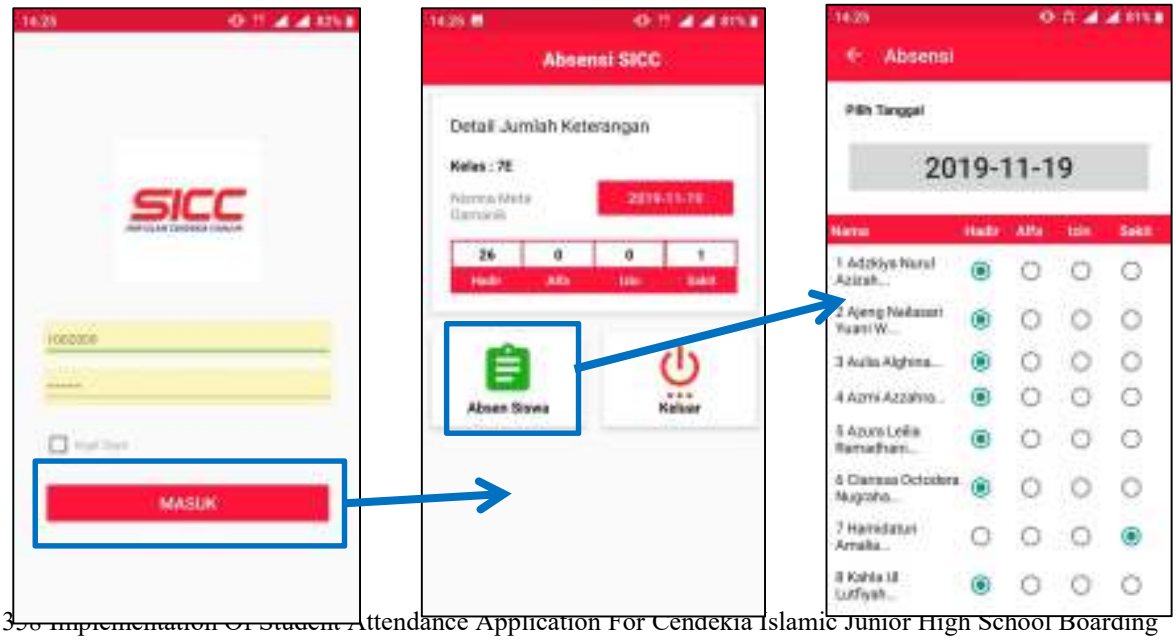

Figure 4. The process of inputting student attendance data

Figure 4 explains the input process of student attendance data carried out by the homeroom teacher. After the homeroom teacher enters a username and password, they can login to the application by clicking button *MASUK*, thus a display of information will appear according to the respective class data. To start inputting student attendance, the homeroom teacher can click button *Absen Siswa*, it will display a list of names of students in the class. The student attendance display contains a list of student names with choices of Present, Alpha, Permit, and Sick information, the homeroom teacher can select and click the option button on the information that is next to the student's name.

After the homeroom teacher has finished clicking the information button option, it means that the data was successfully sent and the application will immediately send attendance data to the school server from the homeroom account. The attendance data display on the school server can only be seen by the administrator, the administrator here is the teacher picket coordinator and the ICT team by accessing the website address that has been created. Figure 5 and Figure 6 below show the results of the student attendance recap on the web page.

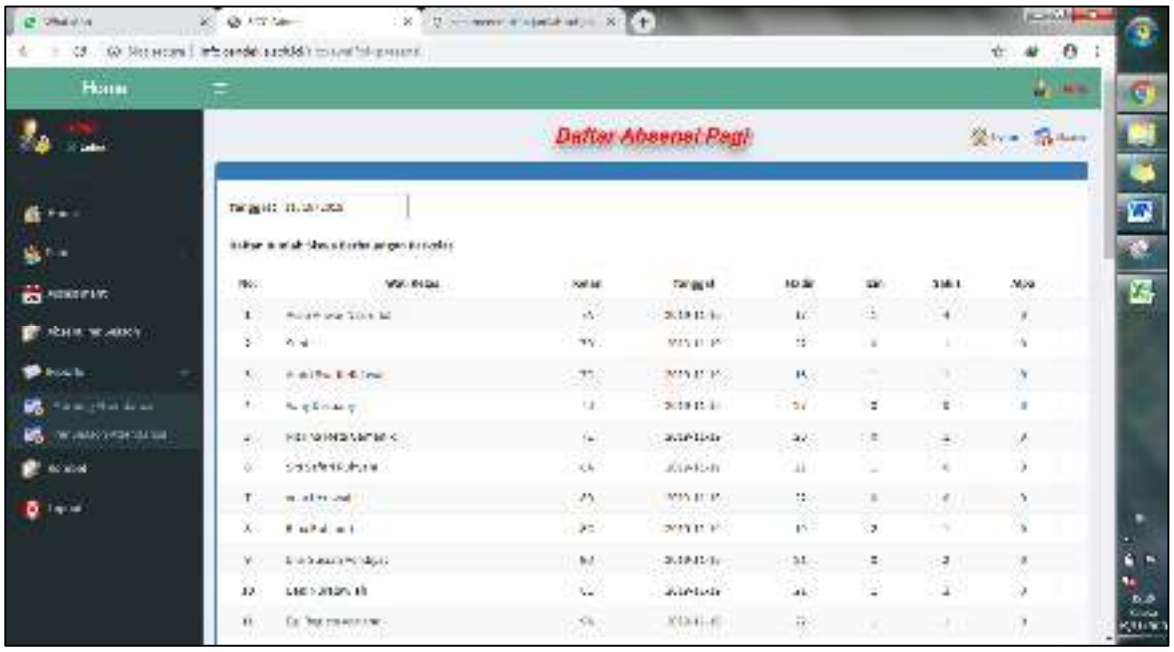

Figure 5. Display List of Number of Students Abstaining from Class on the website

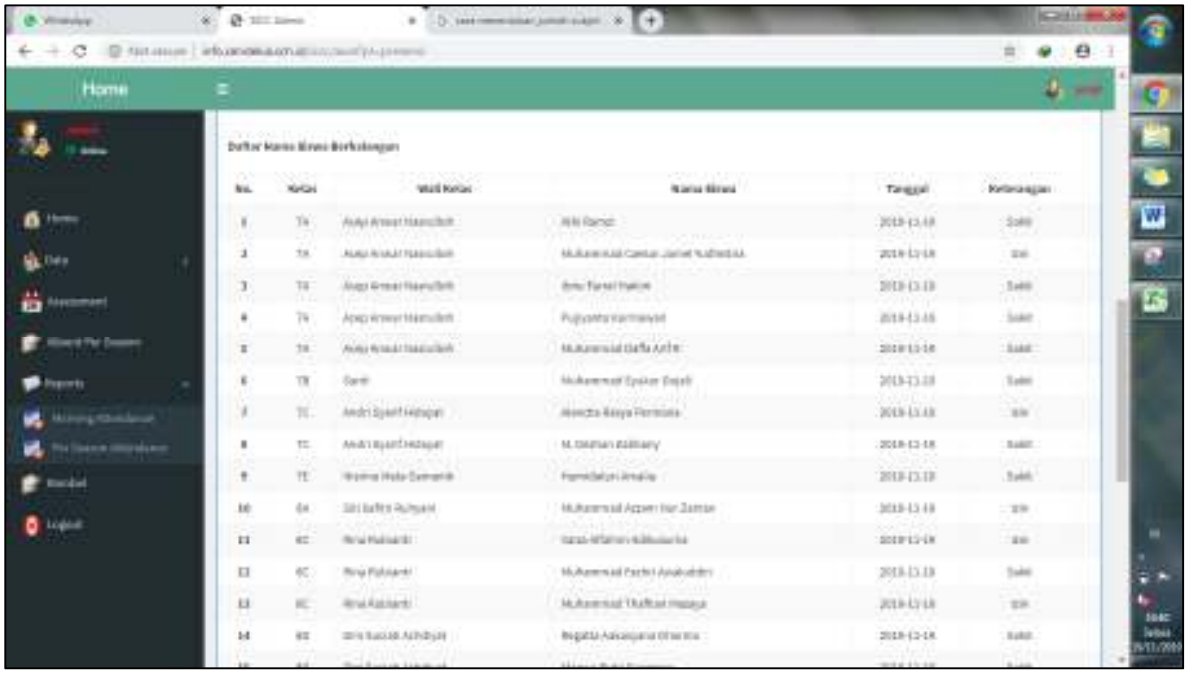

Figure 6. Display List of Student Names Not Attending Classes on the Website

Parents of students can also find out the child's attendance data at school every day by using the SICC App. Display Figure 7 below explains the process of parents viewing student attendance data at the SICC App.

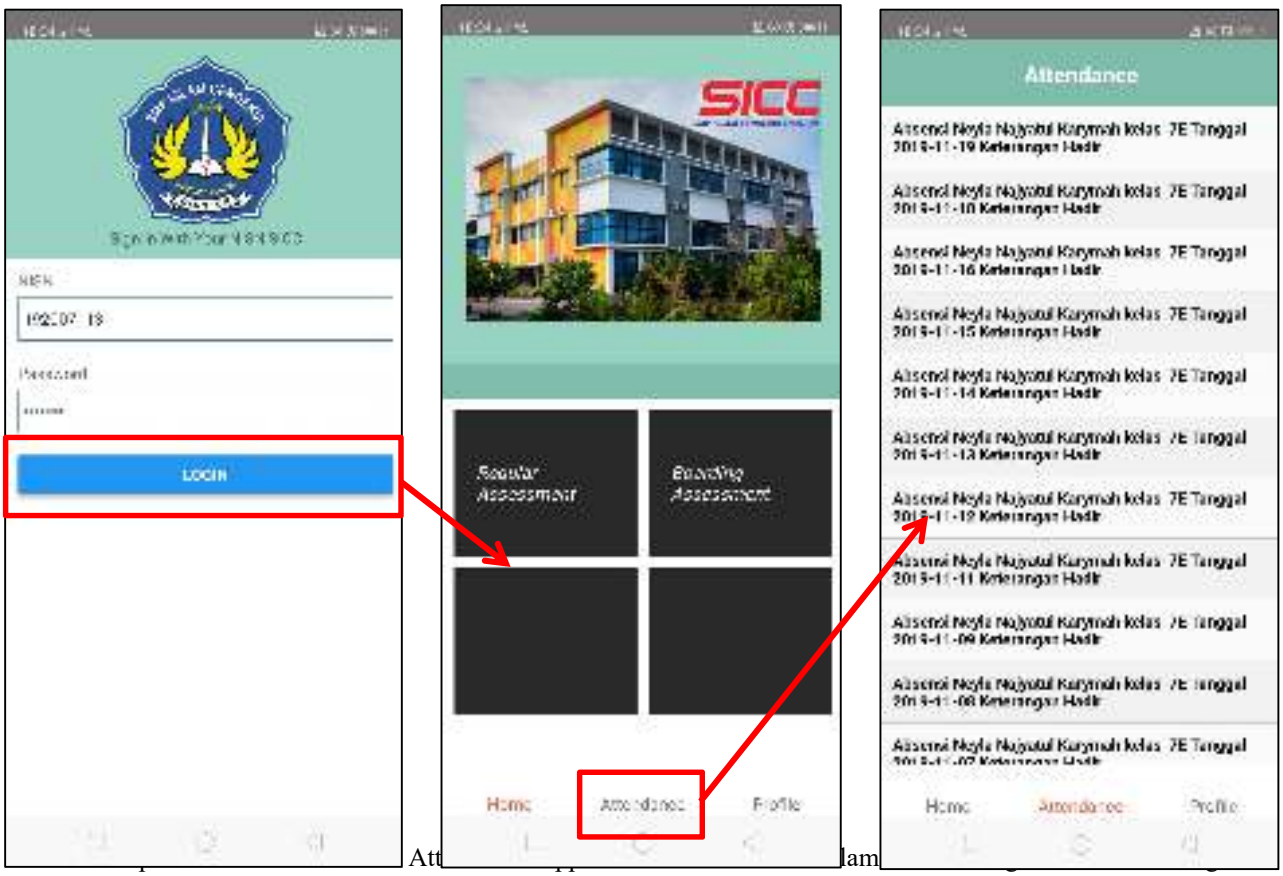

Figure 7. The process by which parents look at their child's attendance data

From Figure 7 above it can be seen, using the child's NIS account and the password that has been determined, parents can enter the SICC App after clicking the LOGIN button. After successfully entering, a display will appear where at the bottom of the display there is the Attendance button option, click the button, it will enter the display of the child's attendance data at school every day. From these data parents can ascertain whether their children have the information Present, Alpha, Permit, or Sick every day.

3.3 Attendance Scenarios

a. Students come to school, enter class or gather in the field.
b. Homeroom teacher records student attendance by using attendance applications that have been downloaded and installed on their respective Android smartphones.
c. After the homeroom teacher completes attendance, the application will immediately send data to the school server.
d. The picket teacher as an administrator can enter the website using a browser on an Android smartphone, tablet, laptop, or PC to see the results of the recapitulation of student attendance every day.
e. Parents of students can see the daily attendance recap using each of their android smartphones as a form of supervision of the discipline of their children at school.

D. CONCLUSION

From the results during the data collection process, needs analysis, architectural modeling and implementation can be concluded as follows :

a. Application using an Android smartphone successfully built with a combination of a database and programming. The database uses MySQL and programming for android uses Kotlin with the framework using React Native, while programming for websites uses PHP and HTML with web page layouts using CSS.
b. The application that was built successfully did attendance and recap automatically, so that the evaluation of student discipline became easier.
c. The system created can make it easier for teachers to evaluate students as one of the assessment components that can determine students rise to the next level and parents can also monitor their children's attendance.

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CURRICULUM MANAGEMENT AND SCHOOL READINESS IN FACING ERA 5.0

Muhammad Ilham, muhammadilham.2018@student.uny.ac.id
Udik Budi Wibowo, Udik_bw@uny.ac.id
Pascasarjana, Universitas Negeri Yogyakarta
Yogyakarta, Indonesia

Abstract. The curriculum is a plan that has a certain system and structure. The curriculum is very important in educational institutions because it is a guideline for organizing learning activities, in which there are contents, subject matter, subject sets, teaching delivery methods. The purpose of this study was to find out: (1) curriculum planning (2) organizing the curriculum, (3) curriculum implementation, (4) supervision, curriculum evaluation and readiness of the 11th Senior High School Yogyakarta to face the era of 5.0. The approach used in this research is a qualitative approach with a case study design. Data and data sources in this study were obtained from interviews with informants. This research was conducted in Yogyakarta 11 Public High School. The results were obtained that curriculum planning was carried out in May before the new school year began. The 11th High School curriculum was compiled by leadership staff consisting of school principals, TU principals, all vice-principals and committees. SMA N 11 Yogyakarta has been using the 2013 curriculum since 2016. The curriculum at SMA N 11 Yogyakarta was evaluated when the curriculum was implemented by monitoring, the last evaluation is carried out in May after UNBK annually. SMA N 11 Yogyakarta is ready to apply era 5.0 in the curriculum if there is a notification from the central government.

Keywords: Management, curriculum, era 5.0

A. INTRODUCTION

Education is a very important investment in the future. Education becomes the main capital for development and enhancing the dignity of a nation. According to Law No. 20 of 2003, education is a conscious and planned effort to create an atmosphere of learning and learning process so that students actively develop their potential to have spiritual, religious, self-control, personality, intelligence, noble character, and skills needed by themselves, the community, nation, and state. Indonesia's educational philosophy is noted in the body of the 1945 Constitution, which is "to make the life of the national intelligent".

Education must always be developed in the context of cultural transformation which is carried out through the process of education and learning from developing countries can turn into developed countries. According to Vashisth (2018) education is an important factor for synthesizing, building ethos, institutions and is very important for national growth and security, whether political, economic, social or cultural. Professional education is very important to utilize a country's natural resources. The ultimate goal of education is to create new people who can advance a country.

Until now, improving the quality of education in Indonesia has not been maximized. Suluh (2018) Education Development Index in Indonesia based on the 2012 UNESCO report ranked Indonesia 64th out of 120 countries. This has become a big homework for Indonesia. Indonesia as one of the UNESCO Member Countries is strongly committed to

ensuring the achievement of the six Education for All (EFA) goals. The goals of education are: 1) broadening early childhood care and education opportunities, 2) ensuring and expanding equitable access to basic education, 3) expanding lifelong learning opportunities, 4) ensuring increased adult literacy and continuing education, 5) ensuring equality gender in education, and 6) improving and ensuring the quality and standards of education in Hawadi (2014).

One tool that needs to be considered to achieve educational goals is the curriculum. Sutrisno (2018) said that the curriculum is a learning plan that contains the objectives to be achieved. Whereas according to Hamalik (2017) the curriculum is a written plan about abilities that must be possessed based on national standards, material that needs to be learned and learning experiences that must be lived to achieve abilities, and evaluations that need to be done to determine the level of achievement of students' abilities, as well as a set of rules with regard to the learning experience of students in developing their potential in certain educational units. The curriculum is a very important component and is a very vital educational tool within the framework of the national education system.

The curriculum becomes a very important tool to increase the success of the overall education system. Given the importance of the curriculum, curriculum development experts must pay attention to curriculum management starting from planning, organizing, implementing and evaluating. Curriculum development must follow the development of science, technology, globalization and the demands of the times.

Today has entered the era of society 5.0. Society 5.0 is a people-centered, technology-based society based on the habits of the community 4.0. The custom of the people in the 4.0 era was the use of technology and AI which greatly increased. In the era of the industrial revolution 4.0, technological developments had a major influence on the world of education in Indonesia. Azzahra (2019) said that information and technology influence activities in schools very massively. New information and knowledge spread very quickly and can be accessed by anyone and anywhere. Education experienced a very great disruption. The role of the teacher who has been the sole provider of knowledge has shifted slightly away from him. In the future, the role and presence of teachers in the classroom will be increasingly challenging and require very high creativity.

Era 5.0 does not rule out the possibility of having a big influence in the world of Indonesian education. Makarim (2019) said that technology cannot replace the role of a teacher. Therefore, real learning is the existence of an inner connection between the teacher and students. Therefore to anticipate this, it is necessary to research curriculum management

and the readiness of schools to apply era 5.0 in the curriculum and provide a little school knowledge about era 5.0. This research was conducted in Yogyakarta 11 Public High School.

B. RESEARCH METHODOLOGY

The approach used in this research is a qualitative approach with a case study design. Data and data sources in this study were obtained from interviews with informants. Data collection techniques in this study used observation, interviews and documentation studies. This qualitative research data analysis technique was conducted by an interview. Activities in data analysis in this study are data reduction, data presentation, and conclusions. Checking the validity of the data is proof that what has been experienced by the researcher corresponds to what exists, and compares the results of interviews from one informant and other informants. To find out the validity of the data the researchers used several techniques, namely the credibility test which by extending the research period (observation) in the field, increasing perseverance meant making observations, triangulation of sources and techniques. The location of the study was conducted at Yogyakarta 11th High School on November 7, 2019.

C. RESULTS AND DISCUSSION

3.1 Curriculum planning in SMA 11 Yogyakarta

Planning is the most important stage in the management function. Planning functions to arrange programs that will be carried out to achieve a goal in the future. Good curriculum planning will give students access to achieve the academic potential of all students. Triwiyanto (2015) said that the purpose of curriculum planning is as a guideline for organizing learning activities to achieve certain educational goals. Wahyudi (2014) curriculum planning is a guideline, mobilizer, and also as a motivation in curriculum implementation.

Based on research conducted at Yogyakarta 11 Public High School, it was obtained that, Yogyakarta 11 Public High School made curriculum planning in May before entering the new school year. This curriculum planning was designed by a curriculum development team consisting of the principal, all vice-principals, teachers, senior teachers, and committee administrators. Curriculum planning must consider several aspects, namely, the needs of students, technological development, facilities, culture, community needs, the availability of human resources and student abilities.

Before planning, the principal first submits the results of last year's evaluation, if there are programs whose results have not been satisfactory or are not good for schools, then the program will be deleted in plans. In planning this curriculum, the school makes three documents. Document one consists of the vision, mission, learning objectives and evaluation made by the curriculum development team. Document two consists of syllabus and learning tools, while document three consists of lesson plans made by subject teachers. Document one will be checked by the school principal, the district/city secondary education center and then brought to the provincial education office. Document one must be completed on the first day of entering the new school year.

In planning documents two and three, the teachers were given the task of making learning tools, lesson plans and syllabus at home and then brought to the school for inspection by the school principal. Documents two and three must be completed before entering the second week of the new school year. Curriculum planning is inseparable from the principal's role as a school leader. The role of the principal in curriculum planning is that the principal directs and provides an overview of the objectives to be achieved, then the curriculum development team lays out the picture given by the principal.

Curriculum planning in SMA N 11 Yogyakarta is in accordance with the principles of curriculum planning, namely: 1) curriculum planning regarding and closely related to student experiences: 2) curriculum planning is based on various decisions about content and processes, which are inseparable from the contents, material, subject matter, field of study, and are closely related to the process and delivery of the contents: 3) curriculum planning contains decisions about issues and topics: 4) curriculum planning involves many parties, including groups of subject teachers, principals, observers of education, parents, stakeholders and other relevant parties: 5) curriculum planners are implemented at various levels or levels: 6) curriculum planning is a continuous process.

3.2 Curriculum Organization

Curriculum organization is a pattern and arrangement of curriculum components that are organized into subjects, programs, lessons, topics, units whose aim is to make it easier for students to understand what is taught to master the competencies predetermined by Sugiana (2018).

Based on research conducted at Yogyakarta 11 Public High School, the results show that the school has an organization of school development teams consisting of leadership

staff, school principals, TU principals, all school principals, and committees. The school development team will be given their respective jobs and school planning in general.

3.3 Implementation of the curriculum

Jabar (2016) that curriculum implementation is mostly related to teaching. This includes teaching methods, materials, and resources, which are often listed in teaching materials, and lesson plans and often also observed in the classroom when the learning and teaching process takes place. The implementation of the curriculum is interpreted as a learning process that begins with learning planning (syllabus preparation), implementation of learning (teaching and learning process), and evaluation of learning (tests and non-tests) to determine the achievement of objectives, the effectiveness of the use of strategies, methods, and learning media.

Based on the results of research conducted at Yogyakarta 11 Public High School, it was found that the implementation of the 2013 curriculum in schools began in 2016. The school has a management aspect in implementing the curriculum, namely preparation, implementation of lessons and closure. In the preparation process, the teacher greets and then sings the song, Indonesia Raya. Classes that do not sing Indonesia Raya can be seen in the teacher's lounge through CCTV monitoring. The teacher will follow up by encouraging students to sing Indonesia Raya through a speaker. After singing Indonesia Raya, the teacher starts core learning

The core learning process is the actual teaching activities carried out by the teacher and the interaction between the teacher and students regarding the subject matter to be taught. In this core learning process, teachers are not free from technological support. Students are empowered to use mobile phones to search for ongoing study material, exam questions that have passed to practice. However, the teacher tells the students to store the handphone again after its use is finished. In the learning process, the teachers have used the LCD in learning effectively and the teacher has used active speakers available in the classroom. The concluding part of the teacher concludes the learning outcomes, conveys learning material at the next meeting and gives assignments to students.

The implementation of the 2013 curriculum in schools is inseparable from supporting factors including, the school is located in a strategic location, spacious and relatively complete facilities to support the implementation of the curriculum. Teachers still experience obstacles in the implementation of the 2013 curriculum. The main obstacle experienced is adjusting for changes that continue to occur. The implementation of the

2013 curriculum in schools has not been maximized because the dynamics of 2013 curriculum changes are very fast. Older teachers find it difficult to innovate in learning. Teachers who experience difficulties are included in the technical guidance, training and education strategies for implementing the 2013 curriculum held by the Human Resources Development Agency for Education and Culture and Education Quality Assurance (BPSDMPK and PMP).

3.4. Curriculum evaluation

Curriculum evaluation is intended to examine the overall curriculum performance in terms of various criteria. The performance indicators evaluated are the effectiveness, efficiency, relevance, and feasibility of the program. Evaluation aims to improve the curriculum by revealing the process of implementing a curriculum that has successfully achieved the goals set by Wahyudin (2014).

Based on research conducted at Yogyakarta 11 Public High School, the results were obtained that the curriculum evaluation was carried out when the curriculum was implemented through monitoring. The latest evaluation was conducted in May before UNBK as well as preparing the next curriculum plan. The evaluation system was also implemented by the principal receiving reports from each teacher, vice-principal, and student. Students submit their complaints directly to the principal either face-to-face or through communication tools such as the WhatsApp application. The principal does not directly execute the report received but is discussed with the curriculum development team.

3.5. School readiness implements the era of society in the curriculum

Curriculum development in schools must keep up with the times so that schools can survive and not lag behind other schools. SMA N 11 Yogyakarta is ready to implement the era of society 5.0 if there is an order from the central government. N 11 Yogyakarta High School is a public school so it must wait for direction from the central government. Public schools must not be creative outside the corridor and await government regulation. The preparedness of SMA N 11 Yogyakarta implements the era of society 5.0 as well as the readiness of schools to receive the 2013 curriculum. Teachers are included in the technical guidance, training, and education.

D. CONCLUSION

Based on the results and discussion of research that has been done, it can be concluded as follows:

a. Curriculum planning at Yogyakarta 11 Public High School was held in May before entering the new school year. This curriculum planning was designed by a curriculum development team consisting of the principal, all vice-principals, teachers, senior teachers, and committee administrators.

b. The curriculum organization at SMA N 11 Yogyakarta consists of the school development team organization consisting of the leadership staff, school principals, TU principals, all school principals, and committees. The school development team will be given their respective jobs and school planning in general.

c. The implementation of the 2013 curriculum in schools began in 2016. The school has followed the times in implementing the implementation of the curriculum and learning. The teacher allows students to use mobile phones to look for ongoing learning material, exam questions that have passed to practice. In the learning process, the teachers and teachers have used the LCD in learning effectively

d. Curriculum evaluation is carried out when the curriculum is being implemented through monitoring. The latest evaluation was conducted in May before UNBK as well as preparing the next curriculum plan.

e. The readiness of SMA N 11 Yogyakarta implements the era of society 5.0 as well as the readiness of schools to receive the 2013 curriculum. Teachers are included in the technical guidance, training, and education.

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THE EFFECT PROBLEM BASED LEARNING METHOD ON CRTITICAL THINKING SKILL

Tanti Dwi Puspitasari, Ikin Solikin
Students, School Of Postgraduate Studies, Indonesian University Of Education, Bandung, Indonesia
Lecturer, School Of Postgraduate Studies, Indonesian University Of Education, Bandung, Indonesia
Tantidps07@gmail.com, solikin65@gmail.com

Abstract
21st century education integrates knowledge, skills, attitudes and mastery of ICT in a learning model and must have 21st century skills, namely HOTS skills. Critical thinking is one of the skills and demands of 21st century learning. Critical thinking is to think logically and be able to decipher information precisely and systematically. Critical thinking skills are in the realm of C4 (analyzing), C5 (evaluating) and C6 (creating / creating). In improving critical thinking skills training is needed to become a great thinker. The ability to think critically must be possessed in order to be right in making decisions in every problem with the resources we have. One important factor that affects critical thinking skills is the learning method. Problem Based Learning Method has the aim to improve critical thinking skills. Problem Based learning method is a reflection of constructivism theory because in its learning contains the principles of constructivism. This theory is student-centered and engages students to be active in the learning process so as to improve students' critical thinking skills.

Keywords: Critical thinking, Problem Based Learning

A. INTRODUCTION

21st Century education according to the 2017 Ministry of Education and Culture is education that integrates knowledge, skills, attitudes and mastery of ICT through an active learning model that is tailored to the competencies and materials in which there are 21st century skills as well as HOTS skills. In the 2013 curriculum learning model applying scientific learning methods. The scientific approach includes 5M (Observing, Asking, Gathering information, Reasoning/Associating and Communicating). HOTS (High Order Thingking Skill) learning according to Bloom's taxonomy is in the areas of C4 (analyzing), C5 (evaluating), and C6 (creating). 21st Century skills here focus on 4C (Communication, Collaborative, Critical Thinking and Innovative Creative).

21st century learning demands must also be able to think logically describe information, produce critical thinking skills, communication skills and interpersonal skills. Critical thinking is actually not a new concept, since 2500 years ago the Greek philosopher Socrates had talked about critical thinking, which was then followed by Aristotle who developed the reason for critical thinking. The ability to think critically is a process is not a product (Ulucinar & A, 2016).

In this 21st Century we must have the ability to think critically in order to be quick in making decisions of every problem with the resources we have. The ability to think critically cannot be obtained instantly but needs to be trained and developed so that it becomes a great thinker who can make or make the best decisions, and here the teacher must participate in realizing them in the learning process in class. Critical thinking is about what we think, when we think that we make the best decisions (Paul R., & Elder, 2013).

Critical thinking is very important because in practice students need the ability to be able to analyze, interpret, assess, communicate and evaluate themselves. The quality of education will improve if schools develop critical thinking skills in teaching and learning activities, according to (Mainali, 2011). The aim of developing critical thinking skills in students is to gain complete and correct knowledge and understanding not to win or show excellence, according to (Sihotang, Rima, 2012).

The phenomenon of the low value obtained by students is an indication of the low ability of students' critical thinking. Because there are still many teachers who use the old way in the teaching process. This is because the amount of time that must be used in the teaching process. As a result, the ability to think critically is low. This is due to the limited time with quite a lot of material delivered, inadequate facilities available in class and at school, still do not understand about scientific learning models, lack of information seeking, lack of time to plan learning, still felt quite effective delivery with lecture methods and can be delivered overall, and feel the lecture method is quite simple and practical.

From the 2015 TIMSS (Trends in Mathematics and Social Study) data, it was found that 95% of students in Indonesia were only able to reach the middle and lower levels compared to Taiwanese students whose students were able to reach high levels which stated that the critical thinking skills of students in Indonesia were still low .

There are internal and external factors that affect students' critical thinking skills. Internal factors are student characteristics (Green, 2005), experience (Loes, Pascarella, Umbach, & Loes, 2017), learning styles (Vaughn & Baker, 2001) and self efficacy (Phan, 2009). External factors affecting students include learning methods, learning styles (Vaughn & Baker, 2001). In the 2013 curriculum there are four suggested learning methods, namely, Problem Based Learning, Discovery Learning, Project based Learning and Inquiry.

Viewed from the four methods above, the Problem Based Learning Method is a method used with the aim that students think critically. According to (Li & Tsai, 2017),, (Triki, Nicholls, Wegener, & Bay, 2015), (Masek, Yamin) Problem Based Learning is a method that can improve critical thinking skills. (Maxwell et al, 2001) said that the Problem Based Learning method is suitable for high school economics subjects. In choosing the method of Problem Based Learning in improving critical thinking skills due to adjusting to the 2013 curriculum.

Constructivism learning theory is a grand theory of problem based learning method introduced by John Dewey. This is also because in the learning process of these two methods there are principles of constructivity. Learning Theory Constructivism is a theory that views that each individual has the ability to build their own knowledge by interacting continuously in their environment. Problem based learning that requires students to learn from empirical problems, think analysis and solve them. Problem Based Learning also involves students conducting relevant investigations and enabling them to learn, according to (Cakir, Ozlem S, 1999).

B. RESEARCH METHOD

The method in this study is the study of literature, namely the collection of data and information from scientific journals, books, and research results. The data and information obtained were developed by combining several theories about critical thinking abilities and problem based learning methods as well as other relevant theories.

C. LITERATURE STUDY

3.1 *Critical Thinking*

The word critic comes from the Greek language, the word critic and criterion. The word critics means 'consideration' while criterion implies 'standard measure' or standard according to (Paul, Richard W; Binker, A.J.A., 1990). So etymologically, the word 'critical' means 'consideration based on a

standard or standard'. According to the opinion (Lambertus, 2009) in etymology critical thinking implies a mental activity carried out by someone to be able to give consideration by using a certain size or standard. The term critical thinking (CT) can also be defined as the ability to think rationally and logically.

Critical thinking which is the goal of national education was introduced by two experts namely (Glaser, 1941). Ennis has a very influential view, he identified critical thinking as "Reflective and sensible thinking that is focused on what decisions to believe or do (Ennis & R.H, 1985). Critical thinking is thinking clearly and rationally which involves thinking precisely, systematically, and following the rules of logic and scientific reasoning. According to Chaffee (Suriadi 2006), critical thinking is a systematic investigation of the thought process itself which is done intentionally using evidence and logic. Critical thinking is the process of actively involving, analyzing, studying and researching problems to arrive at final conclusions, (Fattahi & Haghverdi, 2015).

Critical thinking is a skill according to (Lipman & M, 1987). Then (McPeck, John E. & Press, 1981) emphasized the meaning of critical thinking is "the tendency and skill to engage in an activity with a more curious level". (Bloom, Benjamin, 1956), the well-known cognitive hierarchical taxonomy, says the processing of thinking views as a skill set that varies from the lower order to higher-level skills that requires more complex thinking than lower ones that are thought to require basic thinking and more complex (M Akshir Ab kadir, 2007).

The ability to think critically is reasonable thinking reasoned that is reflective focused on what decisions a person must do from a situation that has indicators in the form of clarity (clarity) that is providing basic explanations, for example being able to define terms etc. Furthermore, the basis (base) is able to support one's conclusions, assess evidence and provide examples, then inference (inference) able to draw conclusions or draw conclusions, and finally interactions (interaction), namely providing solutions or decisions on actions by monitoring implementation (Ennis, 1987).

3.2 *Constructivism Learning Theory*

In the 2013 curriculum various suggested learning methods are the Problem Based Learning method. John Dewey's Constructivism Theory states that problems arise built from the reconstruction carried out by students themselves. Dewey argues that learning depends on students' own experiences and interests and topics in an integrated curriculum.

Problem Based Learning is the development of constructivism learning theory, this is because in the learning process using the Problem Based learning method there are constructivity principles, for example the Problem Based Learning method takes from real problems, solving structured and open problems, making students active.

Constructivism learning theory was developed by Jean Piaget. This theory was born from the ideas of Piaget and Vygotsky. This theory views everyone as having the ability to build their own knowledge through interaction with their environment (Ginting Abdorrahkman, 2012). Constructivism is the basis for thinking that states that knowledge is built little by little by humans whose results are expanded through a limited context and not quickly according (thobroni, Muhammad and Mustofa, 2012).

3.3 Problem Based Learning

Problem Based learning is one of the recommended methods to be applied to the learning process in the 2013 curriculum. Problem Based Learning is a method of learning that is confronted with problems taken from empirical problems, then solves problems and looks for solutions. Problem based learning (PBL) is based on several expert minds, namely John Dewey, Piaget, Vygotsky and Bruner.

Problem Based Learning (PBL) is a learning approach that has been used successfully for more than 30 years and continues to gain acceptance in various disciplines. Problem Based Learning (PBL) was first developed by Prof. Howard Barrows around the 1970s in the study of medical science at McMaster University Canada (Amir & M. Taufiq, 2009) which presents a real problem as the beginning of learning and then solved using a problem solving approach.

"Problem Based Learning is a method in education where the problem itself provides a suitable context especially for further learning. The core of the problem (real life problems, case studies, group assignments) accustom trained students, thereby increasing students' interest in learning "According to (Kristof De Witte & Rogge, 2012).

It can be concluded Problem Based Learning is a method in an education where the problem becomes the context in learning. Problem Based Learning is a learning method where students learn through problem solving that is facilitated. In PBL methods the learning center on complex problems that do not have the right answer, students work in groups and work together to identify what they need to solve a problem.

D. CONCLUSION

In the 21st century education critical thinking skills are needed, and therefore must be supported by training and developed in the learning process. The low ability of critical thinking in our country requires us to immediately find a solution of these problems. There are several factors that affect critical thinking skills, one of which is the learning method. Learning methods suggested in the current curriculum Problem Based Learning can improve critical thinking skills according to statements from several experts.

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THE RELATION BETWEEN ONLINE CUSTOMER ENGAGEMENT, E-SATISFACTION, AND E-LOYALTY IN TOKOPEDIA CUSTOMER

Dadan Sumantri, dadan.sumantri@student.upi.edu
Agus Rahayu, agus_rhy08@upi.edu
Mokh Adib Sultan, adieb_sultan@upi.edu

ABSTRACT

In a decade or so, marketing has changed where business functions have made technology a very important dependency, especially with the advent of the internet. Furthermore, today the Indonesian government is aggressively building digital market infrastructure to expand markets and eliminate consumer barriers with producers so that it can increase Indonesia's GDP. This phenomenon makes buying behavior changes by transacting in e-commerce. One e-commerce that is growing rapidly in the digital industry in Indonesia is Tokopedia where the Tokopedia application is the most popular application in Indonesia. With the high download of this application Tokopedia, the purpose of this study is to look at how online customer engagement directly has a relationship and influence on e-satisfaction and e-loyalty of its customers in the city of Bandung. This researcher uses descriptive and verification methods, where SEM (Structural Equation Modeling) is used to analyze data statistically. This research was conducted with a survey of 200 respondents namely Tokopedia consumers who use mobile applications.

Keyword: Online Customer Engagement, E-Satisfaction, E-Loyalty, E-commerce, Mobile Application,

A. INTRODUCTION

The industrial revolution has developed rapidly with the use of the internet, mobile internet-based technology, big data, and artificial intelligence, which have made it easy for industries to reduce physical encounters and increase their creative abilities (Gentsch, 2019). Industrial Revolution 4.0, presenting the latest Business Process Management including in the Electronic Commerce Industry (e-commerce) in managing the buying, selling, marketing and distribution of products and services through the internet, with the final vision of carrying out all commercial operations (transactions) through digital (Hitpass dan Astudillo, 2019). In the digital world, marketers gain additional power to create customer engagement, build brands, create experiences based on customer value relationships that can be obtained from the use of social media, big data and process them as marketing analysis (Kotler, Amstrong dan Opresnik, 2018). If this new industrial revolution digitizes all logistics, buying and selling processes, e-commerce will account for more than 90% of global commercial transactions. In other words, business processes and e-commerce cannot be managed separately: behind each service there will be a digital process that is integrated with the entire network of business participants.

In Indonesia, there are several e-commerce which have a big influence. Reports from the Iprice Group rank e-commerce based on the number of visits to the website each month, the ranking of applications, the number of followers on social media, to the number of employees (Iprice, 2019). Tokopedia is ranked first in the top e-commerce in Indonesia with more than

137 million visits to the page. The Tokopedia application on the Apple Appstore and on the Google PlayStore ranks second. Bukalapak, which is a local player, is ranked second as the top e-commerce site in the country where the number of Bukalapak visitors per month is more than 115 million visits. Shopee dominates the mobile application platform, which is ranked first on the Apple Store and Google Play Store. In followers on social media Shopee has 69 thousand followers on Twitter, 2.1 million followers on Instagram, and 14.4 million followers on Facebook. Lazada is one of the major e-commerce players in Southeast Asia but in Indonesia ranks 4th in the list of top 5 e-commerce in Indonesia where is visited by 52 million visitors. Blibli is visited by more than 32 million visitors each month. Blibli's position on the mobile application platform Blibli application occupies 7th in the Apple Store and 6th in the Google Play Store.

Table 1: 5 BIG E-COMMERCE IN INDONESIA

No	Online Store	Monthly Web Visitors	AppStore Ranking	Playstore Ranking	Twitter	Instagram	Facebook	Employee
1	Tokopedia	137,200,900	2	2	192,100	1,148,500	6,049,900	2,677
2	Bukalapak	115,256,600	3	4	161,500	711,700	2,423,200	2,575
3	Shopee	74,995,300	1	1	69,300	2,164,100	14,409,600	2,748
4	Lazada	52,044,500	4	3	365,300	1,173,200	28,245,000	2,212
5	Blibli	32,597,200	7	6	483,300	627,400	8,244,800	1,217

(Iprice, 2019)

From these data it can be seen that the best e commerce is Tokopedia. Researchers need to look at what components cause Tokopedia to become the best e-commerce in Indonesia, especially in the city of Bandung

B. THEORETICAL BACKGROUND AND DEVELOPMENT OF HYPOTHESES

Online consumer behavior has a direct relationship with these five elements such as electronics stores, logistical support, product characteristics, website technology characteristics, information characteristics, and home page presentation. According to research, people who have a cable lifestyle and who have limited time, they spend less time buying goods online (Bellman, Lohse dan Johnson, 1999; Bashir, 2013).

The importance of understanding consumer behavior in the e-commerce industry is explained by Pimentel (2015) & Bijmolt et al. (2010) e-commerce consumers in disseminating information with word of mouth is equivalent to the speed of light. By using the internet and

social media by consumers, at present, can share about certain products, services or businesses in seconds to almost the entire world. This concept change is realized by modern marketers and companies, especially for online transactions. The company sees that customers can create value, create competitive strategies, collaborate in the company's innovation process, and be endogenous for the company. At the core of this new view is the concept of customer involvement, which is defined as a manifestation of customer behavior towards a brand or company that goes beyond buying behavior (Bijmolt *et al.*, 2010; Doorn *et al.*, 2010).

Furthermore, the relationship between the company and its customers becomes closer, more selective and may become so close that there is an intimacy or engagement tendency that results in the manifest of this behavior which can affect the brand by means other than buying such as word of mouth (word of mouth) mouth), participation in company activities, suggestions for service improvement, customer voices, participation in brand communities, or revenge (Treacy dan Wiersema, 1993; Bijmolt *et al.*, 2010).

Customer engagement can be defined when psychological conditions arise during the process of interacting and creating customer experiences with other stakeholders in certain service exchanges with the company, and that is manifested in positive behavior, actively interacting and being consistent (Doorn et al., 2010; Brodie et al., 2011; Zhang et al., 2016). Customer engagement in an online environment is associated with advances in information technology, such as adoption of smartphones, tablets, laptops, and many other internet and / or cellular based technologies (Zhang, Lu dan Kizildag, 2017).

Because online consumer involvement begins in the concept of social media applications through web sites, this study specifically looks at the constructs of perceived quality of information, perceived enjoyment, and perceived interactivity because these constructs are often cited in the website design literature as important characteristics to be included when designing the site effective web company (Zhang dan Dran, 2000; Koufaris, 2002; Cao, Zhang dan Seydel, 2005; Ou dan Sia, 2010; Reitz, 2012). The dimensions of online customer engagement are explained on 3 factors, namely technical factors, social factors and individual factors (Mollen dan Wilson, 2010; Zhang, Lu dan Kizildag, 2017). Online customer engagement has a positive relationship with e-satisfaction. In online mobile banking, customer engagement can have a direct influence on e-satisfaction (Dovaliene, Masiulyte dan Piligrimiene, 2015). Higher levels of customer engagement with online brand communities lead to increased satisfaction, positive WOM and loyalty (Wirtz et al., 2013; Solem, 2016).

H1: Online customer engagement will have positive effect on e-satisfaction.

In the context of e-commerce, e-loyalty is influenced by customer preferences for certain websites, resulting in repeat transactions, so it can be said that e-loyalty is one of the important drivers for e-commerce success (Anderson dan Karunamoorthy, 2003). E-loyalty is considered as an important construct because it positively affects long-term profitability and word of mouth references to online businesses, because customers in general often ask for advice from loyal customers (Hur, Ko dan Valacich, 2011). The concept of e-loyalty is divided into four factors, namely cognitive, affective, conative, and action which are the application of the loyalty dimension to online business (Hur, Ko dan Valacich, 2011). Online customer engagement can also have a significant and positive effect on word of mouth (Zhang *et al.*, 2016). Likewise, in their research explained the relationship model between customer engagement that affects customer loyalty.Bijmolt et al. (2010) presents a model that states that online customer engagement can affect word of mouth and customer retention.

H2: **Online customer engagement will have positive effect on e-loyalty**

E-Loyalty is positively and directly related to e-satisfaction (Anderson dan Karunamoorthy, 2003; Luarn dan Lin, 2003), Anderson & Srinivasan, 2003) where higher e-satisfaction will have an impact on higher e-loyalty (Anderson dan Karunamoorthy, 2003). E-satisfaction has the understanding of meeting the needs and expectations of customers on the website and the overall quality of the website is considered satisfactory. E-satisfaction is a term used for customer satisfaction in the web (Cyr, Dash dan Kindra, 2008). To be able to define e-customer satisfaction in e-commerce consists of six dimensions, namely the dimensions of products, services, network systems, payments, privacy protection, website characteristics (Sheikh dan Basti, 2016).

H3: **E-Satisfaction will have positive effect on e-loyalty**

The purpose of this study was to obtain answers from the problems mentioned above, that is, knowing the effect of online customer engagement to e-satisfaction, knowing the effect of online customer engagement to e-loyalty and determine the influence of e-satisfaction on e-loyalty in Tokopedia

C. RESEARCH METHOD

This research was conducted in less than six months, namely from June to November 2019 at Bandung. The method used was cross sectional method, which is a research method by studying objects in a certain period of time / not sustainable in the long term. Respondents in this study

were taken by giving questionnaires to Tokopedia consumers who shop using a mobile application.

This research used sampling technique called random sampling, random sampling technique is used when the population is considered homogeneous. Supranto & Limakrisna (2012) the ideal sample size for SEM should be between 200 - 400. This is consistent with the number of population in this study that is unknown, so the assumptions of sampling can use this method. To want results to be more precise, then it should be greater than the number of respondents is 400 with 10-15 observed variables and with an error rate of 5%. However, due to social constraints (time, cost and energy), this study will take a sample of 200 people.

The measurement scale used is the Semantic Defferential scale that is a scale used to measure attitudes only the form is not multiple choice or checklist but is arranged in one continuum whose answer is very positive located between the right side of the line, the negative answer continuum is to the left of the line and the positive answer continuum is on the right line (Sugiyono, 2017). The data obtained are then processed using descriptive statistics and processing of verification data carried out by SEM because this research aims to develop theory and not have multi-collinearity problems. Before testing the hypothesis, it has been that the indicators used can measure latent constructs through 2nd order confirmatory.

D. RESULT AND DISCUSSION

4.1. Model Analysis

Model testing is carried out on 3 stages: Goodness of Fit (GOF) analysis, validity and reliability.

4.1.1 GOF Analysis

Testing the model will produce several components that will be seen whether this model can be declared fit or not. The GOF components seen are $\chi 2$, RMSEA, NFI, NNFI, CFI, IFI, RFI, dan RMR (Wijanto, 2008; Pappas *et al.*, 2014). Following are the results of GOF analysis in this study:

GOF Component	Target Result	Estimated Results	Result Model
$\chi 2$;	Nilai yang kecil;	$\chi 2$ = 931.516;	Good
RMSEA; p (close fit)	RMSEA $\leq$ 0.1; p < 0.50	0.1; 0.00	Good
NFI	NFI $\geq$ 0.90	0.95	Good
NNFI	NNFI $\geq$ 0.90	0.96	Good
CFI	NNFI $\geq$ 0.90	0.96	Good

IFI	IFI ≥ 0.90	0.96	Good
RFI	RFI ≥ 0.90	0.95	Good
CN	CN ≥ 200	112.90	Good
RMR	Standardized RMR ≤ 0,05	0.020	Good

Tabel 2: GOF Result

Source: Lisrel Output

4.1.2 Validity

Validity test on the suitability of the model can be known from the results of t-value and SLF. To meet the validity requirements, the value of t-value must be ≥ 1.96 and SLF ≥ 0.5. If there are indicators that do not meet the t-value and SLF, then these indicators must be removed for later testing (Wijanto, 2008). In this study all indicator items have SLF values ≥ 0.5 and t-values ≥ 1.96 so that they can be declared valid

4.1.3 Reliability

To measure reliability in SEM, is to measure the composite reliability measure (CR) value and the variance extracted measure (VE) value. Wijanto (2008) explained that the value that must be fulfilled for the CR value is ≥ 0.70 and VE ≥ 0.50 in order to be declared reliable.

Table 3: CE and VE Result

Variable	**Construct Reliability (CR)**	**Variance Extracted measure (VE).**	**Reliability**
Online Customer Engagement	0.983	0.974	Good
E-Satisfaction	0.971	0.960	Good
E-Loyalty	0.936	0.907	Good

Source: Lisrel Output

From the table above it can be stated that all variables tested in this model can be declared reliable so that it can be continued to test the hypothesis

4.2. Hypothesis Result.

This section deals with evaluating the coefficients or parameters that show a causal relationship or the effect of one variable on another. These casual relationships are hypothesized in this study.

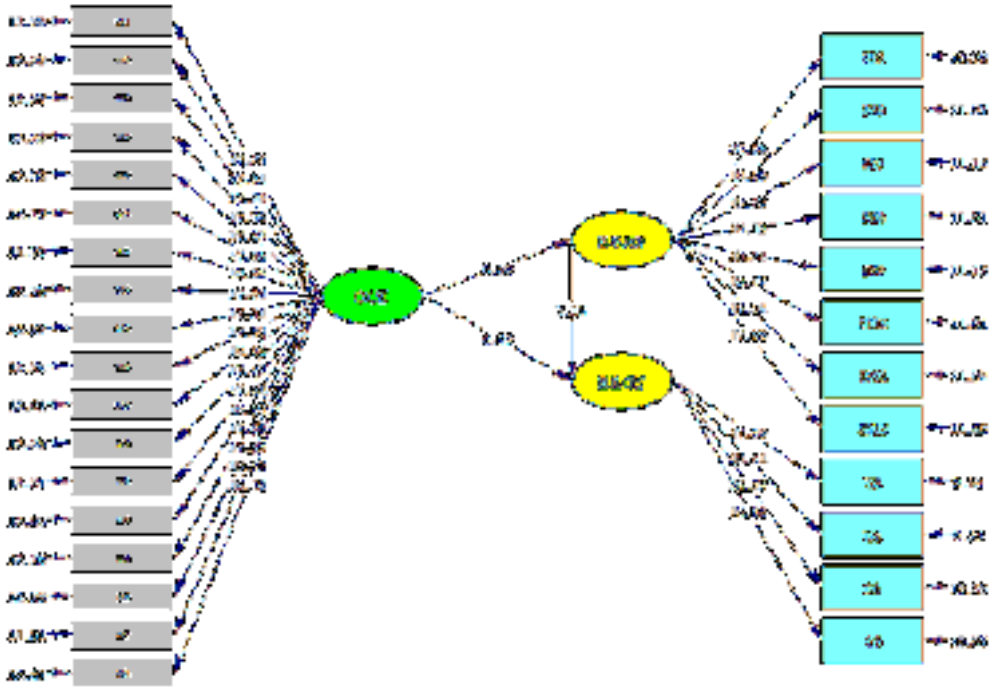

Figure 1: Lisrel Output

4.2 1. The relationship between online customer engagement and e-satisfaction

From the test results of the model in this study it was found that the t-value for the relationship between online customer engagement and e-satisfaction was 5.5. In other words the hypothesis in this relationship is accepted (H1 accepted) because the t-value> 1.96. This is in line with previous research which states that online customer engagement has a positive relationship with e-satisfaction (Dovaliene, Masiulyte dan Piligrimiene, 2015; Zhang, Lu dan Kizildag, 2017; Al-Dmour, Ali dan Al-Dmour, 2019). This is because mobile apps users perceive better value when they are engaged with apps behaviorally (spends lot of time in the app store, considers comments, number of downloads in total and programs downloaded by influents, etc.) and emotionally (express positive feelings about apps, tend to discuss about apps, write comments on apps, etc.

4.2 2. The relationship between online customer engagement and e-loyalty

For the results of the relationship between online customer engagement and e-loyalty obtained a t-value of 4.0, this indicates that this relationship is significant and positive or in other words H2 is accepted. This is in accordance with the

findings in previous studies that online customer engagement can have a significant positive relationship with e-loyalty (Bijmolt *et al.*, 2010; Cheung, Zheng dan Lee, 2014; Zhang, 2016). This is because the marketing process is to establish customer engagement and build profitable customer relationships so that it can increase customer satisfaction which directly increases customer loyalty (Kotler, Amstrong dan Opresnik, 2018).

4.2 3. The relationship between e-satisfaction and e-loyalty

Nilai t-value pada hubungan ini adalah 7.15. Hal ini berarti hubungan antara e-satisfaction dan e-loyalty bernilai positif atau dengan kata lain H3 diterima. Banyak penelitian menunjukkan bahwa hubungan langsung dan positif antara e-satisfaction dan e-loyalty (Anderson dan Karunamoorthy, 2003; Luarn dan Lin, 2003), Anderson & Srinivasan, 2003). Anderson dan Karunamoorthy (2003) dalam penelitian mereka menemukan bahwa e-loyalty secara signifikan dipengaruhi oleh e-satisfaction. Selain itu, temuan mereka juga mengidentifikasi bahwa e-satisfaction yang lebih tinggi akan berdampak pada e-loyalty yang lebih tinggi (Anderson dan Karunamoorthy, 2003).

E. CONCLUSION

The findings in this study could offer the theoretical implications of the e-commerce industry, specifically Tokopedia online shopping. To understand how the loyalty of e-commerce consumers in this study can be seen from the factors in online customer engagement and e-satisfaction. This finding could be an important contribution to the literature that discusses the relationship between online customer engagement both with e-satisfaction and with e-loyalty because of the presence of empirical evidence that has been done in this study, especially in online shopping.

The findings of this research show that consumers engage to Tokopedia can provide a positive relationship and influence consumer satisfaction and loyalty. With these results, Tokopedia can pay attention to the factors that shape online customer engagement, namely technical factors, social factors and individual factors. Tokopedia must realize that maintaining the ease of use of applications, promotion in applications, product completeness, and fast delivery can increase satisfaction and even increase customer loyalty.

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PROFILE OF SCIENCE PROCESS SKILLS IN FUNGI MATERIALS OF CLASS X HIGH SCHOOL STUDENTS IN SRAGEN DISTRICT BASED ON THE TEACHING EXPERIENCE OF TEACHERS

Hidayah Ina Qodriyani*, Email : hidayah.ina1209@gmail.com
Suyitno Aloysius
[1]Postgraduate Biology Education, Yogyakarta State University
[2]Postgraduate Biology Education, Yogyakarta State University
Jalan Colombo Nomor 1 Yogyakarta 55281

ABSTRACT

This study aims to find out: knowing the process skills profile of class X high school students in Sragen District, knowing the mastery of the science process skills aspects of class X high school students in Sragen District, knowing the process skills profile of class X high school students in Sragen District in terms of the teaching experience of teachers. This research is qualitative descriptive research with a survey method. The population in this study were grade X students from six state high schools in Sragen District. The sample of class X students and teachers was taken by a cluster sampling technique with a total sample of 198 students and 6 biology teachers. The research sample was students of Class X Natural Sciences and biology teachers who were in Class X Natural Sciences who participated directly in the learning process in biology subjects in classes that were used as research samples. The process of student data collection uses an instrument consisting of a confirmatory test of fungi subjects and biology teachers by conducting interviews. The results showed that: the science learning process of high school grade X students in Sragen District on fungi subjects was in the moderate category with an average value of 19.22 out of a total score of 32, mastery aspects of the science process fields on the subject the highest level of high school class X students in Sragen is communicate, predict. The lowest aspects are acquiring and processing data, identifying variables, there is found the relationship between profile of science process skills with the teaching experience of biology teachers.

Keywords: 2013 curriculum, science process skills, the teaching experience of teachers

A. INTRODUCTION

The demands and challenges that exist in the 21st century have an impact on changes in learning patterns that exist in education in Indonesia. Education must be able to develop competent human resources who have competitiveness. There are six competencies to face the challenges of the 21st century that must be developed through education, namely the ability to think critically and solve problems, the ability to communicate and work together, the ability to create and renew, the literacy of information and communication technology, the ability to learn contextually and the ability of information and media literacy (BSNP, 2013).

Education in Indonesia has not reached the six competencies of the 21st century optimally. This is proven by the results of the 2018 PISA survey and the 2015 TIMSS. According to the results of the 2018 PISA survey, students' scientific ability in Indonesia only has a score of 396 and is ranked 69th out of 71 countries surveyed by PISA. Meanwhile, according to the 2015 TIMSS survey results which showed the achievements of Indonesian science earned a score of 397. Indonesia ranked 36th out of 39 countries surveyed by TIMSS (Provasnik, 2016). This means that on average Indonesian students in the field of science are only able to recognize some fundamentals of science but have not been able to apply complex and abstract concepts, and the ability to think of high-level Indonesian students is still low.

Science, including biology, is one that has a significant role and opportunity to prepare qualified and competent human resources. Biology is not only characterized by a collection of knowledge in the form of facts, concepts, or principles, but also is characterized by the existence of scientific methods, scientific work, values, and scientific attitudes (Puskur, 2007). The scientific processes involved in learning biology are known as science process skills. Science process skills are scientific skills that allow students to discover new concepts themselves. The science process skills are needed by students because they can develop students' thinking abilities and creativity in learning. Besides, students will actively develop and apply their abilities to solve problems according to their capacity and level of thought development (Ongowo & Indoshi, 2013).

Science process skills are divided into two, namely basic science process skills which include the ability to observe, predict, conclude, group, communicate, and take measurements. While integrated science process skills include identifying variables, making hypotheses, analyzing investigations, making data tabulations, identifying variables, planning and conducting investigations (Rezba, 2007).

The implementation of learning science process skills is inseparable from the role of the teacher who is a learning planner and implementer in schools. The teacher is one of the main factors determining the success of science process skills possessed by students. Through teachers, science process skills are introduced and developed by students in biology learning (Kusnandar, 2011). Based on the results of research Milatus Sa'diyyah (2016) shows that the longer the teacher teaches the more professionalism and teaching ability increases. These factors are assumed to be influential in teachers implementing science process skills-based learning.

Teachers can improve their skills in carrying out science process skills-based learning through participation in training, discussions, seminars, research, certification, and participation in MGMP activities. The activity gives teachers knowledge of how learning and assessment of science process skills should be taught to students so that students master science process skills.

This study aims to analyze the mastery of class X science process skills reviewed based on the teaching experience of teachers. The teacher is a planner for learning activities based on science process skills for students. Class X is the first-class level in senior high education so that information on science process skills in class X is very important as an evaluation material.

This research is important because so far it has not been known with certainty the science process skills of high school students in Sragen District. In addition to describing the science process capability profile of the students, they also analyzed the relationship between the teacher's old teaching variable and the profile of the science process skills of class X students. The results of this study are expected to be the main information for the Sragen District Education Office to prepare students for the 21st century.

B. RESEARCH METHOD

This research uses quantitative descriptive methods using survey methods. This research was conducted in six high schools in Sragen District which were selected based on the teaching experience of class X teachers, namely SMA N 1 Sragen, SMA N 2 Sragen, SMA N 3

Sragen, SMAN 1 Gondang, SMA N 1 Plupuh, SMA N 1 Gemolong. The population of this study was students of class X in six high schools in Sragen District and six class X teachers selected. Student and teacher research samples were taken by cluster sampling technique with a total sample of 198 class X students and 6 biology teachers.

Data collection techniques in the form of test and non-test instruments. The test instrument was in the form of a confirmatory test of science process skills on fungi as many as 32 questions given to class X students and non-test instruments in the form of an interview sheet and questionnaire to find out the teacher's teaching experience given to class X teachers.

The data analysis technique used to determine the value of the mastery of science process skills is to analyze the answer data by manually checking. If the correct answer gets a score of 1 and if the wrong answer is given a score of 0. The maximum score obtained is 32 while the minimum score is 0. The score data obtained is then average and is used to analyze the profile of the whole sample with categories adapted from Sudjana (2005).

Table 1. Science process skill profile categories

Categories	Science process skill scores
Low	0 – 10.66
Medium	10.67 – 21.33
High	21.34 - 32

This category is useful for interpreting the level of mastery of students' science process skills. While the percentage of mastery of science process skills is calculated by the calculation formula adapted from Purwanto (2002).

$NP = {}^{R}/_{SM}$ x 100%

Information:
NP: percentage value of science process skill mastery in every aspect
R: true total score of every aspect
SM: Maximum score on every aspect of science process skills
The percentage of values obtained by students for each aspect of science process skills is grouped into criteria according to Purwanto (2002) as follows.

Table 2. Criteria for mastery of each aspect of science process skills

No	Percentage (%)	Criteria
1	86 – 100	Very high
2	76 – 85	High
3	60 – 75	Medium
4	55 – 59	Low
5	≤ 54	Very low

The results of science process skills scores were analyzed descriptive statistics to get the average score, standard deviation, lowest score, highest score, and the number of samples in each rombel (study group), especially to see trends and the distribution of science process skills profiles in general.

The relation of teachers' teaching experience can be known by comparing the results of the average score of science process skills obtained by students reviewed based on the teaching experience of biology teachers in class X high school.

C. RESULT AND DISCUSSION

The results of this study describe the field conditions empirically through quantitative data in the form of written test results. Data on the measurement results of the science process skills of students in SMA Sragen District on fungi material is in table 3.

Table 3. Results of science process skills test for class X students in Sragen District.

No	Codes	Schools	N	$\bar{y} \pm s$	Max	Min	Categories
1	A	SMAN 1 Sragen	32	23,62 ± 3,20	30	18	High
2	B	SMAN 2 Sragen	32	21,90 ± 2,57	26	16	High
3	C	SMAN 3 Sragen	34	15,20 ± 2,18	18	11	Medium
4	D	SMAN 1 Gondang	36	17,81 ± 2,81	20	14	Medium
5	E	SMAN 1 Plupuh	30	15,43 ± 1,89	18	12	Medium
6	F	SMAN 1 Gemolong	34	21,38 ± 1,81	24	16	High
Total			**198**	**19,22 ± 2,41**	**30**	**11**	**Medium**

Information:
N : number of students taking the test
Min : lowest score
Max : highest score
$\bar{y}$: average score
s : standard deviation

Table 3 explains the profile of class X science process skills in Sragen District high school which is classified as medium, shown by the average score of 19.22 from a total score of 32. Students who score 30 indicate students have high science process skills, meaning that students have mastered the process skills science, while students who score 11 show that students have moderate science process skills, meaning that students have enough mastery of science process skills. This means that learning biology in fungi material can develop science process skills in class X students but is not optimal and evenly distributed because there is a difference between the highest and lowest scores which is quite far i.e. 19. The standard deviation obtained by 2.41 indicates that the general profile of science process skills in Sragen District High School is quite varied, seen in SMA A has a higher standard deviation than other high schools, this means students in SMA A have more mastery of science process skills than students from other schools.

The ability of high school students' science process skills should be already high, considering that according to Sund & Trowbridge (1973) based on Piaget's theory high school students are at the formal operational stage. This means students can think abstractly in developing ideas and thoughts to solve biological problems. But the fact that the varied scores in several high schools in Sragen District show the uneven level of students' ability in science process skills. According to Juhji's research (2016), science process skills are still less than optimal for students, one of which is caused by teachers who teach more concepts in the learning process through the transfer of knowledge and examples that students tend to memorize so students cannot develop their science process skills with maximum.

The results of research on the percentage of mastery of aspects of science process skills in class X SMA Sragen District are in table 4.

Table 4. Percentage of mastery of various aspects of science process skills in class X high school students of Sragen District.

No	Codes	Aspects	Percentage of mastery (%)	Categories
1.	A.	Observing	76	High
2.	B.	Communicating	83	High
3.	C.	Classifying	62	Medium
4.	D.	Measuring	76	High
5.	E.	Concluding	48	Very low
6.	F.	Predicting	78	High
7.	G.	Identifying variables	43	Very low
8.	H.	Making a table	63	Medium
9.	I.	Making a chart	63	Medium
10.	J.	Describing between variables	76	High
11.	K.	Collecting and processing data	40	Very low
12.	L.	Analyzing research results	54	Very low
13.	M.	Constructing a hypothesis	52	Very low
14.	N.	Establishing operational variables	78	High

15.	O.	Arranging experiments	68	Medium
16.	P.	Carrying out an experiment	52	Very low

Information

Very high : very good at mastering science process skills

High : good at mastering science process skills

Medium : enough to master the science process skills

Low : lack of knowledge of science process skills

Very low : very little knowledge of science process skills

Based on table 4 the highest mastery of science process skills is the communication aspect 83%, and the prediction is 78%. This proves students master the science process skills well in communicating and predicting aspects. In the communicating aspect, following the results of the biology teacher interview that the learning process in the classroom uses more discussion and presentation methods. According to Segala (2010), the discussion method makes students creative, active and skilled both in thinking and skilled in gaining knowledge. Based on this the teacher's habit of using the discussion method can develop students' communication skills. While predicting skills are skills in predicting the results to be obtained in an experiment. This proves that teachers do quite often do practical activities so that students' ability to predict is good.

Very low mastery of science process skills is an aspect of identifying the 43% variable, gathering and processing 40% data. This proves that students are very lacking in science process skills in aspects of identifying variables, collecting and processing data. The aspect of identifying variables is still low due to the lack of recognition and training to distinguish variables by teachers. Based on the results of the interview the practicum activities are already equipped with practical manuals made by the teacher, and students just do the practicum according to the guidelines of the book, so the ability to distinguish variables is still less than optimal. Meanwhile, the skills to collect and process data are still very lacking because in practicum activities students are accustomed to groups so that they tend to only rely on other group members to collect or process data, so these skills are less than optimal.

The difference in teacher teaching experience to the ability of science process skills is shown in table 5.

Table 5. Profile of science process skills in class X SMA Sragen District based on teachers' teaching experience

No	Codes	Schools	Teaching Experience	N	$\bar{y} \pm s$	Max	Min	Categories
1	A	SMAN 1 Sragen	28	32	23,62 ± 3,20	30	18	High
2	B	SMAN 2 Sragen	24	32	21,90 ± 2,57	26	16	High
3	F	SMAN 1 Gemolong	21	34	21,38 ± 1,81	24	16	High
4	C	SMAN 3 Sragen	17	34	15,20 ± 2,18	18	11	Medium
5	E	SMAN 1 Plupuh	9	30	15,43 ± 1,89	18	12	Medium
6	D	SMAN 1 Gondang	5	36	17,81 ± 2,81	20	14	Medium

Information:

N : number of students taking the test

Min : lowest score

Max : highest score

$\bar{y}$: average score

s : standard deviation

Table 5 shows that teachers who have taught more than 20 years, namely SMA A, B, F, have high science process skills in their students, whereas teachers who have less than 20 years of teaching namely SMA C, E, D have high science process skills. is on the students. The longer the teacher teaches the more frequent activities in the form of training, and MGMP and the more experience they have so that it also has an impact on the learning process in the classroom. According to Suhardi (2013), the process of learning biology is a system whose components cannot be separated namely raw input (students), instrumental input (curriculum, teacher, learning resources, media, methods, learning infrastructure), environmental (environment) and output (output results).

D. CONCLUSION

Based on the results of research on "Profile of Science Process Skills in Fungi Materials of Class X High School Students in Sragen District Based on The Teaching Experience of Teachers" it can be concluded that the science learning process of high school grade X students in Sragen District on fungi subjects was in the moderate category with an average value of 19.22 out of a total score of 32, mastery aspects of the science process fields on the subject of the highest level of high school class X students in Sragen is communicating and predicting. The lowest aspects are acquiring and processing data, identifying variables, there

is found the relationship between the profile of science process skills with the teaching experience of biology teachers.

E. ACKNOWLEDGEMENT

This research is only limited to knowing the students' science process skills from the confirmatory test results and has not seen the mastery of science process skills that occur directly in the learning process through observation-observation activities.

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COLLABORATIVE LEARNING IN TEACHING READING TO ENHANCE POLYTECHNIC STUDENT'S CRITICAL THINKING

Iis Sulyaningsih, Ishak Abdulhak, As'ari Djohar
iis.sulyaningsih@polban.ac.id

Abstract

Nowadays, instruction paradigm has moved from delivering instruction to transferring knowledge to students in which they discover and construct the knowledge (Barr and Tagg, 1995). Thus, students are placed as the center in the process of teaching and learning. It is called Student's Centered Learning (SCL)

This study focuses on the application of Student's Centered Learning (SCL), especially collaborative in the teaching reading to enhance student's critical thinking. The theories of SCL approach were adopted from Active Learning (Bonwell & Eison, 1991), Collaborative Learning (Bruffee, 1984), and Cooperative Learning (Johnson, Johnson, & Smith, 1991). Furthermore, the critical thinking theories that were applied in this study were drawn from the critical thinking movement (Ennis &Norris, 1987, 1992; Chaffee, 2000; Reichenbach, 2001; Lipman, 2003). Additionally, the teaching procedure applied in this study was adopted from the study of Wallace (1999, 2003) and Chaffee (2000) which has also been employed in Indonesian EFL contexts (see Emilia, 2005; Gustine, 2007).

This study used qualitative research, especially a case study as the research design. Data were gained from participant observation, written essays telling their own perspective, and interview. They were analyzed and interpreted through qualitative procedures. The participants of this research were the second year students of the English Department of a Polytechnic in Bandung.

This study is expected to reveal that the students are able to answer critical reading questions which need deep understanding to the text. Moreover, they are expected to be more active in class interaction and discussion to respond to the text. Besides, they are more sensitive and more tolerant in seeing the issues and diversities. They are willing to listen to others' opinion and to rethink about their own opinion. Finally, they are able to present reasons in discussion so that they are able to make decision and judgment on the issue based on reasonable considerations. The result is expected to be a recommendation and a contribution for a teaching program in higher education level to provide students the ability of critical thinking and disposition which is strongly required in the 21st era.

Key words : collaborative Learning, Critical Thinking, Critical Reading

A. INTRODUCTION

Education in 21st century is purposed to make students achieving *High Order Thinking Skill* (HOTS) which are analyze, evaluate and create. Thus learning objectives are focused on having the critical thinking skills. This skill is one of life skills needed in working place. According to Wagner (cited in Sudira, 2008) there are some life skills that are required; (1) Critical Thinking and Problem Solving, (2) collaboration and networking (3) sociable and compliant (4) enterprenership and inventiveness (5) Effective written and spoken communication (6) acces and analyze information, and (7) imagination and curiosity. Whereas, Barry Stern (cited in Sudira, 2008) stated that Critical Thinking and language skills are fundamental skills that are required as life skills. Therefore, Student's critical thinking skill is important to be developed and enhanced in order that they will be able to analyze the information to have logical and reasoned decisions or solutions. In the case of English Language teaching, the teaching of critical thinking can be

intergrated to any lesson subject. It also can be integrated or infused to the teaching of reading and the teaching of writing. This has been researched by Emilia (2005) which discovered teaching *reading* and *writing* is an effective way to enhance critical thinking ability since the students can be able to interact and communicate their ideas or their point of view in their writing.

Besides, Chaffee (2012) revealed that "*A crucial aspect of being critical thinker in the world is learning to read critically*", Therefore the teaching of reading should intergrate critical thinking skill and called critical reading. The main purposes of this research are : 1) to get the interpretation Collaborative Learning model in the teaching of Reading to enhance students critical thinking; 2) to discover student's critical thinking stage after having learned reading with collaborative learning model.

B. RESEARCH METHOD

This study applied a qualitative approach since it was concerned with the process and product (Wallen and Fraenkel, 1993: 431). The process is about the teaching program which employs collaborative learning in reading . in this case, the activities of student in doing collaborative learning is observed . Teaching program was implemented in natural setting to be observed (Manion and Cohen, 1994:106 ; Wallens and Fraenkel, 1993:392, Nunan, 1992). The product means students answers on critical Reading question and the student's writing about their perspective responding to the text. In this study, the data were collected by doing observation, particularly participant observation . In conducting participant observation, the teacher acted as researcher and took part in the setting they are being observed (Wallen and Fraenkel, 1993: 390-391); (Cohen and Manion,1994:107).This was done to acquire a clear understanding of what was happening in the process of the teaching of reading which employed collaborative learning to develop students' critical thinking. The data produced from this activity are photos, video record and student's writing. Students 'writing informs their opinion on the issue within the texts and their understanding on the critical thinking that was applied in the teaching program.

Besides, interview was also done to look into students' responses toward this teaching activity and learning collaboratively. Interview is defined as an interaction between two people with the specific purpose of obtaining research-relevant information (Manion and Cohen,

1994:271) . The data from interview could provide additional information that is missed in observation and can be used to check the accuracy of the observation (Wallen and Fraenkel, 1993:385).

Polytechnic in Bandung, Politeknik Negri Bandung (POLBAN) had been chosen for this study. They were chosen to be involved for they had passed the reading 1 and 2 as the requisites. This was assumed that they have sufficient level of English proficiency which is needed in the teaching of critical thinking in reading or critical reading.

The data were analyzed by coding, categorizing and contextualizing, and the result is conveyed in descriptive analysis for it is a description of process and analysis of student's writing viewing their critical thinking abilities.

C. RESULTS AND DISCUSSION

In this study, the teaching of reading applied critical thinking so that the students would have the opportunity to apply their critical thinking in responding a text (Kurland, 2000, Chaffee, 2002). In the teaching phase, the teacher applied three steps of teaching reading that proposed by Wallace (1992, 2005) which have been applied by some researchers, such as Crandall (1995), and Shulman (2004). In the EFL (English as Foreign Language) context, it had been applied by Emilia (2005), Gustine (2007), Samanpan (2008), Kustini (2010). The teacher conducted three steps which are *pre-reading, while-reading, and post- reading* in the teaching program. The teacher did pre- reading to clarify objectives of lesson in every meeting, and attempted to motivate students by creating class interaction from the beginning of the lesson. During reading activity, the teacher gave them opportunity to work collaboratively finding out the answers of the following critical reading questions:

What is the issue of the text? ;What is the writer trying to argue?; Who is the writer ?; What is the writer contention? is it stated or implied?; What arguments support her/his contention?; Who is the intended audience, and what assumption is the writer making?; What is the purpose of the writer and how is the author achieve it?

The interaction in collaborative learning was arranged to give the students the opportunities to develop their critical thinking abilities and dispositions. This is in line with Ennis and Noris (1989: 150-151) who proposed that developing the critical thinking abilities can be effectively conducted by allowing students to extend their discussion about issues in the text. At the end,

the teacher asked them to write the conclusion of the text and write their own comments on the issue. The results of the activities were the data to be analyzed.

The data that were taken from the observation exposed that the students talked and shared their knowledge actively to have the same perception. They were trying and arguing to find the answers of some questions which was not explicitly stated in the text. In this case, they have to try to find out what behind the text. To know students perception collaborative learning, interview was done after the program. It was discovered that students were pleased to have this activity in Reading for they can share knowledge and resolve the problem. They commented that Reading lesson was not boring anymore. They like to argue with friends to find out the good answer.

Then, students were provided another text and asked to write the answer. The test were given before (Test 1) and after (Test 2) collaborative learning was conducted. The three first questions are to measure their low order thinking skill which are **Remembering** ; retrieiving relevant knowledge from long term memory; **Understanding** ; constructing meaning from instructional messages;**Applying**; carrying out or using a procedure in given situation. The other questions were to see their higher order thinking skills which are **Analyzing**; how parts relate to others and to an overall structure or purpose, **Evaluating** ; making judgment based on criteria and standards, **Creating** ; putting elements together to a coherent or functional as a whole and recognizing elements into a new pattern or structure. There are fifty students who were involved in the test, and the result is in the following table ;

QUESTION ABOUT	True		Almost true		Nearly		Not true		NA	
	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2	Test 1	Test 2
1. Topic	14 Sts = 28%	29= 58%	27 Sts = 56%	16= 32%	7 Sts = 14%	5=10 %	4 Sts = 8%	0	0	0
2. Issue	11 Sts = 22%	29= 58%	1 St = 2%	10= 20%	25 Ss = 50%	8=16 %	14Ss = 28%	3=6%	0	0
3. Thesis	3Sts = 6%	16= 32%	15 Sts = 30%	22= 44%	2Sts = 4%	8=16 %	28Sts = 56%	4=8%	2 Sts = 4%	0
4. Evidences	2Sts = 4%	14= 28%	13 Sts = 26%	20=40 %	21 Sts =42%	14= 28%	14 Sts = 28%	2=4%	0	0
5. Credible and giving reasons	4 Sts= 8%	14=28 %	28 Sts = 56%	21=42 %	7 Sts = 14%	7=14 %	11 Sts = 22%	8=16 %	1 St = 2%	0

We can see from the table for Test 1, It shows that the students are able to answer the two first questions, though the answers were not exactly right. Meanwhile there are only few students can answer the questions that need higher order thinking skill. This means that ,at that time, their thinking ability were still in ‘ low order Thinking Skill” which are acquiring knowledge and comphrehension. After having learned collaboratively, the students who were able to answer the “ higher order thinking skill” questions such as finding evidences and reasoning were increased from comprehension into analyzing skill.

D. CONCLUSION

This study tried to explore how collaborative learning can be employed in the teaching of Reading. The students were motivated and showed their interest by getting involved in the class interaction.This was to make reading lesson to be more communicative so that students change their mind in viewing Reading lesson as passive language skill. Furthermore, collaborative learning in this study had made students increase their ability in thinking about things behind the text o more than comprehension. This is in accordance with the aims of this study to get the interpretation Collaborative Learning model in the teaching of Reading and to discover student’s critical thinking stage after having learned reading with collaborative learning model.

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INDEPENDENCE IN EARLY CHILDHOOD

Nenin Nurdiani, neninnurdiani@upi.edu
Yeni Rachmawati , yeni_rachmawati@upi.edu
Early Childhood Education Department
Universitas Pendidikan Indonesia
Bandung, Indonesia
neninnurdiani@upi.edu

ABSTRACT

Independence is one of the main values in character. One of the independence of children is obtained through the process of learning and education. In the process of learning towards independence, children learn to deal with various situations and environmental conditions. In addition, independence will also foster a sense of courage and confidence in children. Children will be able to do simple activities without the help of others. Children who do not have independence tend to have the nature of dependence on others and lack self-confidence. This article aims to find out how important it is to instill the character of independence in early childhood and what factors influence children's independence. This article also explains the need to instill the value of independence character education in early childhood so that children no longer depend on others but can stand on their own.

Keywords: character education, independence, early childhood.

A. INTRODUCTION

Children's education is the most basic education to form quality children in the development of human resources. The range of early childhood according to Law National Education System is since the age of zero to the age of six years, while according to the National Association For The Education Of Young Children (NAEYC) that the range of early childhood is children from birth to with age eight years (Ranita Sari, 2019, p. 1). This period is called the *golden age* or a golden period for children where during this period various children's potential develops rapidly in the span of human life.

Education of children aged early is one form of service of education that focuses on the foundation towards the growth and development of children. Education of children aged early aims to help develop children's physical and psychological potential of which include religious and moral values, social-emotional, physical, motor, language, cognitive, art and character values. The character of children formed early on will determine the character of children in the future. The character of the child will be formed well if in the process of growth and development get enough stimulation and space for the child to express themselves well. Character education needs to be instilled in children from an early age and are expected to be formed child becomes a person of character in the future.

Character education is a process of habituation, namely habituation to do good, habituation to speak honestly, habituation to be independent, habituation to discipline, and so on. Character education cannot be formed instantly but through a process of learning and education. Independence is part of the main value of character, which is an attitude that is obtained cumulatively through the process experienced by someone in its development.

In the process of independence, a child will learn to deal with various situations and environmental conditions to he was able to stand on its own and does not depend on other

people else, emotional and physical also be resilient so that it can think and take action appropriate in dealing with various situations. Through joint activities carried out by children with peers will help children instill ways of thinking and behaving in the community and make it as their own way. While the adults around him only help direct the learning process of children towards independence.

Based on the description above, it can be concluded that independence needs to be instilled early on from the age of toddlers in infants where children have started to interact a lot with other people, not only with the closest people (family) but start interacting with new people they know. This is the right time to teach and instill the value of independence in early childhood.

B. RESEARCH METHODS

Method used in the article is using *Literature review*, by collecting some articles about the instill of the character values independence in early childhood and fax tor-factors that influence the value of the character of independence in early childhood. The analysis was conducted to explain the importance of instill independence in early childhood.

C. DISCUSSION

Character and Character Education

Etymologically, the term character (English: *character*) comes from the Greek word *charassein* which means *to engrave*, this word can be translated to carve, paint, carve, or scratch (Astika & Sari Bunga, 2016, p. 70). In the dictionary language Indonesia "character" is defined by character, psychological traits, character or morals that distinguish one person to another, and character.

In terminology, character is defined as a way of thinking and behaving that is the characteristic of each individual to live and work together both in the family, community and country (Setiawan, 2013, p. 55). According to Berkowitz & Bier (2004, p. 73), character is a complex set of psychological characteristics that motivate and enable one to act as a moral agent. While Suyanto (2012, p. 3) states that character is interpreted as values, attitudes, and behaviors that can be accepted by the wider community. These characters include various things such as ethical, democratic, respectful, responsible, trustworthy, fair and just, and caring. Sources of character include social values, state ideology, and citizenship, national cultural values, religion, and ethnicity that are accepted by the people of Indonesia at large so that they do not cause conflicts.

From some of the notions of character mentioned above, it can be understood that character is identical with morals, so that characters are universal human behavioral values which include all human activities in order to relate to God, with themselves, and with

fellow human beings manifested in thoughts, attitudes, behavior based on religious, legal, cultural and customs norms.

Character education is a deliberate effort to promote student character development in schools (Berkowitz, 2009, p. 132). Meanwhile, according lickona (1996, p. 93) that the character education as deliberate efforts by schools, families, and communities to help young people understand, care about and act upon core ethical values. Character education is essentially value education (Kirschenbaum, 2000, p. 4) which involves aspects of knowledge (*cognitive)*, feelings (*feeling*), and action (*action*). Character education is needed in schools for three reasons, first is that we need a good character to be fully human, a weld both for character education is that school is a better place for teaching and learning, a weld third for character education is that this is very important for the task of building a moral society (Lickona, 1996, p. 93).

Character education is not just getting children to behave well, more than that, namely forming thoughts, character, and good behavior with which the child succeeds. To instill the implementation of character education must be based on the principles of basic education. There are eleven basic principles of character education (Lickona, 1996, p. 95) including:

1. *Education character promotes core ethical values as the foundation of good character*
2. *Characters must be comprehensively defined to include thinking, feeling and behaviour*
3. *Education effective character requires a deliberate, proactive, and comprehensive approach that promotes the core values in all phases of school life*
4. *School should be a community care*
5. *To develop character, students need opportunities for moral action*
6. *Education effective character including a meaningful and challenging academic curriculum that respects all learners and help them succeed*
7. *Education characters must strive to develop students' intrinsic motivation*
8. *Staff school should be learning and moral community in which all share responsibility for character education and strive to keep the same core values guide the education of students*
9. *Education code requires moral leadership from the staff and students*
10. *School must recruit parents and community members as full partners in the school effort to build character*
11. *Character education valuation must assess the character of the school, the function of school staff as character educators and the extent of student manifestations of good character*

With eleven principles of character education, it is hoped that it will help schools implement quality character education. The values in education charter indispensable

for children ages early to provision their future. The main values of character that are the focus in strengthening character education are religiosity, nationalism, independence, mutual cooperation, and integrity. (Permendikbud No. 20 of 2018).

Based on the discussion above, it can be stressed that character education is efforts that are designed and carried out systematically to help students understand the values of human behavior related to God Almighty, self, fellow human beings, the environment, and nationality manifested in thoughts, attitudes, feelings, words, and actions based on religious norms, law, manners, culture, and customs.

Independence

One of the values of characters developed for children ages early is independence, the attitudes and behavior that is not easily dependent on others to complete tasks. Independence is very important to be developed in children from an early age so that children become individuals who are able to do all activities with their own abilities without interference from others.

Independence comes from the basic word 'self' which gets the prefix "to" and the suffix "an" which then forms a state word or thing. Independently in Indonesian dictionary (Ministry of Education, 2005) means the state can stand on its own, not rely on others, while independence is a state of things or can stand on its own without relying on others.

Musthafa (2018, p. 85) defines independence as the ability to make choices and accept the consequences that accompany them. Independence is absolutely necessary for the development of a complete and prime personality. Independence generally refers to aspects of human function which involve being separated mentally and mentally (Raeff, 2010, p. 31). Rose in Cameron (2007, p. 468) argues that 'independence' to act and think only exists simultaneously governed by a network of rules and norms that are subject to social sanctions.

At the time of birth, humans are helpless, but behind their powerlessness holds great potential to be developed. To be able to develop naturally, someone needs the help of others to guide and direct the development of this potential. Other assistance can come from families, educational institutions, and the wider community. Knowledge, skills, values and attitudes possessed are mostly obtained through the process of interaction with the environment. In further development, humans can not only rely on the help of others. A person's success is largely determined by the individual concerned, at least determined by strength, desire and will. This is where every individual is required independence in carrying out every action.

For early childhood independence manifested when the child uses his own mind to take simple decisions, such as choosing a playmate, choosing clothes to wear, choosing school supplies that will be used. As parents, it should train the child's independence in accordance with their development.

From some definitions of independence it can be concluded that independence is the ability of a person to not depend on or do not need help from others in taking care of himself

physically (eating alone without being fed, dressing himself without assistance, bathing and defecating on his own), in making a decisions emotionally, and in interacting with others socially. Independence of early childhood is part of the development process is expected to occur in the context maturity, the point that the child's independence is an ability to think, feel, and children do something on impulse itself in accordance with its obligations in everyday life unaided by man other.

Factors That Influence Children's Independence

According to Santrock (2003, p. 145) the factors that influence independence and shape independence are: (1) Environment. Family environment (internal) and community (external) will shape a person's personality including independence (2) Parenting. The role and parenting of parents is very influential in instilling the values of independence of a child (3) Education. Education has a significant contribution in the development of the formation of independence in a person namely (1) Social interaction. Social interaction trains children to adjust and take responsibility for what is done so that children are expected to be able to solve the problems faced (2) Intelligence. Intelligence is an important factor that influences the process of determining attitudes, decision making, problem solving and adjustment.

Whereas according to Basri (in Sa'd i yah 2017, p. 39) mentions the factors that influence independence in children are:

1) Internal Factors

Internal factors are all influences that originate from within the child itself, such as the state of heredity and constitution of the body from birth with all the equipment attached to it. Internal factors consist of; (a) Gender Role Factor, physicaly boys and girls are clearly visible differences in the development of independence. In the development of independence, boys are usually more active than girls, (b) Intelligence Factors or Intelligence, children who have high intelligence will more quickly grasp something that requires thinking abilities, so that intelligent children tend to be quick in making decisions for act, coupled with the ability to analyze well the risks to be faced. Intelligence is related to the level of independence of children, meaning that the higher the intelligence of a child, the higher the level of independence, (c) Developmental factors, independence will have a lot of positive effects on the development of children. Therefore, parents need to teach independence as early as possible according to the child's developmental abilities.

2) External Factors

External factors are influences originating from outside themselves, often also called environmental factors. The life environment faced by children greatly influences their personality development, both in negative and positive aspects. Usually if the family, social and community environment is good, tend to have a positive impact in terms of children's independence, especially in the field of values and habits in carrying out the tasks of

life. External factors consist of; (a) Fostering Factor, to be able to be independent one needs opportunities, support and encouragement from the family and the surrounding environment, for that parents and the response from the social environment is very necessary for children for every behavior they have done, (b) Socio-Cultural Factors, is one of the external factors that influence children's development, especially in the field of values and habits of life that will shape their personality, including their independence, especially in Indonesia which consists of various ethnic groups with diverse socio-cultural backgrounds, (c) Socio-Economic Environmental Factors, adequate socio-economic factors with good education and habituation patterns will support the development of children becoming independent.

The Importance of the Independence of Investment Value in Children Age Early

Instilling the value of independence in early childhood should begin at an early age, because at this age the child is in a golden age, where all the growth and development of children goes rapidly. To instill independence in children can be done with habituation or exemplary, both of which are very close to the child's life.

Habituation itself (*habituation*) is the process of forming attitudes and behaviors that are relatively settled and are automatic through a repetitive learning process. Attitudes or behaviors that become habits have characteristics; the behavior is relatively sedentary, generally does not require a high enough thinking function. (Cahyaningrum, 2017, p. 209). The process of habituation in education is important, especially for young children. Children are not aware of what is called good and not good in a moral sense. The children's memories are not strong, their attention is quick and it is easy to turn to the latest things and likes. In this condition they need to be familiarized with certain behaviors, skills, skills and thought patterns.

The process of habituation is actually about repetition. Meaning that what is familiarized is something done repeatedly and eventually becomes a habit. Habituation must be applied in the daily lives of students, so that what is accustomed especially related to good morals will become a perfect personality. For example, if a teacher enters the class always says hello. If students enter class do not say hello, then the teacher reminds that when entering class or any room should say hello.

Exemplary is the most absolute element to make changes in life behavior, in preparing and shaping the spiritual and social morals of children. (Cahyaningrum, 2017, p. 209). Therefore, the best example in the view of children who will be imitated in the behavior and good manners etched in soul. This example is suitable to be used to instill children's social and character values. That is, advice that is not accompanied by exemplary as the saying goes to bring sea salt to marinate the sea, a work more in vain than the benefits.

Instilling independence in children is not easy, as parents must give great trust to children, then parents apply and provide examples of independent attitudes to

children. Children will follow the habits of their parents, to instill independence in children, of course there is interaction between parents and children. Interaction by parents to children will foster independence in children. According to Yamin (2010 , p. 4) there are some things that concern to instill self-reliance in children aged early, namely trust, habits, communication, and discipline.

Developing independence in children is not only done in the home environment, but in the school environment also needs to provide support so that children can be independent. Schools use curricula that are appropriate to the stage of child development, in addition to the program of learning activities in schools instill the importance of fostering behavior and attitudes that can be done through good habituation from an early age so that children grow into independent individuals in daily life.

Encouraging the growth of self-reliance in children aged early, Mustafa (2008, p. 8 5) suggested that parents and teachers need to provide a variety of options and if possible as well as providing an overview of the possible consequences that accompany that choice taken. In the context of preschool or kindergarten, aspirations and willingness of the child learners need to be heard and accommodated. In the context of the family in the home environment, this requires parents to be more patient and wait by the way provide a variety of options and talk about careful with children everytime they are faced with making decisions - important decisions. All of this is expected so that children can make decisions independently and learn from the consequences of the decisions they make. Efforts to instill independence in children by providing opportunities to engage in various activities. The more opportunities given to children, the more skilled children will develop their skills so that they are more confident.

With independence children will get many benefits to their lives, both the benefits of cognitive abilities, affection, and psychomotor children. Independence at an early age is also useful to foster an attitude of responsibility of children, enhance children's skills, solve various problems faced by children, make decisions, think creatively, and have lots of ideas, think critically, have strong self-confidence, and do not depend on people other. Unlike the case with children who do not have self-reliance, in their lives children will depend on others and do not have confidence.

D. CONCLUSION

Independence is one of the main values in character that is the focus of character education. Independence in children needs to be instilled early on because at that time all aspects of development run rapidly. Likewise, independence needs to be instilled early on so that children in all their activities can be independent not dependent on others.

Many factors affect the cultivation of independence in children aged early among the factors inside and factors outside. Factors from among the sex, intelligence, and development of children. While the factors from the outside

include parenting, neighborhood social cultural, economic and social environment. To instill independence in children aged early to do with habituation and models, usually located in the immediate environment of children, because children will imitate of those nearby. If independence can be instilled in children, children will be able to do their own activities without help from others, and also children will feel confident because they can do all their own activities.

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ANALYSIS OF STUDENT ANSWER ON GUESSING SQL QUERY

Suprih Widodo, supri@upi.edu
Robby Akbar, robbyakbar@upi.edu
Nur Azizah, nurazizahbks@student.upi.edu
Universitas Pendidikan Indonesia Kampus Purwakarta

ABSTRACT

This study analyzes students' answers in answering quizzes about SQL queries through the GISEL application. This application was developed to facilitate students in learning SQL queries. Some questions in the form of data stored in a database that must be solved using SQL are submitted to students majoring in PSTI who come from heterogeneous schools (high school, vocational ICT, etc.). The questions given had difficulty levels, until 1723 answers were obtained from 75 students. Analysis of student answers was conducted using a constant comparison technique. Based on the results of the analysis obtained data that the origin of the school really determines the number of experiments conducted by students, students from social studies classes until the end of the experiment still have not found the right answer in the category of moderate to high level problems.

Keywords: GISEL apps, Query SQL

A. INTRODUCTION

SQL (Structured Query Language) is a language used to process data contained in a database. SQL has important commands in the database. SQL is implemented in software as a link between software and databases. Based on the results of interviews with PSTI students, the difficulty faced by students in learning SQL is to memorize and implement SQL functions in data processing. Students have difficulty in understanding and implementing SQL (Structured Query Language). Database courses are only delivered once a week with a time allocation of 2 credits and the learning resource used is the website. Some questions in the form of data stored in a database that must be resolved using SQL are submitted to PSTI students who come from heterogeneous schools (high school, vocational ICT, etc.). Therefore the writer makes a GISSEL application based on a website and is expected to make students train themselves more using SQL in solving cases in the database.

In addition, this study analyzes students' answers in answering quizzes about SQL questions through the GISEL application. This application was developed to facilitate students in learning SQL queries. Some questions in the form of data stored in a database that must be resolved using SQL are submitted to PSTI students who come from heterogeneous schools (high schools, vocational ICTs, etc.). The questions given have a difficulty level, up to 1723 answers obtained from 75 students.

B. RESEARCH METHOD

The methodology in this research is descriptive qualitative. Qualitative research according to Bogdan and Taylor (in Moleong, 2010) is research that produces descriptive

data in the form of words written or spoken from people and behaviors that can be seen. Bogdan and Biklen (1982) state that "Qualitative research has a natural setting as a source of direct data and researchers are key instruments". Related, research, qualitative, has a natural setting as a direct source of data and the researcher is the main data collector.

While the descriptive method according to Nazir (2011: 52) is a method in discussing the status of human groups, a subject, a set of conditions, a system of discussion or class of events at the present time. The purpose of descriptive research is to make a description, picture or complete picture of the relationship between the phenomena under investigation. Descriptive analysis is used to evaluate actions that provide improvement, good improvement in a good direction compared to the previous condition (Arikunto, 2010: 209).

Descriptive qualitative research aimed at describing and analyzing existing phenomena, both natural interactions and human engineering, which pay more attention to characteristics, qualities, interrelationships between activities (Sukmadinata, 2011: 73). Qualitative descriptive research in this study is the result of SQL query PSTI student answers and described in descriptive form. The attitude that answers from the beginning to the end of the answer. The subjects of this study were 75 students of PSTI UPI Purwakarta Campus. In line with this, Suharsimi (2010: 88) revealed that research subjects are objects, things, or people where data for research variables are inherent, and at issue. Analysis of student answers was carried out using constant grading techniques.

C. RESULT AND DISCUSSION

Open Student website provided for guessing SQL queries. Continue to log into the application, by sending the NIM and password that has been given.

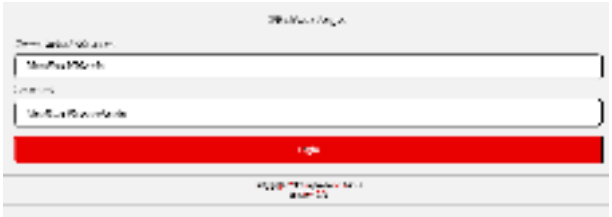


Figure 1. Application Login Page

After successfully logging in, it will present instructions on what to do in using this application.

Figure 2. Usage Guide page

A table description that includes table names, available column names, and types of data to retrieve

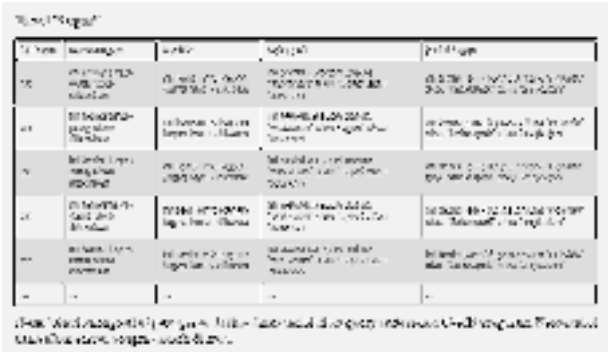


Figure 3. Information table 1

A table description that includes table names, available column names, and types of data to retrieve

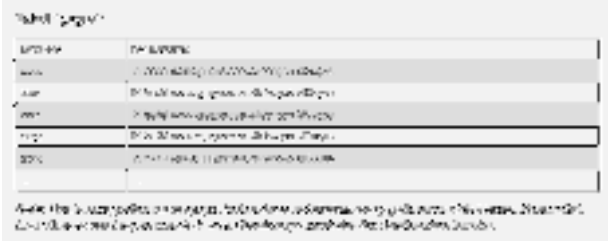


Figure 4. Information table 2

Menu for conducting SQL query experiments. Each answer entered will be stored in a database that will be used as material for analysis.

Figure 5. SQL query answer column

Displays SQL query data results that have been done.

Figure 6. Display if the query is successful

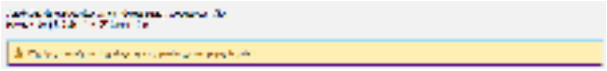


Figure 7. Display if the query was successful, but not suitable

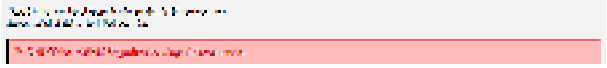


Figure 8. Display if the query error

NO	School type	Major	Number of students
1	SMA	IPA	47
2	SMA	MIPA	17
3	SMA	IPS	1
4	SMK	Farmasi	1
5	SMK	Multimedia	1
6	SMK	Rekayasa Perangkat Lunak	1
7	SMK	Teknik Elektronika Industri	1
8	SMK	Teknik Instalasi Tenaga Listrik	1
9	SMK	Teknik Pemesinan	1
10	SMK	Teknik Komputer Jaringan	4

Based on the analysis of SQL query answers from 75 students in each category of questions that have been done. The following results are obtained:

No	Purpose	No. of try	No. students of correct	No of Wrong answear	No of Error
1	Perform basic queries select * from assignment;	206	114	47	45
2	Perform a query with where	354	195	52	107

	clause select * from the group where idGroup = 0101;				
3	Perform a query with where clause along with and operators select * from the task where hariKe = 2 and type Task = "individual";	795	462	69	264
4	Perform a query with where clause along with and operators & not operators select * from the task where hariKe! = 1 and hariKe! = 2 and typeTask = "individual";	375	277	18	80

Incorrect: When the answer entered does not contain a query script, or when performing a query on an inappropriate menu. Success: When the answer entered is successfully executed, although it is not certain that the results will match. Error: When the answers entered don't match the SQL query.

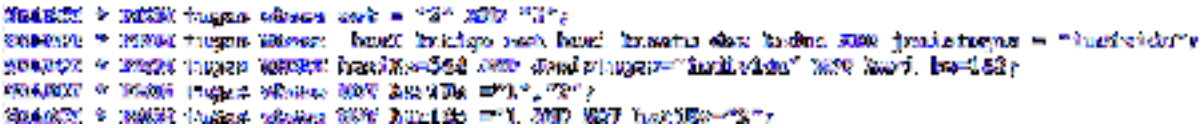
In this first problem the SQL query target that must be done is to display data using the basic SQL commands. SQL query answer errors that often occur in category 1 problems that cause errors are still many students who have not been able to determine the name of the table to take data.

In the second problem the SQL query target that must be done is to display data using the condition where. SQL query answer errors that often occur in category 2 problems that cause errors are not able to put the statement where in the query.

```
SELECT * FROM gugus WHERE 1010
SELECT * FROM gugus where_0101
SELECT * FROM gugus1000
SELECT * FROM idGugus = 0001
```

SQL query answer errors that often occur in category 3 problems that cause errors are not yet able to distinguish values that use "(quote) or not when using where.

SQL query answer errors that often occur in the question of category 4



Top 5 with the most trials

NO	Students ID	No. of try	1st Question	2nd Question	3rd Question	4rth Question
1.	1903512	66	3	11	38	14
2.	1905878	66	2	1	30	33
3.	1901932	62	24	8	24	6
4.	1901607	58	2	3	46	7
5.	1901938	52	6	4	31	11

D. CONCLUTION

Based on the results of the analysis obtained data that the origin of the school really determines the number of experiments conducted by students, students from social studies classes until the end of the experiment still have not found the right answer in the category of moderate to high level problems.

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APPLICATION OF BIOGAS INSTALLATION AS PRODUCING ENERGY FOR CHOPPER MOVERS IN GEDONG, NGADIROJO,WONOGIRI REGENCY

1) Shanti Emawati[13]
2) Endang Tri Rahayu[13]
3) Fajar Danur Isnantyo[2]
4) Mustika Nuramalia Handayani[4]
Dept. of Animal Husbandry, Faculty of Agriculture, Sebelas Maret University, Indonesia
Dept. of Building Engineering Education, FKIP, Sebelas Maret University, Indonesia
Food, Nutrition and Public Health Research and Development Center, Sebelas Maret University, Indonesia
University of Pendidikan Indonesia, Bandung, Indonesia
Email : shantiemawati@staff.uns.ac.id

ABSTRACT

The purpose of this activity is to analyze the level of farmer acceptance of biogas innovation as a producer of energy driving the grass chopper. This activity was carried out on 1 August - 20 October 2019 in Gedong Village, Ngadirojo District, Wonogiri Regency. The method of determining the location and respondent of this activity is determined intentionally (purposive sampling) with the consideration that in Gedong Village has a population of beef cattle that is high enough so that the potential to produce livestock manure waste for biogas installations. Purposive selection means that the sample is selected and determined based on certain considerations in accordance with the research objectives. The method of this activity is a survey to collect primary data from respondents and secondary data from related agencies. Data collection techniques are interviews, observation, FGD, counseling and training on biogas installations as a producer of energy driving the grass chopper. Data analysis of this activity is descriptive analysis.

Based on the results of this activity shows that the level of farmer acceptance of biogas innovation as a producer of energy driving the grass chopper is in the medium category. An increase in knowledge of farmers after participating in extension activities and training on biogas installations as a producer of energy driving the grass chopping machine. The conclusion of this activity is the level of farmers' acceptance of the biogas innovation as a producer of the energy of driving the grass chopping machine is in the medium category.

Keywords: biogas installation, beef cattle, acceptance level, knowledge

A. INTRODUCTION

Ngadirojo District is one of the sub-districts in Wonogiri Regency. Ngadirojo District has an area of 9,325,556 ha which is divided into 11 villages / wards. Administratively, Ngadirojo Subdistrict has territorial boundaries, namely the north bordering Karanganyar Regency, the south bordering Nguntoronadi District, the west bordering Wonogiri District and the east by Sidoharjo District (BPS Wonogiri, 2016).

Gedong Village, located in Ngadirojo District, is an area that has potential in beef cattle fattening with a population of 1385 beef cattle from 740 breeders. Farming and cattle farming are used as the foundation of life for the community. The community runs farming and animal husbandry side by side, namely as the main and side livelihoods, but on one side of the agriculture and animal husbandry business also causes negative impacts in the form of

environmental pollution due to waste management that is not optimal. Beef cattle breeding business both fattening and maintaining calf-producing parent can produce sewage waste.

Livestock manure stores potential as the main raw material for biogas, because both are organic materials that have a high content of Nitrogen (N), in addition to the elements C, H, and O. Cow dung is composed of feces, urine, and residual feed containing higher nitrogen. than only from the stool. The amount of nitrogen that can be obtained from cow dung with a total body weight of +120 kg (6 adult cattle) with a period of collecting dung for three months reaches 7.4 kg. This amount can be compared with 16.2 kg of urea (46% nitrogen) (Balitnak, 2009) cit (Kaharudin and Sukmawati, 2010).

The development of biogas in the community will have a dual benefit of reducing pollution from livestock manure and producing alternative energy that is environmentally friendly and renewable so that it can be used to overcome the current energy crisis. Besides producing biogas energy, it also produces waste products in the form of bio slurry. Bio slurry or biogas pulp is a product of the processing of biogas made from livestock manure and water through a process without oxygen (anaerobic) in a confined space. Although it is called pulp, Bio slurry has many benefits, including as a basic ingredient in making organic fertilizer.

But on the other hand, livestock manure has the potential as a source of environmental pollutants. Adverse effects of livestock and agricultural waste can be polluted from methane (CH4) and as a medium for the breeding of disease-causing microorganisms. According to Goodland and Anhang (2009) livestock manure waste contributes emissions to the global warming rate of approximately 51%. Based on this information, a technology application is needed to increase the economic value of livestock manure waste from the beef cattle business while reducing the adverse impact on the environment and human health through the construction of biogas installations and making organic fertilizer in Gedong Village, Ngadirojo District, Wonogiri Regency.

B. METHODS

This study was carried out on 1 August - 20 October 2019 in Gedong Village, Ngadirojo District, Wonogiri Regency. The method of determining the location and respondent of this activity is determined intentionally (purposive sampling) with the consideration that in Gedong. Ngadirojo District, Wonogiri Regency has a fairly high beef cattle population and there are cattle ranchers who are members of the summit group. Jati Galih and the Makmur Farmers Group. Purposive selection means that the sample is selected and determined based on certain considerations in accordance with the research objectives (Sugiyono, 2006). The method of this activity is a survey to collect primary data from

respondents and secondary data from related agencies. Data collection techniques are interviews, observation, Focus Group Discussion (FGD), counseling and training on biogas installations along with biogas treatment and processing of livestock waste based on bio-slurry into organic fertilizer. Data analysis of this activity is descriptive analysis.

C. RESULT AND DISCUSSION

1.1. Characteristics of Respondents

Respondent characteristics include the age of the farmer, level of education, main occupation, number of family members, and number of livestock.

1.1.1. Age of Respondents

Table 1. Age of respondents

Age (years)	Number of respondents (people)	Percentage (%)
< 15	0	0
15-64	43	93.48
>64	3	6.52
Total	46	100

Source: Primary data processed, 2019

Based on Table 1 shows that the majority of respondents aged between 15-64 years with the number of respondents at 43 people (93.48%). The respondent's age is included in the productive age. According to Ahmadi (2017), breeders with that age category still have strong physical abilities and mature thinking especially in managing the business they do. A person's age factor also determines the level of work participation in earning a living. As a person ages, his participation increases, but it also decreases at a certain age in line with the decreasing physical strength factor. The age factor will greatly affect jobs that rely heavily on the strength and physical abilities of the workforce. Age will greatly affect work productivity because it is more dominant to rely on physical strength (Akmal, 2006).

1.1.2. Education Level of Respondents

Table 2. Education Level of Respondents

Education Level	Number of respondents (people)	Percentage (%)
Elemetary school	22	47.83
Yunior High School	9	19.56
Senior High School	14	30.43
University	1	2.17
Total	46	100

Source: Primary data processed, 2019

Based on Table 2 shows that the education level of the majority of respondents had an elementary school education. The respondent's education level is relatively low so it has an impact on the absorption of innovation in business development. According to Murwanto (2008) that breeders' education level is an indicator of population quality and is a key variable in the development of human resources. In the livestock business, the education factor is expected to be able to help the community in efforts to increase the production and productivity of livestock that are kept. An adequate level of education will have an impact on improving the performance and management capabilities of farm businesses run (Akmal, 2006).

1.1.3. Main Job Respondents

Table 3. Main occupation of the respondent

Main job	Number of respondents (people)	Percentage (%)
Farmers	33	71.74
Laborers	4	8.69
Construction laborers	2	4.35
Private	6	13.04
Student	1	2.17
Total	46	100

Source: Primary data processed, 2019

Based on Table 3 shows that most respondents earn a living as farmers by 33 people with a percentage of 71.74%. Breeding is a side job. Respondents have a side job as a farmer to provide additional income. According to Asnidar (2017) that although breeding business is not the main occupation, the average breeder has experience in managing his business even with a small amount as additional income.

According to Tarmizi et al. (2018) farmers depend more on their living needs than their agricultural products, raising livestock only as a side job, so the time spent on livestock business is not optimal in managing their livestock businesses. Breeding activities are only carried out on the sidelines of their busy carrying out their main work. These conditions cause livestock business to be less supportive of livestock productivity and the economic value of livestock for families is often overlooked.

1.1.4. Number of family members

Table 4. Number of family members

Number of family members (people)	Number of respondents (people)	Percentage (%)
1-2	4	8.69

3-4	22	47.82
5-6	15	32.61
7-8	5	10.87
Total	46	100

Source: Primary data processed, 2019

Based on Table 4 shows that the majority of respondents have 3-4 family members as many as 22 people with a percentage of 47.82%. The number of dependents for the family is quite high. According to Hastang and Asnawi (2014), the number of dependents of a family in a household is all family members who are family dependents including the head of the family, wife, children and all family members who are the responsibility of the head of the family. The size of the family member can affect the development of beef cattle business. The smaller the number of family members, the smaller the costs incurred to meet the needs of the family, so the results obtained can be used to increase business scale (Hendrayani and Febrina, 2009).

1.1.5. Number of Livestock Ownership

Table 5. Number of Livestock Ownership

Number of Livestock Ownership	Number of respondents (people)	Percentage (%)
<1	2	4.35
1-2	18	39.13
3-4	16	34.78
5-6	6	13.04
7-8	2	4.35
>8	2	4.35
Total	46	100

Source: Primary data processed, 2019

Based on Table 5 shows that most of the total number of respondents livestock ownership between 1-2 head of 18 people with a percentage of 39.13%. The number of cattle ownership is categorized as small. According to Hastang and Asnawi (2014), the small size of livestock ownership is because generally raising beef cattle is a side business. This was also stated by Hadi and Ilham (2002) that the small scale of business in intensive agriculture areas was caused by animal husbandry as a farmer's household business with limited capital, labor and management. Thus, the scale of the business can affect the income of farmers. This is in line with the results of the study of Saleh et al. (2006) that the scale of beef cattle business significantly affected the income of beef cattle farmers.

1.2. Increased knowledge of respondents

Based on the results of the pretest and post test showed an increase in knowledge and skills of respondents after participating in counseling and training activities by 14.75 with a pretest value of 56.45 and post test of 71.20. According to Marlina et al. (2019), one measure of an increase in knowledge and skills of participants is through an analysis of changes between pre-test and post-test scores. Judging from the value of the pretest shows that the initial knowledge of respondents is still low. Respondents after participating in counseling and training activities increased knowledge and skills. This shows that the process of transfer of knowledge and skills of processing livestock waste is quite good (Marlina et al., 2019).

1.3. Acceptance of Biogas Innovations

Acceptance of biogas technology innovations in Gedong Village, Ngadirojo District, Regency is presented in Table 6.

Table 6. Acceptance of biogas technology innovations in Gedong Village, Ngadirojo District

Acceptance of biogas technology innovations	Number of respondents (people)	Percentage (%)
Accept	32	69,56
Doubtful	14	30,43
Reject	0	0
Total	46	100

Source: Primary data processed, 2019

Based on Table 6 it can be seen that the majority of breeders in Gedong Village, Ngadirojo Subdistrict received biogas technology with a percentage of 69.56%. As many as 14 farmers are hesitant at 30.43% in accepting biogas technology. This is because the construction of biogas installations requires a large cost and a long time because the farmers have to fill the digester and maintain biogas installation routinely.

Biogas built in Gedong Village consists of 2 biogas installations, which are 20 m3 in size at the Summit partners. Jati Galih and 12m3 in the Makmur Farmers Group partner. Development of biogas installations with fixed dome technology, in addition to producing fuel to power stoves and lamps but also as a chopper engine driver. This gives a large benefit to the farmer because it reduces the cost of purchasing fuel, besides that the farmer gets additional income from the sale of organic fertilizer derived from bio-slurry / biogas waste.

According to Mikuwati (2018), the use of waste into biogas provides benefits for health, social, environmental and financial. According to the Ministry of Agriculture (2009) the benefits of biogas energy are as a substitute for fuel, especially kerosene and used for

cooking. Biogas on a large scale can be used as a power plant, besides that biogas production also produces residual processed livestock manure which can directly be used as organic fertilizer on plants. The livestock waste generated is no longer a burden, but a by-product that has high economic value and if possible is equivalent to the economic value of the main product (Insam et al., 2015).

D. CONCLUSION

The majority of farmers in Gedong Village, Ngadirojo District, Ngadirojo Regency receive biogas technology and there is an increase in breeders' knowledge after participating in counseling and training activities.

E. ACKNOWLEDGEMENT

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PAKEM: A LEARNING APPROACH TO STUDENTS OF ELEMENTARY SCHOOL WITH A MULTIMEDIA-BASED LEARNING AS A SOLUTION TO IMPROVE THE QUALITY OF LEARNING

Nuraini Usman, ainipgsd@gmail.com
Marwan Pulungan, marwanpulungan17@yahoo.com
Asnimar, asnimar@unsri.ac.id
Nurdin Kamil, nurdinkamil43@gmail.com

ABSTRACT

This research was conducted to produce a learning guide book with a Multimedia-based learning and PAKEM approach to Thematic learning. PAKEM is active, creative, effective and joyful learning. The development of this book is carried out to increase the activeness of students in thematic learning in elementary schools. This study uses a 4D development model, by adapted from Dick and Carey. The steps of this development method are taken in 4 steps, namely Define, Design, Develop and Disseminate. These four steps are carried out coherently, and have the steps below it. First step was defined, the researcher conducts a needs analysis. Second step is Design, at Design step researchers begin to be analyzed and make a draft of product development. The Develop step the researcher begins to develop the product, and at this step the product is developed through the validation test of the material expert and the media expert. In the Disseminate stage, the distribution of products made is carried out. This research is a research lecturer which is assisted by students as implementers. The subject of this research is the fourth grade students of elementary school Partners of PGSD FKIP UNSRI. Data collection uses questionnaires, interviews and observations. Data collection instruments consist of interview guidelines and observation guidelines for needs analysis, and a rating score scale from material experts and media experts. The effectiveness of the product in the trial can be seen from the results of observations on the activeness of students in participating in learning with a Multimedia-based PAKEM approach. The results showed that the learning guide book with a multimedia-based learning and PAKEM approach to Thematic learning has been found the appropriate criteria based on the results of the validation of the material experts and media experts. The average value of media validation was 93.10 with "very good" criteria, and the average value of material expert validation was 90.40 with very good criteria. In conclusions, learning with a multimedia-based PAKEM approach is stated to be able to improve the quality of learning to be active, effective and joyful learning in Elementary School Partners of FKIP UNSRI.

Keywords: Active, Elementary School, Multimedia-based Learning, PAKEM

A. INTRODUCTION

Education is a real and conscious effort carried out through a process of guidance, teaching, and training activities by an educator aimed at their students so that they are able to achieve a predetermined indicator and achievement. Good learning is carried out with the transfer of knowledge made by the teacher to students or vice versa. So students not only hear the explanation from the teacher, but the creation of complementary two-way communication [1] . In School Based Management there are three important components that are expected to improve the quality of education in Indonesia, namely: (1) school management, which is expected to open schools, have accountability and be participatory (2) community participation, both physically and non-physically / technically educative and (3) participatory, active, creative, effective and fun learning (PAKEM) in accordance with the principles of student centered learning. PAKEM is a solution to improve the quality of learning in schools. The PAKEM principle must be implemented effectively, this will certainly make learning more interesting and increase student motivation in learning. Forms of student

motivation in learning can be improved also through effective learning conducted by teachers in collaboration with students [2] . PAKEM is carried out with the availability of several factors, namely the teacher as a facilitator in learning, the teacher also functions as a motivator, mediator, evaluator and supervisor. Besides learning must be centered on students, with students themselves who search, find, process and make a concept of the knowledge they will get [3] .

The standard is translated from the four pillars of education launched by UNESCO, namely: (1 *) learning to know* , namely learning science in the form of cognitive aspects of learning; (2) *learning to do* , which is learning to do which is an aspect of practice and its implementation; (3) *learning to be* , i.e. learning to be myself in the form of aspects of personality and conformity with students; (4) *learning to life together* , namely learning to live in togetherness which is the social aspect of students, how to socialize, and how to live tolerance in diversity around students [4] . The application of active learning in schools has a variety of ways that can be developed by teachers, including learning by involving students. This method is very effective because students can experience the learning experience directly. Creative is also intended so that teachers create diverse learning activities so that it meets various levels of student ability. Creative is meant above not only by the use of learning aids. A teacher can take advantage of learning media based on information and communication technology that is currently growing rapidly. The use of *slides* prepared by the teacher in delivering learning material supports the occurrence of IT-based learning. Effective means that learning has a number of objectives to be achieved, so learning is very useful for students. Given the definition of active learning above, there is little justification for this exception. Challenging homework problems, online discussion boards, or written assignments can provide the same benefits of in-class activities [5] .

Active learning is done by providing a learning approach that invites students to provide feedback, evaluation and assessment in the learning process. So that student activity occurs in the learning process and each stage of learning [6] . Learning using the PAKEM approach requires collaboration to make learning more effective. One of them by using multimedia. Multimedia is a combination of data or media to convey information so that information is presented more attractively [7] . Multimedia learning is useful for channeling messages (knowledge, skills, and attitudes) and can stimulate students' choices, feelings, concerns and wishes so that the learning process deliberately occurs, aims, and is controlled [8] . The results of the study [8] - [10] show that learning using interactive multimedia has a significant influence on student learning outcomes. In addition, the ability that is needed by schools is the ability to think critically. Interakrif learning media are designed aiming to clarify the presentation of messages, information and can overcome the limitations of the senses, space, time, and objects or objects that are too big or too small objects that are not visible to the senses can be presented with the help of a microscope, film, slides, or images. This situation can lead to the ability to analyze, criticize, and reach conclusions based on careful inference or consideration called critical thinking skills (CBC) [11] .

Development of students' critical thinking skills through giving students freedom to provide their own answers in accordance with the logic of student thinking so that there are various kinds of thoughts produced by students [12] . Teaching critical thinking is effective if certain conditions are met: creating learning situations and necessary time allocation; encourage

children to think independently, to speculate, to ponder; acceptance of diversity of opinions and ideas; active involvement by the confrontation of ideas, cooperation and collaboration in finding appropriate solutions; belief that children will not be ridiculed for opinions [13], [14] . This implies that there must be some sort of metacognitive awareness on the part of the thinker of her own thought process. Critical thinking involves, as do all virtues, a set of habituated skills possessed by the agent and applied to her thinking [15] . The learning is implemented according to the Active Knowledge Sharing model and the scientific approach which requires the students to actively participate in the learning process. This is done to encourage students to be more confident and actively participate in learning [16] and of course the teacher is very instrumental in the implementation of learning that can improve students' critical thinking skills. For this reason, from the results of the above study, researchers developed a product that produced a book applying multimedia-based PAKEM approaches to thematic learning in elementary schools.

B. RESEARCH METHOD

The device development model that is applied, used in this study is a model adapted from the 4D development model which consists of 4 stages, namely 1) the *define* stage , the stage that aims to determine and define learning needs., 2) the *design* stage, namely the prototype design of learning devices 3) the *develop* phase is aimed at producing learning tools 4) the *disseminate* stage, namely the stage of using the developed device . These four stages are carried out coherently, and have the stages below it. As in the *Define* stage the researcher conducts a needs analysis. Needs analysis is done through observations in the implementation of learning and also interviews with teachers in primary schools. In the *Design* stage the researcher begins to analyze the results of the interview and make a draft in product development. The *Develop* Phase the researcher begins to develop the product, and at this stage the product is developed through the validation test of the material expert and the media expert. In addition, researchers also conducted trials and revisions to deficiencies found in the trial phase. Furthermore, at the *Disseminate* stage the distribution of the products made is carried out. This research is a lecturer research assisted by students as implementers. The subjects in this study were SD Negeri Mitra PGSD FKIP Unsri which consisted of 2 different schools. Data collecting is done by using a questionnaire and observation sheet. The effectiveness of the use of books on the application of multimedia-based PAKEM approach to thematic learning was analyzed by independent t-test after a normality and homogeneity test was performed.

C. RESULT AND DISCUSSION

There are several findings from the development that has been done. At the research and information gathering stages information is obtained about the learning needs of teachers and students in learning mathematics. The results showed that teachers and students needed a medium of learning mathematics in the form of picture story books that could improve students' mathematical abilities in connection. These results form the background in this research and development. Furthermore, in the planning stage, researchers have considered various objectives and benefits of media development. At this stage including the determination of material based on learning needs, core and basic competencies, and child-

friendly content based on student characteristics. When developing the initial form of the product stage, the media are developed based on the planning that has been made. The results of the literature review between lecturers and students outline focused on the learning approach. Of the several scientific journals discussed, the development of learning in elementary schools is focused on a student-centered learning approach. Of all the teachers in the school, only a few had understood the approach that could be implemented in learning in accordance with the 2013 curriculum. This resulted in learning conditions that were still *teacher centered.* The results of the interview also showed that the teacher had not used much media as a tool to convey learning, so students also did not really understand the explanation from the teacher. For this reason, after conducting an analysis, several stages are carried out in product development.

3.1 Design

Product design starts with a discussion again between lecturers and students. Each member of the study presents the results of the *need analysis* found in the previous stage. After the submission took place, the research team began to conduct discussions about the products to be developed. After that, together designing a product that will be developed. Based on the needs analysis, the product design book for thematic learning material development with Multimedia-based PAKEM approach in primary schools is as follows:

1. The book's title is a Multimedia-based PAKEM Approach to Thematic Learning in Primary Schools.
2. In general, the Book consists of 2 parts, namely the introductory chapter and the material chapter (chapters 2-4).
3. The introduction is the beginning of a book that is useful in providing an overview and explanation of learning practices in schools, as well as learning theories.
4. Book material is part of the core of the book. The book has 3 chapters, which are Chapter 2 about PAKEM learning, in this chapter it explains the standard learning in detail, with a description of PAKEM itself. Chapter 3 on Multimedia, explains about the various types of media that can be used by teachers, or multimedia that combines concrete media that are created directly by the teacher or *online* media that helps teachers deliver material that is difficult for teachers to explain in class. Chapter 4 on Thematic Learning and Learning Practices uses the Multimedia-based PAKEM approach to Thematic Learning in Primary Schools.
5. Each chapter has several elements, including an initial theory about the material, then examples of implementation, pictures to provide explanations / examples of the material presented, and also a description of learning practices in elementary schools.
6. The thematic material delivered in the product is taken in class IV learning in Elementary Schools. Types of Work. General description of learning practices, namely the implementation of learning conducted by students in Thematic learning with Multimedia-based PAKEM approach. The activity of designing learning practices is carried out by first analyzing the curriculum on the material developed. The material development is continued by analyzing the Core Competencies (KI) and Basic Competencies (KD) in class IV. After that, the

selection of appropriate themes and also discussion of appropriate multimedia and support the learning process in class IV.

7. Books made have supporting elements that are increasingly perfecting the product, including the Cover, foreword, Table of contents, and Bibliography.

3.2 Develop

The next stage after the preliminary study and research planning is product development. This stage is the workmanship of the product draft that has been prepared in the previous stage. Product development begins with reviewing the draft, and begins to make products in accordance with the guidelines for the preparation of the book.

The research and development of the book that was completed was designed, then validated in the initial stages by a validator given to 3 material expert validators, and 3 media expert validators. The subject of the experts in this validation activity were the Research Partner Lecturers and also the Elementary School Teacher Alumni Faculty of Teacher Training and Education who worked as primary school teachers. The validation instrument uses a *Likert* scale with a scale of 5. The results of expert validation and practitioner validation are as follows:

1) Material Expert Validation Results

After the product revision is held by the researcher, the validation is submitted again by the validator that has been previously appointed. From the validation results in the second revision, the following results are obtained:

Table 3.1 Results of expert material validation

No	Aspect	Analysis	Score
1	Material Worthiness		90
		Criteria	Very good
2	Presentation Feasibility		92.86
		Criteria	Very good
3	Language Feasibility		88.33
		Criteria	Very good

Based on the results of validation II in the table above, it is known that in the aspect of material feasibility an average value of 90 is obtained with the criteria of "very good". In the aspect of presentation eligibility, an average value of 92.85 was obtained with "very good" criteria. In the aspect of language eligibility an average value of 88.33 was obtained with the criteria of "very good". Thus obtained an average of the three aspects of material validation is 90.40 and has "very good" criteria. Thus the products that have been developed can be used in research.

2) Product Expert Validation Results

After a revision of the product being developed, the researcher returns the validation to the previous validator. The results of the validator carried out by the validation are as follows:

Table 3.2 Results of Validation of media experts

No	Aspect	Analysis	Score
1	Book Display		88.57
		Criteria	Very good
2	Presentation		95.71
		Criteria	Very good
3	Effectiveness		95
		Criteria	Very good

Based on the results of validation II in the table above, it is known that in the Book View aspect an average value of 88.57 is obtained with the criteria of "very good". In the aspect of presentation obtained an average value of 95.71 with the criteria "very good". In the aspect of language eligibility, an average value of 95 with "very good" criteria is obtained. Thus obtained an average of the three aspects of material validation is 93.10 and has "very good" criteria. That way, the design and material on the product developed can already be used in research.

a. Product Trial

After the product goes through the validation stage by the material expert and the media expert and the module has also been repaired, then the product is tested with a small group trial consisting of 10 students and a large group trial (field trial) consisting of 30 students. The product trial results are as follows:

1) Small Group Test

Based on the results of small group trials on learning activities with a multimedia-based PAKEM approach to thematic learning, an average of 85% was obtained with the interpretation criteria being "good". This means that products developed by researchers have interesting and efficient criteria for use in teaching and learning activities.

2) Large Group Test

After being trialled on a small group, then the resulting product is trialled on a large group. The number of respondents in this large group was 30 students. Field trials were conducted and students were asked to fill in responses to learning using the PAKEM approach that was contained in the product being developed. The results of field trials on the learning process with the PAKEM approach based on Multimedia on Thematic learning obtained an average of 87.09% with the interpretation criteria that is "very good".

3) Teacher Trial

After conducting a small group trial and field trial, then the product is tested back to the teacher trial. This is done to convince the data and to know the broad attractiveness of the product. Teacher test results obtained a score of 86.15% with the criterion of interpretation that is "very good", this means that the module developed by researchers has very interesting criteria for use in learning.

3.3 Disseminate

This stage is carried out by researchers by printing the results of books and distributing them for use by educators. So, it is hoped that the usefulness of this book can be felt by all.

D. CONCLUSION

In the discussion of this development research describes the suitability of the final product with development objectives, the results of the validation of experts consisting of material experts and media experts and trials as well as the advantages and disadvantages of the products produced.

Products developed through the stages of validation of material experts and media experts. This is done to test the feasibility of the product being developed. The resulting product can be used by teachers as teaching guides because it contains material on the Multimedia-based PAKEM approach to thematic learning in grade IV elementary schools. From the final results of Material Validation it is known that in the aspect of material eligibility obtained an average value of 90 with "very good" criteria. In the aspect of presentation eligibility, an average value of 92.85 was obtained with "very good" criteria. In the aspect of language eligibility an average value of 88.33 was obtained with the criteria of "very good". Thus obtained an average of the three aspects of material validation is 90.40 and has "very good" criteria. Thus the products that have been developed can be used in research. This validation test is carried out in stages, namely validation I, after which a revision is held with regard to comments and suggestions given by experts, then validation II is submitted again to the same material expert.

In addition, the results of media validation are known that in the aspect of Book Display obtained an average value of 88.57 with "very good" criteria. In the aspect of presentation obtained an average value of 95.71 with the criteria "very good". In the aspect of language eligibility, an average value of 95 with "very good" criteria is obtained. Thus obtained an average of the three aspects of material validation is 93.10 and has "very good" criteria. That way, the design and material on the product developed can already be used in research. Similar to the material validation test, the media validation test is carried out in stages, namely validation I, after which a revision is held with regard to comments and suggestions given by experts, then validation II is submitted again to the same media expert.

After that, the final stage of book development passes through the *disseminate* stage, which is the dissemination stage. Therefore, to find out the efficiency of this book, a product trial was conducted consisting of a small group test and a field test on fourth grade students of Elementary school PGSD FKIP Unsri. The results of product trials in small groups produce very good responses, some aspects such as usefulness, suitability and media attraction are categorized very well. The results of the field trials were carried out with regard to revisions to the small group trials. So the results of the field trials are also categorized very well from several aspects of the assessment.

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MUSEUM 5.0 : RANCANGAN MUSEUM DIGITAL UNTUK OPTIMASI PERAN MUSEUM DALAM MENCAPAI TARGET SDGs

Angga Hadiapurwa, angga@upi.edu
Hafsah Nugraha, hafsahnugraha@student.upi.edu
Nanda Khaerunnisa Syafitri, nandakhs@upi.edu
Program Studi Perpustakaan dan Sains Informasi
Universitas Pendidikan Indonesia
angga@upi.edu

ABSTRAK

Museum sebagai salah satu lembaga pengelola koleksi-koleksi seperti peninggalan sejarah, seni, dan ilmu pengetahuan memiliki peranan dan fungsi tersendiri untuk memenuhi Tujuan Pembangunan Berkelanjutan atau Sustainable Development Goals (SDGs). Banyaknya museum yang jaraknya jauh untuk diakses sebagian orang menyebabkan peranan museum menjadi tidak maksimal dalam memanfaatkan keberadaannya untuk mencapai target SDGs. Perkembangan teknologi yang ada di era society 5.0 dapat dimanfaatkan oleh museum untuk mengembangkan tingkat literasi informasi dan literasi media pada masyarakat sebagai salah satu cara untuk untuk mencapai target SDGs pada topik 4.7 tentang Quality Education, 10.2 tentang Reduce In-Equality, dan 16.10 tentang Peace, Justice, and Strong Institutions. Tujuan dari penelitian ini adalah untuk memberikan gagasan kreatif berupa rancangan museum digital berbasis AR untuk memaksimalkan peran museum dalam mencapai target SDGs. Rancangan museum digital yang digagas ini membuat pengunjung dapat berinteraksi dengan koleksi melalui mobile apps yang dikombinasikan dengan sentuhan teknologi AR, sehingga aplikasi ini diharapkan dapat menambah pengalaman pengunjung dalam mengakses koleksi yang tersedia di museum. Metode yang digunakan adalah studi literatur hasil kajian pustaka yang bersumber dari referensi ilmiah. Hasil dari penelitian ini adalah rancangan museum digital berbasis AR dapat menjadi solusi atas salah satu kendala yakni jarak yang dialami oleh museum. Pemanfaatan teknologi AR dapat menjadi sarana promosi museum agar semakin banyak dikunjungi sekaligus juga menjadi sarana promosi untuk mencapai target SDGs.

Kata Kunci: *Museum Digital; SDGs; Society 5.0; Augmented Reality.*

A. PENDAHULUAN

Perkembangan teknologi di dunia kini berkembang sangat pesat. Revolusi Industri 4.0 sebagai salah satu perkembangan mesin teknologi digital sudah banyak dialami oleh berbagai kalangan masyarakat di berbagai belahan dunia. Schwab (2017) menyatakan bahwa Revolusi Industri 4.0 adalah fase revolusi industri ke-4 yang berkembang dari konsep revolusi industri ke-3 ketika teknologi digital secara masif makin banyak digunakan. Namun, di abad ke-21 ini, sudah mulai muncul adanya istilah *Society 5.0* yang merupakan perkembangan dari era Revolusi Industri 4.0. Menurut Faruqi (2019), *Society 5.0* adalah sebuah perkembangan kehidupan dalam masyarakat yang disokong oleh perkembangan teknologi dengan konsep masyarakat yang bisa memanfaatkan teknologi namun tetap memperhatikan aspek sosial dan kemanusiaan. Dalam konsep era *Society*

5.0 tidak hanya mengedepankan perkembangan teknologi saja namun tetap memperhatikan pula adanya prinsip keseimbangan antara perkembangan teknologi dengan konsep kemasyarakatan sehingga permasalahan yang ada di dalam lingkup masyarakat bisa diselesaikan dengan adanya kolaborasi antara dunia nyata dan dunia maya yang dapat berintegrasi.

Prinsip keseimbangan yang dimiliki oleh *Society 5.0* ini dapat digunakan sebagai salah satu cara untuk mencapai Tujuan Pembangunan Berkelanjutan atau *Sustainable Development Goals* (SDGs) yang merupakan sebuah konsep yang dicetuskan oleh Perserikatan Bangsa-Bangsa (PBB) untuk mencapai 17 tujuan yang telah dirumuskan dengan melakukan pembangunan bersama hingga tahun 2030. Di dalam situs resmi PBB (*https://www.un.org*) SDGs digagas untuk masa depan yang lebih baik dengan mengatasi berbagai tantangan global yang terkait dengan kemiskinan, kesenjangan, perubahan iklim, kemakmuran, kedamaian, dan keadilan. Untuk mencapai target SDGs, diperlukan kerja sama dan kontribusi dari semua pihak. Museum sebagai salah satu lembaga pengelola koleksi-koleksi seperti peninggalan sejarah, seni, dan ilmu pengetahuan memiliki peranan dan fungsi tersendiri untuk memenuhi target SDGs.

Museum secara khusus memiliki peranannya tersendiri terhadap setiap topik SDGs yang ada. Banyaknya museum yang tersebar di seluruh dunia dengan berbagai macam koleksi seni, sejarah, ilmu pengetahaun bahkan hal-hal aneh sekali pun bisa menjadi sarana untuk mencapai target SDGs. Umumnya museum berperan sebagai lembaga penyedia informasi untuk masyarakat yang menyajikan secara nyata koleksi tertentu. Visser (2018) menjelaskan lebih spesifik mengenai peranan museum untuk memenuhi target SDGs, yakni pada topik 4.7 yang menjelaskan tentang *Quality Education*, 10.2 tentang *Reduce In-Equality*, dan 16.10 tentang *Peace, Justice, and Strong Institutions.* Pada topik 4.7 dan 10.2 museum berperan sebagai lembaga informasi yang mempromosikan capai-capaian SDGs melalui pendidikan, khususnya mengenai inklusi sosial, ekonomi dan politik tanpa memandang usia, jenis kelamin, disabilitas, ras, etnis, asal, agama, ekonomi atau status sosial lainnya. Sementara dalam topik 16.10, museum sebagai lembaga informasi harus memastikan bahwa aksesibilitas masyarakat terhadap informasi dapat terjamin serta melindungi kebebasan masyarakat untuk memperoleh informasi, sesuai dengan undang-undang nasional dan perjanjian internasional. Menurut Faruqi (2019) Perkembangan era *society 5.0* ditandai dengan adanya penggunaan *Artificial Inteligence* atau kecerdasan buatan, robot, *Big Data* dan *Internet of Things (IoT).* Perkembangan teknologi di era *Society 5.0* yang semakin canggih dapat dimanfaatkan oleh museum untuk mengembangkan tingkat literasi informasi dan

literasi media pada masyarakat di era digital sehingga konsep kesimbangan antara manusia dan teknologi untuk mencapai tujuan SDGs dapat tercapai.

Literasi informasi merupakan kemampuan seseorang dalam memahami bagaimana mengakses dan mendapatkan sebuah informasi sehingga ia membuat sebuah pemahaman dan menciptakan ide-ide baru (McKenzie, 2000). Ketika seseorang melakukan literasi terhadap informasi, menurut Webber dan Johnston (2014) terdapat beberapa elemen, yaitu: 1). Kemampuan dalam mencari informasi yang efektifm, 2). Kemampuan dalam memilih informasi yang relevan, 3). Kemampuan dalam menyeleksi dan mengevaluasi informasi yang didapatkan, 4) Kemampuan dalam menggunakan media, 5). Kepekaan dalam membedakan informasi yang benar dan salah, 6). Efektivitas dalam menyampaikan informasi kepada orang lain. Pada elemen yang ke-4, dapat diartikan bahwa untuk melakukan literasi informasi, seseorang perlu menggunakan media, sehingga diperlukan pula adanya literasi media untuk mendampingi pencarian informasi. Literasi media menurut Rubin (2006) adalah sebuah pemahaman mengenai komunikasi antara sumber, teknologi dan kode yang digunakan agar sebuah pesan dapat tersampaikan setelah adanya seleksi dan interpretasi sehingga bisa memberikan sebuah dampak. Maka dapat diartikan bahwa penyampaian informasi atau pesan dapat dilakukan melalui berbagai jenis media. Perkembangan teknologi-teknologi terbaru seperti, *Augmented Reality* (AR), *Virtual Reality* (VR), *smartphone, Artificial Intelligence* (AI) merupakan hasil dari perkembangan teknologi yang memudahkan aktivitas manusia sehingga dengan menggunakan teknologi tersebut informasi dapat dengan mudah disampaikan kepada masyarakat.

Kebiasaan masyarakat dalam memenuhi kebutuhan informasi atau kebutuhan kehidupan yang lainnya tidak dapat terlepas dari teknologi. Berdasarkan data yang dilansir oleh *we are* social mengenai *digital around the world in* 2019 sekitar 5,1 miliar penduduk dunia merupakan pengguna media sosial dengan menggunakan *smartphone* (Kemp, 2019). Dalam era digital ini dapat diartikan bahwa masyarakat akan lebih memilih untuk menggunakan teknologi *smartphone* yang dimilikinya dan ikut aktif dalam dunia digital baik untuk bertukar informasi atau sekedar berkomunikasi.

Berbagai macam kendala yang selama ini dialami oleh manusia, dapat terselesaikan oleh teknologi. Pemanfaatan teknologi seperti AR, VR, *smartphone* dapat mengatasi permasalahan yang berkaitan dengan jarak, eksperimen, dan juga simulasi. Sehingga teknologi memberikan

kemudahan hampir dalam semua aspek sehingga dunia ini dirasa tidak memiliki batasan meskipun jarak antara satu tampat ke tempat lainnya berjauhan.

Berbicara mengenai jarak, di dunia ini terdapat banyak sekali museum yang letaknya berjauhan. Jarak yang jauh ini menjadi salah satu faktor mengapa banyak orang yang mengalami kesulitan untuk mengunjungi berbagai museum menarik yang ada di seluruh dunia. Hal ini menyebabkan peranan museum menjadi tidak maksimal dalam memanfaatkan keberadaannya untuk mencapai target SDGs. Untuk mengatasi jarak yang jauh, teknologi menjadi jawaban atas masalah tersebut.

Seperti halnya komunikasi, teknologi menjadi perantara agar jarak tidak menjadi hambatan untuk selalu terhubung. Pemanfaatan teknologi di dalam bidang museum sudah diterapkan oleh beberapa museum di dunia, seperti Pitt River Museum (dapat diakses di http://www.prm.ox.ac.uk/virtualtour.html) yang telah menggunakan teknologi *camera* 360º untuk memudahkan pengunjung virtual dalam mengakses koleksi museum di titik-titik tertentu.

Selain Pitt River Museum, di Indonesia penerapan teknologi untuk museum sudah dilakukan oleh Museum Sumatera Selatan. Untuk memamerkan koleksi yang dimilikinya, Museum yang dikelola oleh Pemerintah Propinsi itu menyediakan aplikasi di *Playstore* android bernama "SumSel Museum" yang memanfaatkan teknologi *Augmented Reality* (AR). Pemanfaatan AR dilakukan untuk meningkatkan daya tarik pengunjung museum dan memberikan pandangan bahwa museum bisa menjadi sangat menarik dan modern.

Zaman yang semakin berkembang juga mengubah paradigma masyarakat yang membutuhkan informasi. Jika sebelumnya masyarakat mendatangi informasi yang mereka butuhkan, maka di era yang super cepat ini informasilah yang mendatangi masyarakat. Seperti halnya konsep "perpustakaan digital" yang dapat diakses di mana dan kapan saja, konsep "museum digital" juga dapat dikembangkan agar peran museum untuk mencapai target SDGs dapat dimaksimalkan.

Berdasarkan hasil pemaparan di atas mengenai peran museum dalam SDGs dan peranan teknologi di masyarakat serta perkembangan pemanfaatan teknologi di museum, penulis bermaksud untuk mengembangkan rancangan museum digital berbasis AR untuk memaksimalkan peran museum dalam mencapai target SDGs. Oleh sebab itu, mengacu pada kajian yang telah dilakukan serta berdasarkan latar belakang yang telah dipaparkan, penulis memilih judul "Museum 5.0 : Rancangan Museum Digital Untuk Optimasi Peran Museum Dalam Mencapai Target SGDs".

B. METODE PENELITIAN

Metode yang digunakan untuk karya tulis ini adalah studi literatur hasil kajian pustaka yang bersumber dari referensi ilmiah. Zed (2008, hlm. 1) menyatakan bahwa dalam kegiatan studi literatur, penulis memanfaatkan perpustakaan untuk memeperoleh data penelitiannya, sehingga kegiatan penelitiannya dibatasi hanya pada bahan-bahan koleksi perpustakaan saja. Perlu digaris bawahi bahwa koleksi perpustakaan di sini bukan hanya sekedar buku namun jurnal-jurnal ilmiah, daftar bibliografi, kamus, daftar istilah, dan sebagainya juga merupakn koleksi perpustakaan yang dapat dimanfaatkan dalam studi literatur.

Terdapat empat langkah dalam metode studi literatur yang dikemukakan oleh Zed (2008, hlm. 16) yaitu (1) menyiapkan alat perlengkapan, (2) menyususn bibliografi kerja, (3) mengatur waktu, dan (4) membaca serta membuat catatan penelitian. Keempat langkah ini dapat memudahkan kerja penulis dalam melakukan studi literatur.

C. HASIL DAN PEMBAHASAN

Museum memilik peran untuk mencapai target SDGs khususnya tiga topik berikut yakni mengenai SDGs nomor 4 yakni *Quality Education*, kemudian nomor 10 mengenai *Reduce In-Equality*, dan terakhir nomor 16 mengenai *Peace, Justice, and Strong Institutions. United Nation* (2015) menjelaskan capaian-capaian yang terdapat dalam setiap target SDGs dan museum berperan untuk mencapai target SDGs pada capaian 4.7, 10.2, dan 16.10.

Dari paparan yang dikemukakan oleh Visser (2018) pada intinya museum memiliki peranan sebagai lembaga yang berperan untuk mempromosikan hal-hal yang berkaitan dengan kemaslahatan umat manusia melalui edukasi serta gerakan-gerakan persuasif lainnya. Selain itu museum juga berperan sebagai lembaga yang menjamin aksesibilitas informasi bagi masyarakat sesuai dengan aturan yang berlaku, seperti yang dikemukakan oleh ICOM dalam Pengelolaan Koleksi Museum (Direktorat Museum, 2007) yakni salah satu fungsi museum sebagai lembaga yang melakukan penyebaran dan pemerataan ilmu untuk umum.

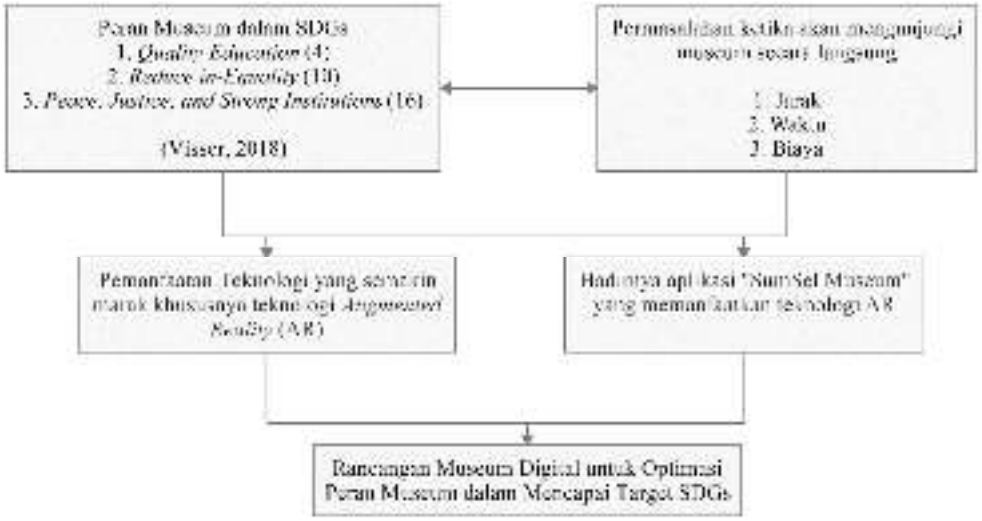
Seperti yang sudah dijelaskan sebelumnya jarak yang terlampau jauh untuk mendatangi museum menjadi permasalahan dalam kemudahan akses koleksi museum. Padahal setiap museum memiliki ciri khas koleksinya masing-masing yang tidak dimiliki antara museum satu dan museum lainnya. Hal ini menyebabkan peranan museum untuk mencapai taarget SDGs menjadi kurang

maksimal. Meskipun koleksi yang dimiliki banyak dan beragam, namun cukup disayangkan apabila tidak dapat dinikmati oleh semua pihak. Sebelumnya, ICOM telah menjelaskan bahwa dalam memamerkan koleksinya museum harus terbuka tanpa memandang siapa dan apa tujuan mereka untuk datang ke musuem sehingga museum harus selalu siap untuk memamerkan segala jenis koleksi yang akan dipamerkannya.

Kebiasaan masyarakat yang menggunakan teknologi untuk memperoleh informasi dan memenuhi kebutuhan hidup membuat teknologi menjadi sangat dibutuhkan. Perkembangan teknologi yang kian pesat dan kondisi masyarakat yang semakin dibantu dengan keberadaan teknologi yang membuat segala pekerjaan manusia menjadi lebih mudah bisa memberikan dampak adanya inovasi teknologi seperti digitalisasi informasi akan menjadi pilihan menarik di mata masyarakat. Sehingga dengan adanya pembaharuan dari teknologi informasi seperti digitalisasi koleksi museum dengan teknologi AR dapat membantu masyarakat dalam mendapatkan informasi museum.

Teknologi AR sebelumnya sudah banyak diimplementasikan dalam kehidupan sehari-hari untuk memudahkan kegiatan sehari-hari. Seperti yang diungkapkan Silva, dkk. (2003) bahwa teknologi AR yang bersifat interaktif sehingga memudahkan dalam kegiatan eksperimen dan simulasi. Jika berbicara mengenai museum, Museum Sumatera Selatan sudah melakukan implementasi teknologi AR untuk menarik minat pengunjung museum. Selain digunakan sebagai sarana promosi, aplikasi android yang memanfaatkan teknologi AR ini menjadi aplikasi pelengkap yang dapat dimanfaatkan oleh pengunjung Museum Sumatera Selatan.

Aplikasi SumSel Museum memiliki cara kerja yang unik. Pengunjung yang telah memiliki aplikasi ini dapat menggunakan teknologi AR dengan cara melakukan *scan barcode* yang terdapat pada koleksi museum. Aplikasi ini dapat menampilkan koleksi museum yang ada di Museum Sumatera Selatan secara digital dan memungkinkan pengunjung untuk beriteraksi langsung dengan koleksi seperti memutar, memperbesar, dan memperkecil koleksi. Konsep ini yang kemudian ingin dikembangkan oleh penulis sebagai gagasan kreatif dalam memaksimalkan peran museum untuk mencapai target SDGs.



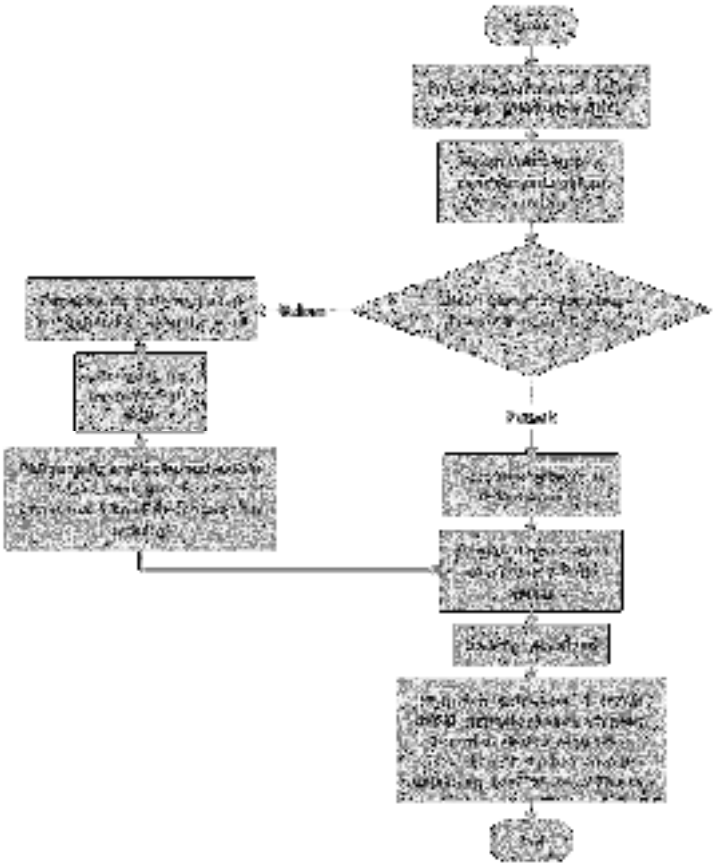
Gambar 1 Kerangka Berpikir

Berdasarkan pemaparan sebelumnya di dalam pendahuluan, penulis ingin merancang sebuah museum digital yang dapat dimanfaatkan untuk optimasi peran museum dalam mencapai target SDGs. Rancangan museum digital ini dibuat dengan memanfaatkan teknologi AR dan megadopsi konsep aplikasi "SumSel Museum" yang sudah dikembangkan sebelumnya, sehingga pengunjung dapat berinteraksi dengan koleksi serta mendapatkan infromasi mengenai koleksi melalui aplikasi museum digital. Pemanfaatan teknologi AR pada aplikasi museum yang dikembangkan ini dapat mengatasi kendala jarak yang sudah diuraikan pada latar belakang, sehingga optimalisasi peran museum dalam mencapai target SDGs dapat dimaksimalkan.

3.1 Desain Museum Digital

Desain aplikasi museum digital ini dibuat dengan mempertimbangkan kemudahan pengguna sehingga fitur yang ditampilkan tidak terlalu banyak dan fokus pada penerapan teknologi AR. Desain aplikasi museum digital ini menampilkan menu utama berisi dua pilihan yakni "Pernah Menggunakan" atau "Belum Pernah Menggunakan" aplikasi museum digital. Pilihan ini akan mengarahkan pengunjung ke dalam menu yang berbeda. Pengunjung dapat memperoleh akun dengan mendaftar menggunakan e-mail. Terdapat dua jenis akun yang dimiliki oleh aplikasi museum digital yakni trial account yang diperoleh langsung setelah pengunjung daftar menggunakan e-mail dan premium account yang diaktifkan setelah voucher yang sudah dibeli pengguna diaktivasi.

Adapun desain umum untuk aplikasi museum digital adalah sebagai berikut:



Gambar 2 Desain Umum Aplikasi Museum Digital

3.2 Cara Kerja Museum Digital

Seperti yang sudah dipaparkan sebelumnya pada latar belakang, terdapat kemungkinan bahwa pengunjung tidak dapat mengunjungi museum secara langsung. Pemanfaatan teknologi AR dalam pengebangan aplikasi museum digital ini dapat dimanfaatkan sebagai salah satu solusi dari permasalahan tersebut. Pengunjung dapat berinteraksi dengan koleksi melalui *mobile apps* yang dikombinasikan dengan sentuhan teknologi AR, sehingga aplikasi ini diharapkan dapat menambah pengalaman pengunjung dalam mengakses koleksi yang tersedia di museum.

Aplikasi museum digital ini dapat dioperasikan pada *smartphone* berbasis android. Pengunjung dapat mengakses koleksi-koleksi yang terdapat dalam museum. Koleksi ini berupa hasil konversi metadata yang telah diinput sebelumnya oleh pengelola museum dan sudah dihimpun di dalam database aplikasi tersebut. Sistem akan membaca metadata tersebut kemudian menampilkan koleksi dalam bentuk AR dan menyertakan informasi mengenai koleksi tersebut.

Terdapat dua mode aplikasi yakni versi *trial* dan versi *full access*. Versi *trial* dapat diakses untuk pengunjung yang pertama kali mengakses aplikasi museum digital. Versi ini dapat terus menerus diakses oleh pengunjung sebagai sarana promosi tersendiri bagi aplikasi museum digital ini meskipun dengan fitur dan jumlah koleksi yang dibatasi. Selanjutnya versi *full acess* yang dapat diakses dengan aktivasi kode voucher. Kode voucher ini dapat diperoleh dengan melakukan pembelian secara langsung dari aplikasi dengan menggunakan *e-wallet* serta dapat digunakan untuk satu kali akses tanpa pembatasan fitur. Pembatasan akses sebanyak satu kali dilakukan untuk tetap mendapatkan pemasukan dari aplikasi museum digital ini guna pemeliharaan aplikasi dan koleksi museum itu sendiri.

3.3 Rencana Pemanfaatan Museum Digital untuk Optimasi Target SDGs

Rancangan museum digital ini sangat memungkinkan untuk direalisasikan, meskipun banyak hal yang perlu dipikirkan termasuk mengenai biaya yang dibutuhkan untuk mengembangkan dan merawatnya. Biaya yang akan dikeluarkan untuk pengembangan dan perawatan aplikasi, dapat ditutup dengan voucher yang akan dijual secara resmi oleh pengelola museum melalui laman resmi museum dan dapat dibeli oleh pengunjung menggunakan *e-wallet*. Voucher ini akan terus memperbarui dirinya sendiri sehingga setiap orang yang membelinya akan mendapatkan nomor seri yang berbeda-beda.

Seperti yang sudah dipaparkan sebelumnya pada bagian sintesis, teknologi dapat menjadi salah satu solusi untuk mengatasi kendala jarak yang dialami museum untuk mencapai tujuan SDGs. Pemanfaatan teknologi dapat menjadi sarana promosi museum sesuai dengan paparan mengenai peran museum untuk mencapai target SDGs.

Selain sebagai sarana promosi, aplikasi museum digital ini dapat meningkatkan daya tarik atau citra dari museum sendiri secara nyata. Pemanfaatan teknologi AR yang terbilang baru dapat menjadi ciri khas museum yang berteknologi canggih sehingga apabila memungkinkan dari segi waktu dan biaya dapat menarik minat pengunjung untuk datang ke museum secara langsung.

Aplikasi museum digital ini juga dapat meningkatkan aksesibilitas pengunjung terhadap koleksi museum. Jika sebelumnya koleksi museum hanya dapat diakses oleh pengunjung yang datang langsung ke museum, maka dengan adanya aplikasi museum digital semua pengunjung memiliki kesempatan yang sama untuk mengakses koleksi museum dan memperoleh informasi dari koleksi tersebut. Hal ini menyebabkan aksesibilitas koleksi museum yang semula terbatas perlahan berubah menjadi bisa diakses oleh siapa saja secara digital.

Pemanfaatan teknologi berbasis AR untuk aplikasi museum digital ini merupakan salah satu fakta mengenai bagaimana teknologi dapat menyelesaikan permasalahan yang dialami oleh manusia. Teknologi dapat membiaskan jarak seolah dunia menjadi tidak memiliki batas. Teknologi yang terus berkembang pesat dalam berbagai bidang menuntut manusia untuk memiliki kemampuan literasi informasi dan literasi media sehingga dapat menerapkan konsep *society* 5.0 yang memiki konsep keseimbangan antara kemampuan masyarakat sosial dengan perkembangan teknologi serta dapat mendukung peran museum untuk mencapai target SDGs dapat dimaksimalkan.

D. KESIMPULAN

Berdasarkan hasil analisis dan sintesis yang telah dipaparkan sebelumnya, maka dapat diambil kesimpulan bahwa rancangan museum digital berbasis AR dapat menjadi solusi atas salah satu kendala yakni jarak yang dialami oleh museum. Desain museum digital yang dikembangkan memberikan pengalaman baru kepada pengunjung untuk mengakses koleksi museum. Kombinasi pemanfaatan teknologi AR dan *smartphone* menjadi sebuah aplikasi yang nantinya bisa dimanfaatkan oleh masyarakat. Cara kerja museum digital dengan menggunakan AR dan konversi metadata menjadi berbentuk visual dalam aplikasi sehingga pengunjung dapat berinteraksi dengan koleksi museum serta mengakses informasi terkait koleksi tersebut. Kedepannya akan disediakan fitur khusus dalam aplikasi dan laman resmi museum untuk melakukan transaksi pembayaran voucher. Pembayaran dengan menggunakan fitur *e-wallet* untuk memudahkan pengunjung dan memepercepat proses transaksi agar koleksi museum dapat diakses di mana dan kapan saja.

Pemanfaatan teknologi dapat menjadi sarana promosi museum agar semakin banyak dikunjungi sekaligus juga menjadi sarana promosi sesuai dengan paparan mengenai peran museum untuk mencapai target SDGs. Pemanfaatan teknologi AR yang terbilang baru dapat menjadi ciri khas museum yang berteknologi canggih sehingga apabila memungkinkan dari segi waktu dan biaya dapat menarik minat pengunjung untuk datang ke museum secara langsung. Aplikasi museum digital ini juga dapat meningkatkan aksesibilitas pengunjung. Semua pengunjung bisa memiliki kesempatan yang sama untuk mengakses koleksi museum dan memperoleh informasi dari koleksi tersebut.

Pemanfaatan teknologi dapat membiaskan jarak seolah dunia menjadi tidak memiliki batas. Teknologi yang terus berkembang pesat dalam berbagai bidang menuntut manusia untuk memiliki kemampuan literasi informasi dan literasi media sehingga dapat menerapkan konsep *society* 5.0

yang memiki konsep keseimbangan antara kemampuan masyarakat sosial dengan perkembangan teknologi serta dapat mendukung peran museum untuk mencapai target SDGs dapat dimaksimalkan.

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PENGGUNAAN UNDERSTANDING BY DESIGN DALAM PENGEMBANGAN DAN DESAIN KURIKULUM SEKOLAH TINGGI TEOLOGIA (STUDI KASUS DI STT IMAN, JAKARTA)

Yogi Tjiptosari, S.Th., M.Pd

yogi.tjiptosari72@gmail.com

ABSTRACT

The curriculum is a very important document that details how learning and teaching must be carried out. The curriculum document is a guide to learning; it must be well planned, designed and developed, if you want to achieve a success in the implementation stage. This case study conveys its attention on the analysis and evaluation of the Theological College curriculum documents. The aim is to look closely at which parts are currently lacking, to analyze and revise them, and make recommendations for improvement. The relevance and effectiveness of this curriculum is important to build on the factors that currently exist in society and how from time to time changes occurred in terms of culture and the availability of resources and ideology of a nation. The curriculum revision is based on input received from the Institution foundation, alumnus, lecturers and other stakeholders, as well as government regulations which then lead to more effective data collection in producing written documents. The implementation of this revision uses Understanding by Design (UbD) in providing the curricular approach needed by the IMAN Theological College (STT IMAN) to achieve the objectives of the revised curriculum document.

Key words: Curriculum, revision, Understanding by Design

A. PEMBUKAAN

Pada saat ini perkembangan teknologi yang pesat mendorong berkembangnya pendidikan di berbagai sektor. Akibatnya banyak riset yang dilakukan untuk merancang dan mengelola perkembangan kurikulum yang menghasilkan berbagai desain pembelajaran. Desain pembelajaran yang dihasilkan diharapkan dapat meningkatkan pengembangan pendidikan dalam waktu yang relatif lebih lama. Dunia menyaksikan berbagai macam langkah besar yang dilakukan diberbagai tingkat pendidikan, yang kemudian menghasilkan berbagai model untuk merancang dan mengelola reformasi kurikulum, yang kemudian menghasilkan desain pembelajaran yang berfokus pada kompetensi jangka panjang.

Kurikulum sendiri memegang peranan penting dalam pendidikan, sebab berkaitan dengan arah, isi, proses dan evaluasi pendidikan yang pada akhirnya menentukan kualifikasi lulusan suatu lembaga pendidikan. Perbaikan-perbaikan dalam kurikulum merupakan solusi dalam mengatasi rendahnya kualitas proses dan hasil pendidikan yang berakibat pada rendahnya kualitas sumber daya manusia Indonesia dalam kesempatqan persaingan global yang sedang terjadi. Kebijakan pada kurikulum inipun berdampak pada pengembangan kurikulum Sekolah Tinggi Teologi.

Amanat Pembukaan Undang-Undang Dasar Negara Republik Indonesia tahun 1945, sangatlah jelas mengedepankan pada pendidikan yang meningkatkan keimanan dan ketakwaan kepada Tuhan Yang Maha Esa, serta akhlak mulia untuk mencerdaskan kehidupan bangsa.

Tujuan Negara dalam mencerdaskan kehidupan bangsa memberikan kesempatan kepada setiap warga Negara Indonesia berhak memperoleh pendidikan yang berkualitas sesuai dengan kemampuan yang dimilikinya. Pemerataan pendidikan memberikan kesempatan setiap warga Negara Indonesia memiliki keterampilan hidup yang berguna untuk mengenali dan mengatasi masalah diri sendiri dan juga lingkungan disekitarnya, serta dapat mendorong masyarakat yang menjiwai nilai-nilai Pancasila.

Berdasarkan Human Development Report (HDI) atau Indeks Pembangunan Manusia (IPM) tahun 2018 yang disampaikan oleh UNDP, menempatkan Indonesia pada tingkatan 116 dari 189 negara dan territorial. Meningkatnya indeks pembangunan manusia berbicara mengenai cepatnya pembangunan manusia dengan cara, salah satunya, adalah pada bidang pemerataan pendidikan. Hal ini akan mendorong peningkatan pada produktifitas barang dan jasa atau kinerja, sehingga mampu menghasilkan output yang produktif. Depdiknas sendiri selaku penentu sistem pendidikan nasional memiliki kewajiban untuk mewujudkan misi pembangunan di Negara Indonesia ini. Generasi manusia seperti apa yang harus dipersiapkan? Karenanya pembangunan manusia ini tidak hanya membangun dan mengembangkan ranah intelektual saja, melainkan melibatkan watak, moral, social dan bahkan fisik peserta didik, dan lebih baik lagi apabila dapat mewujudkan manusia yang Indonesia seutuhnya.

Sekolah teologia saat ini berusaha membenahi diri agar mencapai mutu yang ditetapkan oleh Badan Akreditasi Nasional (BAN) sebagai lembaga yang ditunjuk pemerintah untuk melaksanakan akreditasi bagi semua jenjang pendidikan di Indonesia. Hal ini mendorong Sekolah Tinggi Teologi (STT) di seluruh Indonesia untuk membenahi diri dan memenuhi standar mutu pendidikan seperti yang telah ditetapkan oleh pemerintah. Hal ini merupakan hal yang sangat positif dan penting, karena STT adalah bagian dari pendidikan nasional yang penting dalam rangka ikut serta mencerdaskan bangsa dan berperan dalam membangun Negara ini.

Oleh karena perkembangan yang cepat dari ilmu pengetahuan, teknologi, sosial dan budaya, maka Sekolah Tinggi Teologia IMAN (STT IMAN) melihat pentingnya pembenahan dalam kurikulum agar lebih optimal dalam menghasilkan lulusan. Untuk itu digunakanlah metode Understanding by Design dalam Pengembangan dan Desain Kurikulum Sekolah Tinggi Teologia IMAN (Studi Kasus di STT IMAN, Jakarta). Adapun pertanyaan penelitian yang dapat di identifikasi adalah: 1) apakah ada perbedaan yang signifikan antara kelompok eksperimen dan kelompok kontrol sebelum menerapkan UbD dalam perencanaan kurikulum

pembelajaran? 2) Apakah ada perbedaan yang signifikan antara kelompok eksperimen dan kelompok kontrol setelah menerapakan UbD dalam perencanaan kurikulum pembelajaran?

Seperti pernyataan Johnson (2001) yang dikutip oleh Merfat Ayesh Alsubaie (2016), bahwa:

> *"The goal of a successful educational program and thus effective curriculum development should be to meet the needs and current demands of the culture, the society, and the expectations of the population being served. Therefore curriculum development and the educational reform process continually under goes review, revision, and constant change. Curriculum Development can be challenging, therefore the involvement of all stakeholders, especially individuals who are directly involved in student instruction, are a vital piece of successful curriculum development and revision."*

Tujuan dari penelitian ini adalah untuk mengetahui pengaruh penggunaan Understanding by Design pada Pengembangan dan Desain Kurikulum Sekolah Tinggi Teologia IMAN. Posner (1988:94) bahwa: *"A 'complete' curriculum planning model is not what the field needs. The field needs curriculum planners not only able to use various models, but also aware of the implications of their use."* Oleh karena itu UbD berisi tiga langkah pengembangan kurikulum, yaitu:

1. Mengidentifikasi hasil yang diinginkan pada saat merevisi pembelajaran, memprioritaskan pembelajaran dan tujuan yang penting, menentukan capaian dan memvalidasi hasil pembelajaran
2. Menentukan hasil capaian yang dapat diterima
3. Merencanakan pengalaman dan instruksi pembelajaran.

B. METODE PENELITIAN

Metode penelitian yang digunakan adalah interview terhadap para *stakeholders* dalam STT IMAN dan kajian pustaka melalui buku, jurnal dan literasi lainnya yang dilakukan peneliti dalam rangka mengumpulkan informasi. Data yang diperoleh kemudian digunakan dalam mendesain kurikulum yang mencakup perbaikan minor dan mayor dalam dokumen kurikulum. Hal ini dilakukan dalam rangka memberikan program pendidikan dan pelatihan praktis yang holistik, komprehensif, kontekstual dan aplikatif.

C. HASIL DAN DISKUSI

Kurikulum merupakan rancangan pengajaran yang disusun secara sistematis dan merupakan materi yang diperlukan sebagai syarat dalam menyelesaikan suatu program pendidikan. Program pendidikan dalam kurikulum sifatnya menyeluruh dan bersumber dari berbagai landasan pengetahuan yang didalamnya berisi tujuan, isi, bahan pengajaran dan evaluasi yang digunakan untuk mencapai tujuan dalam pendidikan. Desain kurikulum yang biasanya dilakukan adalah berisi daftar konten pembelajaran yang akan di ajarkan. Studi kasus yang di dasarkan pada *Understanding by Design* (UbD) ini digunakan untuk meningkatkan capaian akademik bagi peserta didik di STT IMAN. Studi kasus ini untuk melihat perbedaan antara group eksperimen dan group kontrol sebelum menerapkan dan setelah menggunakan UbD dalam merencanakan kurikulum pembelajaran di dalam kelas. Menyaksikan realitas pembelajaran yang sebelumnya, maka diamati bahwa perencanaan tersebut tidak memenuhi harapan. Karena selain dari pada cara konvensional pembelajaran di dalam kelas, juga penekanan pembelajaran yang lebih fokus pada informasi sebagai tujuan dalam pengajaran daripada dalam proses dan penggunaan informasi tersebut dalam praktek kehidupan.

Understanding by Design memiliki dua hal: 1) desain 'backward' dan 2) mengajar untuk pengertian. Dalam desain 'backward' ini, guru memulainya dengan tujuan kurikulum yang ingin dicapai dan kemudian merencanakan kurikulum dengan memilih kegiatan-kegiatan dan materi yang mengangkat kompetensi dan mengembangkan kemampuan belajar peserta didik. Meskipun demikian diperlukan proses dalam berlatih merencanakan kurikulum pembelajaran yang tidak berkonsentrasi pada sisi kognitif saja, akan tetapi juga memperhatikan bagaimana caranya mengkonfirmasi teori ilmu pengetahuan dan aplikasinya.

Digunakannya *Understanding by Design* memberikan hasil dalam keterampilan guru mendesain unit study kurikulum berdasarkan kerangka kerja (UbD) yang lebih berkualitas pada tingkat individu maupun kelompok. Pentingnya penelitian ini adalah karena fokus peserta didik yang meningkat pada proses pembelajaran. Dosen pun dalam proses pelatihan memiliki kemampuan yang dapat dikembangkan dengan lebih baik dalam menghadapi tanggung jawab yang meningkat dalam cara belajar peserta didik, yaitu meningkatnya pola analitis, pengembangan diri yang lebih mandiri dan hal ini mendorong peserta didik untuk belajar.

D. KESIMPULAN

Penelitian ini merupakan implementasi praktis dari tujuan pendidikan yang bertujuan untuk memperbaiki kepribadian individu dalam aspek mental, spiritual, emosional dan

kemampuan dalam berinteraksi dan hidup berdampingan dalam konteks masyarakat yang lebih modern.

Desain Understanding by Design ini adalah sebuah kerangka kerja dan bukanlah program pendidikan. Dengan demikian *Understanding by Desain* merupakan metode yang dapat dipakai dalam: 1)memperbaiki standar kurikulum, 2) menekankan pemahaman peserta didik dalam mengingat konsep dalam pembelajaran, dan ke 3) Menggunakan alat penilaian yang lebih baik dalam mencatat perkembangan prestasi peserta didik.

Oleh karena itu, maka pengembangan kurikulum menjadi salah satu tugas penting bersama, baik dari pemerintah, maupun institusi pendidikan, untuk mengatur dan mengembangkan pendidikan, demikian juga sumbangsih dari para pemerhati pendidikan yang kemudian menjadi bahan pertimbangan dalam mendesain serta mengembangkan kurikulum. Partisipasi masyarakat yang aktif juga merupakan sumbangan pemikiran dalam merespon setiap perubahan.

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IMPLEMENTATION OF WORKSHOP AND ENTREPRENEURSHIP EDUCATION IN VOCATIONAL HIGH SCHOOLS WITH CURRICULUM 2013: PERSPECTIVES OF TEACHERS AND STUDENTS

Budi Azhari Muda Hasibuan, budazhari85@upi.edu
Rusman, rusman@upi.edu
Curriculum Development Masters Program UPI Postgraduate School Bandung, Indonesia

ABSTRACT

This paper aims to examine how the implementation of Education and Entrepreneurship education in Vocational High Schools with Curriculum 2013 is viewed from the perspective of teachers and students. The method used in this paper is library research, while data collection is done by examining or exploring several journals, books, and documents from print and electronic media. The findings in this study are the implementation of Education and Entrepreneurship education in Vocational High Schools can be an important part of educational policies implemented in each school. This is considering the change and development of education in the era of globalization which resulted in very high competition in the world of work. So that the implementation of education and entrepreneurship is a form of response to these problems. Through Education and Entrepreneurship education is expected to be able to equip students to face competition in the world of work by providing skills as a provision of their lives. One important factor in the successful implementation of Workshop and Entrepreneurship education is the teacher as a learning implementer and students as learning targets. The teacher as an implementer must understand the concept of learning so that students know the learning objectives are undertaken. To achieve the learning objectives of the Workshop and Entrepreneurship, the teacher needs to perform the following roles: (1) The teacher plays as a trainer, (2) The teacher participates in the learning activities, (3) The teacher creates a Workshop and Entrepreneurial learning environment, and (4) The teacher evaluates student learning outcomes.

Keyword: *Implementation, 2013 Curriculum, Workshop and Entrepreneurship, Teachers, Students*

A. INTRODUCTION

In this century, Indonesia faces an era of free competition in the fields of technology, economy, social culture, and education. Especially with the progress of science and technology resulting in changes and developments in a more complex direction. These changes and developments create new problems and demands for the community, including changes in education. Education must always be improved to be able to compete and keep abreast of the times. Education can change the quality of human life in a better direction and benefit the surrounding environment.

Changes and developments in education will unknowingly give rise to new problems and demands, including changes in the curriculum. The 2013 curriculum implemented now is the answer to the challenge developed by curriculum developers in Indonesia. The 2013 curriculum is a continuation of the development of the Kurikulum Berbasis Kompetensi (KBK), which was released in 2004 and Kurikulum Tingkat Satuan Pendidikan (KTSP) in 2006 with comprehensive competence of attitudes, knowledge, and skills. In line with the sound of Law No. 20 of 2003 Article 35 which reads,

"graduate competence is a qualification of the ability of graduates which includes attitudes, knowledge, and skills following agreed National Standards.

The 2013 curriculum implemented is a complex activity because it requires all preparedness, starting from the teacher, students, facilities and infrastructure, materials, budget, management at the school level and also the readiness of the relevant administrators. Implementation is influenced by all elements involved in it, even during the initial socialization before it is implemented in schools. Curriculum developers need to consider the complexity of the process of transferring information from the developer to the implementer, related to the characteristics of the curriculum itself. Each curriculum has its peculiarities starting from the objectives, scope, teaching materials, methods, approaches, and evaluations. This information needs to be understood by teachers as curriculum implementers to be applied to students as curriculum implementation targets.

One of the subjects that must be studied by students at the vocational high level in implementing the 2013 curriculum is Workshop and Entrepreneurship. In line with Permendikbud No. 34 of 2018 concerning one of the Competency Standards of Vocational School Graduates on the fourth point, which is to have productive abilities by their expertise both for work or entrepreneurship. The purpose of this Workshop and Entrepreneurship learning is as a response to developments and changes that occur in the life of society, nation and state in Indonesia in particular, which can not be separated from the influence of global change, the development of science and technology and arts and culture.

The success of the implementation of Workshop and Entrepreneurship learning is very much influenced by the teacher's role. This is because teachers are included in several factors that influence curriculum implementation, as Marsh said (in Hamalik, 2008, p. 239), namely "there are three factors that influence curriculum implementation, namely the principal, peer support, and internal support in class".

The intended role of the teacher is to make the curriculum something actual in the process of learning activities. In line with the opinion of Sukmadinata (2009, p. 19) that is "how good the curriculum is made, but the results are very dependent on what the teacher does in class". Teachers as curriculum translators must understand the difference between what has been done so far (the old curriculum) and what must be changed in the new curriculum (Ansyar, 2015). The implementation of the curriculum is not limited to applying the curriculum but is a process of educational change that is complex and

involves many parties in the school, such as changes in mindset, feelings of individuals, groups, and school culture (Brady & Kennedy, 2007).

Teachers of Workshop and Entrepreneurship subjects are required to be able to instill the attitudes and entrepreneurial character of each student. This is because teachers have a central role in the success of the implementation of the Workshop and Entrepreneurship, so the standardization of the subjects of the Workshop and Entrepreneurship in Vocational High Schools is an important and urgent thing to do.

However, the reality shows that the majority of SMK teachers have not been trained in teaching Workshop and Entrepreneurship, and lack knowledge of the right approach to teaching Workshop and Entrepreneurship. Furthermore, the following table 1 relates to teacher understanding related to the 2013 curriculum in Workshop and Entrepreneurship subjects.

Table 1
Teacher's understanding of the 2013 Curriculum in Workshop and Entrepreneurship

No	Teacher Response	Frequency
1	Difficulties in understanding the application of PKWU learning (implementation of Core Competencies and Basic Competencies into Indicators and subject matter).	52%
2	Lack of references related to curriculum implementation (unavailability of teacher and student handbooks related to the 2013 Curriculum).	81%
3	Do not have learning devices for one semester	86%
4	Lack of school infrastructure (limited practice space and network of school collaboration).	81%
5	Lack of school infrastructure (limited practice space and network of school collaboration).	60%
6	Lack of effective PKWU MGMP role.	81%
7	Inadequate information about the 2013 curriculum (limited socialization or training activities)	75%

Source: Winarno (2015, p. 239).

Chusuma (2017, p. 4) also mentioned "the constraints faced during the learning process of Workshop and Entrepreneurship are that there are no professional teachers who teach specifically the subjects of Workshop and Entrepreneurship. So in dealing with subjects sometimes the school appoints other subjects to teach the subjects of workshops and entrepreneurship. " The following table 2 deals with the difficulty of teachers in applying the subjects of Workshop and Entrepreneurship.

Table 2

Type of Application Difficulty

No	Types of Teacher Difficulties	Information
1	Difficulty providing material for craft practice	40%
2	For certain schools, especially the majority of students from poor families, the practice of making handicraft products is constrained by the availability of funds for material procurement	70%
3	The teacher's skills in teaching craft products are also limited	68%
4	Difficult to change the mindset of students who tend to want to become employees	95%
5	The low commitment of school leaders	20%
6	The average teacher does not have practical experience opening a business	0%
7	Test results for teacher entrepreneurship attitude potential are on average still low (under 100 from 150 points)	5%

Source: Winarno (2015, p. 239).

The curriculum implementation is also inseparable from the assessment aspects. This indirectly affects how the assessment process is carried out by teachers of Workshop and Entrepreneurship subjects in schools. Many teachers in schools provide assessments based only on understanding concepts and theories, even though the assessment is regulated in Permendikbud No. 34 of 2018 concerning Educational Assessment Standards in Vocational High Schools. The assessment process according to the Minister of Education and Culture for Workshop and Entrepreneurship education is more emphasis on aspects of attitude and experience, as well as the skills of students. So that teachers in the field have not fully understood the concept of an assessment conducted to students. In line with the results of research conducted by Retnawati and Nugraha (in Arviani, 2018, p. 4) which states,

> "In implementing the 2013 curriculum the teacher did not fully understand the assessment system. Teacher difficulties are also found in developing attitude instruments, carrying out authentic assessments, formulating indicators, designing assessment rubrics for skills, and collecting scores from several measurement techniques. Also, the teacher could not find a suitable application to describe the presentation of student learning"

The learning process with such an assessment system will result in inconsistencies between the values obtained by students and their attitudes and behavior in everyday life. They have not been able to apply the concept of Workshop and Entrepreneurship education that they have received in real life as entrepreneurs.

The gaps presented in the previous description give rise to a fundamental question: why is learning Workshop and Entrepreneurship as an educational effort not yet able to

fully provide the values and norms of independence to students to equip them for life skills? Based on these questions the authors are interested in seeing the implementation of the 2013 Curriculum, in particular, the subjects of Workshop and Entrepreneurship in Vocational High Schools based on an analysis of the factors that affect students and teachers in curriculum implementation.

B. RESEARCH METHOD

The method used in this study is the library research approach. The literary approach according to Hadi (1981) is a method for obtaining data from books that are relevant to these problems. Zed (in Supriyadi, 2016) states that literature study or literature can be interpreted as a series of activities relating to the method of collecting library data, reading and recording and processing research materials. In library research studies there are at least four main characteristics that writers need to consider include: First, that the writer or researcher deals directly with text or numeric data, not with direct knowledge from the field. Second, the library data is "ready to use" means that the researcher does not fall directly into the field because the researcher is dealing directly with the data source in the library. Third, that library data are generally secondary sources, in the sense that researchers obtain material or data from second hand and not original data from the first data in the field. Fourth, that the library data conditions are not limited by interest and time.

Based on the above, the data collection in research is carried out by examining and/or exploring several journals, books and documents (both printed and electronic) as well as other sources of data and/or information deemed relevant to the research or study.

C. RESULT AND DISCUSSION

3.1 Implementation of Workshop and Entrepreneurship Education in Vocational High Schools

3.1.1 Implementation Concept

According to Durlack (2016, p. 334) "implementation can be defined in general as the way a program is practiced and sent to students". In other words, implementation refers to what programs look like reality compared to what is contained in a theory. In connection with the meaning of implementation in the curriculum. Bertram, Blasé, and Fixsen divided the implementation into several stages starting from exploration, installation, initial implementation, and full implementation.

Exploration, this stage is sometimes also called "exploration and adoption". In the early stages of this implementation, organizations must consider the potential comparisons between target populations, characteristics, and community resources, and the elements, activities, and phases of program models (definition models), basic theories, and theories of change. Installation, this stage determines the installation stage when resources are used as structural support needed to start a new or exercise model must be developed. Initial Implementation, an initial implementation of each program requires a new understanding and activity. Full Implementation, at this stage the implementation is well dispersed and easily accessible, serves to support activities, and is regularly reviewed about improvements.

3.1.2 The Concept of Workshop and Entrepreneurship

Workshop and Entrepreneurship is a type of constructivist learning (Assudani & Killbourne, in Bell & Liu, 2018, p. 211). Contrustivistic in entrepreneurship gives the intention that how individuals create meaning from new knowledge and can explain how the knowledge is processed by entrepreneurship that the contest is moving fast and dynamic (Bell & Liu, 2018, p. 214). In line with the opinion (Mandel & Noyes, 2016, p. 166) that "the method in learning entrepreneurship is with experience or experience". Entrepreneurial learning must be taught through practice, including the practice of play, empathy, creation, experience, and reflection (Neck, et al Mandel & Noyes, 2016, p. 166; Procter, 2010, p. 55). While the foundation of a learning workshop and entrepreneurship is "believed that the mission (or social problem or need) (Waghid, Z. 2019).

There are many definitions of entrepreneurial learning, so there has not been a single generally accepted definition of entrepreneurial learning so that the definition of the term "entrepreneurship is often criticized" (Moroz & Hindle, in Hietanen & Jarvi, 2015, p. 47; Kirby, 2004, p. 511) ; Blanch & Oswald (in Fuchs, et al, 2008, p. 366).

Korsgaard & Anderson (in Bell & Liu, 2018, p. 214) argue that "entrepreneurship is a social and economic process in which social networks and interactions play an important role. Kuratko (in Siagian & Simatupang, 2011, p. 138) argues "entrepreneurship is a process of innovation and creation through four main dimensions (individuals, organizations, environment, and

processes) assisted by collaborative networks in government, education, and institutions". The European Union (in Fulgence, 2015, p. 242) states entrepreneurship is.

> "The ability to turn ideas into action, including creativity, innovation and risk-taking, and the ability to plan and manage a project to achieve goals. The thing that supports is that everyone, in everyday life in the community, makes employees more aware of the context of the work they are capable of, seizes opportunities and provides a basis for the development of social and commercial activities ".

In 2000, the idea of an entrepreneurial mindset was formulated by marking expanding entrepreneurship education outside the tertiary institutions and academic community into the world of practice, as an example of Gallop's recent opinion polls suggesting that 8 out of 10 high school students want to become entrepreneurs (Calderon, in White & Moore, 2016, p. 105). Entrepreneurship education is an increasingly important factor with the increasing emphasis on acquisition skills and outcomes (Penaluna, in Rae, 2012, p. 644). Thus, entrepreneurship education is an instrument of individual empowerment and a tool to change markets, businesses, industry, economy, and society (Morris, in White & Moore, 2016, p. 102). Jones & Iredale (in Bell & Liu, 2018, p. 215) states that entrepreneurship education must include learning experiences, creative problem solving, and learning by involving students. While the European Union (in Morselli & Ajello, 2016, p. 802) defines entrepreneurship education as,

> "All educational activities that seek to prepare people to be responsible, enterprising, have the skills, knowledge, and attitudes needed to prepare individuals to achieve the goals they set for themselves so that life is fulfilled".

Thus, entrepreneurship education has an impact on individuals and institutions, which in turn also causes changes in society and the economy. Impacts that are seen individually are observable at the individual level, for example, career advancement and competence.

This certainly causes a shift in perspective, where entrepreneurship education is involved in schools, the entrepreneurship education process is seen as an important goal, with the following reasons,

1) entrepreneurial attitude is an inherent factor of young people who must be preserved.

2) "entrepreneurship" skills and quality at an early stage are key competencies that must be possessed.
3) entrepreneurship education does not have to be limited to certain studies because it is an option for everyone from an educational background (Fuchs, et al, 2008, p. 367).

Thus, the European Union (Fuchs et al., 2008, p. 368) shows that entrepreneurship education in schools is important and must focus on: (1) building student quality, (2) creating positive attitudes towards students and increasing their awareness of entrepreneurship as job choices, and (3) facilitate initial knowledge between school and business.

3.1.3 The Role of Teachers in Workshop Learning and Entrepreneurship

Each teacher learning process plays a major role in understanding entrepreneurship in the school context and changing students' understanding of entrepreneurship in the learning process in the long term (Deakins, et al., In Morselli, 2018, p. 801) Many teachers do not understand the concept (Ruskovaara, et al, in Morselli, 2018, p. 801) or find it difficult to identify good practices for infusing entrepreneurship into a program (Solomon, et al, in Morselli, 2018, p. 801). Thus, according to Gibb (in Morselli, 2018, p. 804) entrepreneurship teachers must be brave in taking risks, taking innovative approaches to identify opportunities and take responsibility. Also, teachers must have a lot of experience and creativity (Gerba, in Fulgence, 2015, p. 245).

To achieve the objectives of the entrepreneurship program, teachers need to perform the following roles,

1) the teacher as a trainer where the trainer is someone who teaches people the skills they need for a job.
2) participate in activities, where entrepreneurship teachers must interact with employers and other stakeholders.
3) creating an entrepreneurial learning environment, which involves a simulation process for student learning related to how the learning environment is in a real environment.
4) assessing the results of entrepreneurship in the class, where results can be reflected in changes in behavior and attitudes in each individual.

Hietanen & Jarvi (2015, p. 56) explained the role of vocational education teachers in the entrepreneurial learning process.

Table 3
The Role of Vocational Education Teachers on Process Entrepreneurship Learning.

Elements of the Entrepreneurship Learning Process	Teacher's Role
Opportunity to find	Utilization of formal and informal environments, as well as outside the school context in real life.
Creating opportunities	For business development
Decision-making	Joint decisions for businesses through creative problem solving
Reflection of knowledge management	Because, in the previous action, information was only obtained for the action
Competency management	Utilizing experience and learning about skills and knowledge achieved in new situations

Based on the above, entrepreneurship teachers in Vocational High Schools must know to explore the environment to facilitate the entrepreneurial learning process. This shows that entrepreneurship learning requires careful planning and the need for research to reveal some of the challenges that will be faced along with their impact on the overall program output (Ismail & Ahmad, 2013, p. 146).

3.2 Workshop and Entrepreneurship Learning As Part of the Implementation of the 2013 Curriculum at SMK

The 2013 Curriculum related to entrepreneurship subjects was refined to "Workshop and Entrepreneurship". Workshops and entrepreneurship are compulsory subjects that must be learned by every student in SMK / MAK in the 2013 curriculum that is classified in group B subjects in the curriculum structure of SMK / MAK in accordance with Permendikbud No. 70 of 2013 with the number of study hours of 2 JP each week for each expertise program in SMK / MAK.

Entrepreneurship education can be an important part of education policy in every school (Hietanen & Jarvi, 2015, p. 46). This is because entrepreneurship education is believed to provide general skills, training, and knowledge as well as

facilitate access to the business world by allowing individuals to assess labor-related, type of goods, and regulate business (Rajiman, in Buli & Yesuf, 2015, p. 893).

Based on the description above, the overall learning of entrepreneurship in schools must be characterized by active learning and experience-based activities in real life as much as possible. The implementation of entrepreneurship learning the curriculum in Vocational High Schools has a goal that should provide stock to students through three dimensions, (1) aspects of managerial skills; (2) Production technical skills; and (3) Personality developmental skills. The three main things, the point is to instill the attitude, values, and spirit of independence and the ability of cooperation and the embedded paradigm or mindset of entrepreneurship in students (Hasanah, 2015, p. 64).

The entrepreneurship learning process in Vocational High Schools is an internalization of entrepreneurial values in teaching material. The learning process that is not able to generate motivation will not internalize these values, this method only makes students able to imitate the programmed activities. The way to learn through the process of integration will be the process of internalizing values that are unified in a person. Entrepreneurship integrated education makes students learn like an entrepreneur.

In the entrepreneurial learning process, at least students are given learning material related to important aspects so that someone can become an entrepreneur. Entrepreneurship learning provides special skills to students so that they can manage their skills as a source of livelihood. This is the real thing that is expected to be owned by students after participating in the entrepreneurial learning process. Students not only have technical skills but are also able to apply these skills as provisions for their lives. Entrepreneurship is an effort to prepare students to face real life. This is related to the fact that many graduates have skills but have difficulty applying these skills later in life.

The vocational curriculum which is based on "constructivist" theory, requires a learning process that respects the diversity and experience of a child's daily life, thus enabling him to be able to contract his concepts or knowledge so that students will become more creative and clever to interact with friends the other. According to Pentti M (in Hasanah, 2015, p. 67) that the aim of the entrepreneurship learning curriculum is to produce graduates who: 1) have the capacity to start a new business, 2) have the capacity to work effectively in a small organization, 3) have the capacity

to work effectively in a flexible job market, and 4) have entrepreneurial skills for a better life.

Brock & Steiner (Waghid, Z, 2019) there are seven of the most important elements in the entrepreneurship curriculum, namely,

1) addressing social needs or problems by making a positive contribution to society
2) opportunity for recognition
3) innovation
4) scale of social enterprises
5) the acquisition of resources to achieve the organization's mission
6) create a sustainable business model
7) measuring results

The process and basic pattern of entrepreneurship learning in SMK can be described as follows.

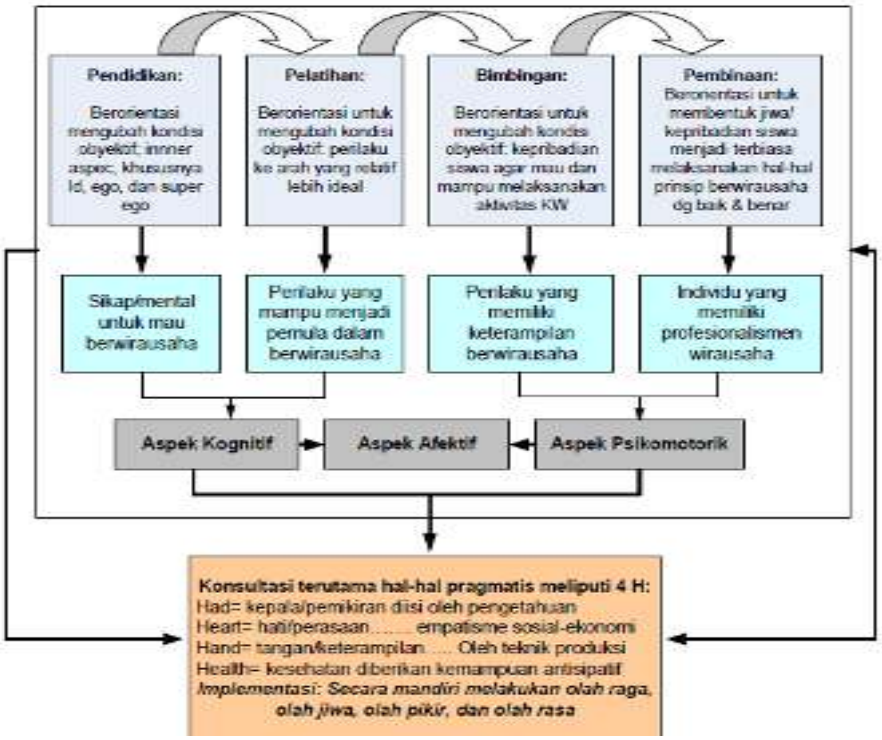

Figure 1. Basic Pattern of Entrepreneurship Learning in Vocational Schools

Source: Suherman (in Hasanah, 2015, p. 73)

3.3 Factors That Influence Workshop Learning and Entrepreneurship in the 2013 Curriculum

Firdani (2017, p. 150) states that there are several factors that influence learning and entrepreneurship, which include 1) teachers, 2) students, 3) facilities and infrastructure, 4) learning resources, and 5) parents/guardians of students. All five have their positive and negative sides. However, it turns out the problem regarding the distribution of student books as a source of learning is still a homework for the government as a policyholder even though in terms of implementing the 2013 Curriculum optimal efforts have been made.

Cheung (2008, p. 511) argues that there are several inhibiting factors in entrepreneurship learning, namely,

1) time, where time is the biggest factor that hinders progress in entrepreneurship education. This is related to the program from the curriculum which takes a lot of time because it is accompanied by training time as well. This is reinforced by research conducted by (Nkirina, 2010, p. 160) where there is a mismatch of time determined by the training that must be carried out, where there should be 90 minutes in each training, but taught for 120 minutes.
2) teachers, where many teachers do not dare to open programs related to entrepreneurial innovation in students.
3) capital, is also a major obstacle related to finance because in conducting an entrepreneurial practice capital is needed and sometimes schools lack capital and few companies support entrepreneurial practices in schools. This is also in line with the opinions of (Mandel & Noyes, 2016, p. 171; Nkirina, 2010, p. 161) where funding is also identified as an obstacle to implementing programs related to entrepreneurship learning.

D. CONCLUSION

Conceptual implementation is the way a program is practiced and sent to students. One of the internal programs implemented in the 2013 Curriculum is the subject of Workshop and Entrepreneurship. Workshop and entrepreneurship are compulsory subjects that must be learned by every student in SMK / MAK in the 2013 curriculum. Workshop and entrepreneurship is one type of constructivist learning, meaning how individuals in the learning process can create meaning from new knowledge and can explain how that knowledge processed according to the concept of entrepreneurship. The learning process of workshop and entrepreneurship must be taught through the practice of play, empathy, creation, experience, and reflection.

One of the inhibiting factors in the implementation of Workshop and Entrepreneurship learning is the teacher. Based on this, the success of the implementation of Workshop and Entrepreneurship education is strongly influenced by the role of the teacher. Thus, each process of learning and entrepreneurship by the teacher has a major role in understanding entrepreneurship in the school context and changing students' understanding of entrepreneurship in the learning process in the long term. Entrepreneurship teachers at Vocational High Schools must know to explore the environment to facilitate the entrepreneurial learning process. To achieve the objectives of the entrepreneurship program, the teacher needs to perform the following roles: 1) The teacher as a trainer, 2) Participate in activities, 3) Create an entrepreneurial learning environment, 4) Assess the results of entrepreneurship in the classroom.

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THE PATTERN CHARACTER EDUCATION IN PONDOK PESANTREN AL-MUNAWWIR KOMPLEK L KRAPYAK YOGYAKARTA

Imam Nur Huda

imamnurhuda2.inh@gmail.com

Husaini Usman

husainiusman@gmail.com

Abstract: *This study aims to describe and analyze character education in Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta. The data obtained in this study are interviews, observation, and documentation. The research method used is a qualitative approach with a descriptive type. The results obtained are Pondok Pesantren Al-Munawwir Komplek L applying character education through four approaches namely the role of caregivers of boarding schools (Kiai), Learning to read Al-Quran, KItab kuning learning and Habituation of boarding school activities. The Kiai decided not to follow interests outside the Islamic boarding school, so that he could always set an example, direction, and motivation that supported the formation of religious values, responsibility, and independence. Pondok Pesantren Al-Munawwir Komplek L has its uniqueness in providing education related to reading the Al-Quran. The specialty in reading the Al-Quran trains a student to have the value of fond of reading and hard work. Kitab kuning learning in this islamic boarding school forms students' character through religious values, discipline, and fond of reading. The customary activities of Pondok Pesantren Al-Munawwir Komplek L teach values of independence, tolerance, hard work, discipline, national spirit, caring for the environment and social care. The conclusion of this research is the character education of Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta has applied several values from the eighteen values of national character education.*

K*eyword:** ***character education, Islamic boarding school

A. INTRODUCTION

The era of disruption has had a number of impacts on aspects of education, both positive and negative impacts. One negative effect is moral decline. Based on the results of Arifin's research (2019) that the presence of the era of disruption caused a decline in children's morale because it was not matched by good and correct use of information and technology education.

To overcome this, serious steps are needed, According to Candra (UM Public Relations Unit, 2019) and Mujib (BHP UMY, 2018) the disruption era had a negative impact in the form of dehumanization. An educational approach is needed that can overcome it, namely character education.

Based on Article 4 of the Republic of Indonesia's Presidential Regulation Number 87 of 2017 concerning Strengthening of Character Education (PPK) that organizers of character education are formal, non-formal and informal educational institutions. Islamic boarding school is a non-formal educational institution that has a comprehensive education system in the form of a merger between formal education and boarding education (Hayati, 2015).

According to Masrur (2017), Islamic boarding schools are the right place in shaping character and giving students early provision so that they do not fall into radicalism.

Character Education

The values forming the nation's character in Article 3 of the Republic of Indonesia's Presidential Regulation Number 87 of 2017 concerning Strengthening Character Education (PPK) that the implementation of character education must be based on 18 Pancasila values namely religious, honest, tolerant, disciplined, hard-working, creative, independent, democratic, curiosity, national spirit, love the motherland, appreciate achievement, communicative, love peace, love to read, care about the environment, care socially and responsibly.

Lickona (1991) says that there are three important components in instilling character values, namely knowledge about morals, feelings about morals and deeds about morals.

In instilling the character values Lickona (1991) mentions that there are five approaches, namely 1) the value investing approach is an approach that uses exemplary, positive and negative reinforcement and feelings play, 2) the cognitive moral development approach is an approach that encourages students to think about problems moral problems, 3) a value analysis approach is an approach that trains students to solve problems related to social values, 4) a value clarification approach is an approach that helps students to assess their actions in a moral context and 5) the learning approach to do is an approach which gives an opportunity to do good deeds. The above approaches are reinforced by Nucci and Narvaez (2018), Zubaedi (2017) and Arifin (2019) that character-building factors are imitating someone who is considered important, learning through educational institutions and religious institutions and learning through self-habituation of the culture of a group.

Pondok Pesantren

Pesantren comes from the word santri, by getting the prefix "pe" and the suffix "an" pesantren can be interpreted as a place to live for students (Dhofier, 1994). While the word santri itself according to Madjid (1997) is seen from two opinions. The first opinion mentions the word santri comes from Sanskrit ‘Sastri’

which means literacy, on the other hand, Dhofier (1994) santri comes from Indian language which means to know the holy books.

Pondok comes from Arabic, which means hotel, hostel, house, simple residence (Hasbullah, 1966). Islamic boarding school consists of five main elements, namely; Kiai, santri, mosques, huts, and the teaching of the kitab kuning (Zamakhsari: 1994). These five elements are characteristic of pesantren. Even though these five things support one another, Kiai has such a central role in education in pesantren.

Islamic boarding schools have authority in carrying out their educational curriculum. Gazali (2018) in his research stated that Islamic education has two tasks, namely transmitting Islamic sciences and preserving religion.

In general, the Islamic boarding school curriculum uses two approaches, namely structured and unstructured learning. Learning with a structured approach is learning in stages and have an evaluation at the end of the semester. The learning is managed by a division in Islamic boarding schools called Madrasah Diniyyah.

Learning with an unstructured approach in the form of *sorogan*, *bandongan*, memorization and *lalaran* (Pramono, 2017). *Bandongan* is a kitab kuning learning method led by Kiai and followed by all students. *Sorogan* is a method of reading the kitab kuning by way of santri facing individual clerics or Kiai. Memorization is a method of learning through memorization of the Al-Quran and *Nadzom* (Arabic poetry). Whereas *lalaran* is reading *nadzom-nadzom* which has been memorized together and uses certain songs.

Based on the background above, the formulation of this research problem is how character education in Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta and based on the formulation of the problem, the purpose of this study is to describe and analyze character education in Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta.

B. RESEARCH METHOD

This study uses a qualitative approach with a descriptive type that describes the character education in Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta. The essence of qualitative research is an understanding of an event that occurs in the object of research. This is in line with Macmillan & Schumacher's opinion that qualitative research focuses on understanding social phenomena (Mohapi, 2014). Therefore, to uncover the character education that is happening in Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta can use qualitative research methods.

The sources of this research are the caretakers of the Islamic boarding school or Kiai, the head of the pondok pesantren, the head of the Madrasah Diniyyah and several santri. This research was conducted

on September 12, 2019, until October 10, 2019. The place of this research was Pondok Pesantren Al-Munawwir Komplek L Krapyak Yogyakarta. According to Castellan (2010), the techniques used in collecting data in qualitative research are interviews, observation, and documentation. In addition, Creswell said that the analysis of data from qualitative research is a combination of theoretical perspectives and what happens in the field. Data from qualitative research in the form of narration, description, presentation, and explanation (Williams, 2007).

C. RESULT AND DISCUSSION

Pondok Pesantren Al-Munawwir Krapyak Yogyakarta was established in 1911 by KH. Muhammad Moenawwir. Pondok Pesantren Al-Munawwir Komplek L is one of the Islamic boarding schools specifically for male students who are in the auspices of the Pondok Pesantren Al-Munawwir. The caretaker of the Pondok Pesantren Al-Munawwir Komplek L is KH. Muhammad Munawwar continued the leadership of the first generation Islamic boarding school caretakers namely KH. Ahmad Munawwir. The santri of Pondok Pesantren Al-Munawwir Komplek L is a santri who attends pesantren education and education in the Yogyakarta tertiary institutions.

Based on the results of interviews, observations and documentation, the description of character education in Pondok Pesantren Al-Munawwir Komplek L are influenced by four factors, namely the role of the Kiai, qur'anic learning, kitab kuning learning and self-habituation of islamic boarding school activities.

The Role of the Kiai

The Kiai has a central role in the existence of the pesantren itself. The role of the Kiai in shaping character is further strengthened by Mukhlasin (2016) based on his research that one of the formations of characters in Islamic boarding schools depends on the role of the Kiai. Through the observations of Kiai in Islamic boarding schools, they have three main roles.

First, the Kiai always set an example for the santri as seen from their daily activities. This exemplary attitude is one way of instilling religious values through deeds. This was conveyed by the Head of Islamic Boarding School that "in his daily activities he always behaved *Zuhud* (simple) and *Istiqamah* (continuity) in leading prayer at Islamic boarding schools".

One student revealed that "I feel he has an attitude of simplicity and concern for his child. I feel moved to imitate his attitude because of the simplicity that looks soothing "Thus the role of the Kiai Pondok Pesantren Al-Munawwir Komplek L is an example in instilling religious values.

The second role of the Kiai is as a leader who gives direction related to the management of boarding school education. These directives were then carried out by the board of management of the Islamic boarding school and Madrasah Diniyyah as a form of responsibility.

Then the third role of the Kiai is as a motivator that gives motivation to the santri. As a motivator, the Kiai mandates the santri to be independent in taking care of themselves and activeness in participating in the boarding school activities.

From the findings above it can be seen that the Kiai has an important role in transferring character values to students. This is in line with Sutrisno (2017) in his research that religious values and responsibilities are values that are instilled in Islamic boarding schools.

Qur'anic Learning

Al-Qur'an learning at Pondok Pesantren Al-Munawwir Komplek L is held every day after sunset prayers except Friday night. The recitation categorization is 1) *Bil Juz Amma*, namely memorizing of Juz Amma or Juz 30 and 7 short letters (As-sajdah, Al-Kahfi, Al-Waqiah, Al-Mulk, Ar-Rohman, Yasiin, Ad-Dukhon), 2) *Bin Nadzri* is depositing 29 Juz Al-Quran readings and 3) *Bil Ghoib* namely depositing 30 Juz Al-Quran Memorization. Recitation of *Bil Juz Amma* was taught by the clerics while *Bin Nadzri* and *Bil Ghoib* were managed by Kiai.

Besides, Pondok Pesantren Al-Munawwir Komplek L has learning to read the Al-Quran called *talaqi*. The activity is carried out every day after the morning prayer except Friday morning. *Talaqi* is taught by Kiai where he reads the Al-Quran accompanied by giving a stop sign or endowment of the Al-Quran then the santri imitates the reading of the Al-Quran.

The existence of the Al-Quran study at dusk and dawn aims for the students to have expertise in reading the Al-Quran fluently and have the love to continue reading the Al-Quran, instill a sense of love for the Al-Quran and instill a fondness for reading. Besides reading the Al-Quran requires patience, hard work, and persistence, considering the students also have to carry out their obligations as students.

Kitab Kuning Learning

The study of the kitab kuning is carried out every day after evening prayers except Thursday night. The students are grouped according to their classes, starting from the *I'dadiyah* (preparation) class, one, two, three and four. Each class has the characteristics and focus of each learning. The first class aims to be able to read the kitab kuning that has been given meaning, the second class is trained to be able to read the kitab kuning and its explanation and the third and fourth grades have started to read the kitab kuning without meaning and without *harokat.*

Each class is given lessons about Fiqh, Nahwu, Shorof, Tarikh, and Akhlak. But the kitab kuning that is used is adjusted to the level of each class. The study of Fiqh aims to make students understand Islamic Sharia laws, Nahwu and Shorof lessons are lessons that are used to help strengthen the expertise in reading the kitab kuning, Tarikh is a lesson that tells the history of the Prophet Muhammad and Akhlah is a lesson that focuses on learning how a person has *akhlaqul karimah* (good nature).

The characteristic of a santri is that he can read the kitab kuning (Daulay, 2012) which underlies the existence of *sorogan* and *bandongan* activities. *Sorogan* was held by Madrasah Diniyyah during Nahwu's study, which was a mandate from the Kiai and the spirit of a santri to be able to read the kitab kuning. While *bandongan* teaches how a santri to emulate the story of the Prophet Muhammad and Kiai in ancient times.

From the above findings, it can be concluded that by learning the kitab kuning trains students to be disciplined, take classes and teach how to divide their time to practice reading the kitab kuning.

Self-habituation of Islamic Boarding School Activities

Pondok Pesantren Al-Munawwir Komplek L activities include daily, weekly and at certain events. Daily activities include 1) five daily prayers in congregation, 2) *bandongan*, 3) Quranic study, 4) learning in Madrasah Diniyyah. Weekly activities include 1) grave pilgrimage 2) incest 3) *tahlilan* 4) cleaning the environment of the islamic boarding school. While the activities at certain events are 1) ceremonies at Pondok Pesantren Al-Munawwir on the 17th of August and celebrated with competitions and 2) conducting social services in the form of giving several foodstuffs to the surrounding community by new students during the orientation period of new students.

These activities are activities designed to foster the values of santri characters. In cleaning the environment, the students were invited to jointly instill a caring attitude towards the environment and cleanliness. During the ceremony on August 17, students took part in the ceremony and participated in the race. It aims as an investment in the value of patriotism. The orientation period is carried out by giving groceries to the community in the RT environment which teaches students to care about the surrounding social environment.

Based on the above findings, with a variety of activities that are loaded for religious learning of students, inadvertently teach the character values in it. The Pondok Pesantren Al-Munawwir Komplek L strives that from the many Islamic boarding school activities that must be followed, coupled with the busy preaching duties, can train all students to become individuals who are independent of what is their business, disciplined towards each activity and work hard in living it. This is shown from every day of the students

where they have to wash their clothes, take care of personal needs and regularity to participate in every boarding school activity.

This is consistent with what the Head of the Boarding School said that "every student in a boarding school must be familiar with the culture of students who are independent, disciplined and hard work. This is due to the many activities that he must fulfill both from the Islamic boarding school itself and college assignments. Therefore if they cannot be independent, disciplined and work hard on themselves then they will not be able to survive in the boarding school. According to one of the students said "I try to continue to follow every Islamic boarding school activity. Besides that, I also didn't forget my college assignments". Thus the activities of the Pondok Pesantren Al-Munawwir Komplek L indirectly instill the value of independence, discipline and hard work. The statement is by the findings of Hidayat (2016) that the formation of character in Islamic boarding schools depends on self-habituation to the life patterns of boarding schools.

There is a distinctive culture of the students of Pondok Pesantren Al-Munawwir Komplek L. The students in this Islamic boarding school consists of various types of age, occupation, college, culture, language, and position in Islamic boarding schools. From the diversity of the students still, look familiar in mingling and communicating. Thus the Pondok Pesantren Al-Munawwir Komplek L has a culture that instills tolerance.

D. CONCLUSION

Based on the presentation of the results and discussion of Pondok Pesantren Al-Munawwir Komplek L has instilled several character values from 18 Pancasila values, namely 1) religious values, 2) Responsibility values, 3) independent values 4) discipline values 5) reading values, 6) the value of hard work 7) the value of caring for the environment, 8) the value of loving the motherland, 9) the value of social care and 10) the value of tolerance.

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Developing An Experiential Learning Model to Increase The Students' Experiences in Learning at 21st Century

1) Taryanah, taryanahwae@student.upi.edu
2) Ishak Abdulhak
3) Ashari Djohar
4) Rusman Hasan

ABSTRACT
Learning is the process of interacting students with educators and learning resources in a learning environment. Learning is assistance provided by educators so that the acquisition of knowledge and knowledge, mastery of skills and character can occur, and the formation of attitudes and beliefs in students. In other words, learning is a process to help students learn well.

One strategy in learning that is used is the method of experience. Learning by experience method alone is obtained accidentally or intentionally from the experience experienced by students. Experience is important to influence students' processes to better understand the content of learning. Students will be able to easily understand what the content and purpose of learning is through learning as these students have experienced something in accordance with the learning material. And with the experience, students can also apply the experience in class to understand learning.

This study focuses on developing an experiential learning model to improve the learning experience, for the students of Junior High School. Learning occurs through experiences that are owned by students, namely through students' reactions to the environment in which they are located. So the tool or means of education is the learning experiences possessed by students. Learning experience indicates that students are active participants, in which some characteristics of the environment attract their attention and in this case they act (Tyler, 1949: 63-64).

The research design used is Research and Development (R&D) by employing observation, interview, questionnaire, document analysis, focus group discussion, and test as the instruments to gather the data. The experiential learning models developed covers several items, including learning design, implementation of learning, standard conditions and learning environment, learning evaluation system, and principles of learning. The targeted research outcome is a valid learning model which can be used, applied and disseminated for the sake of learning improvement. In additional, the findings are also targeted to be presented in international conference, published in the SCOPUS accredited journal and in form of a book, as well as proposed to earn the intellectual property rights.

Keywords:
Experiential Learning, learning experience, junior high school

I. Introduction

Learning is the process of interacting students with educators and learning resources in a learning environment. Learning is assistance provided by educators so that the acquisition of knowledge and knowledge, mastery of skills and character can occur, and the formation of

attitudes and beliefs in students. In other words, learning is a process to help students learn well.

One strategy in learning that is used is the method of experience. Learning by experience method alone is obtained accidentally or intentionally from the experience experienced by students. Experience is important to influence students' processes to better understand the content of learning. Students will be able to easily understand what the content and purpose of learning is through learning as these students have experienced something in accordance with the learning material. And with the experience, students can also apply the experience in class to understand learning.

This study focuses on developing an experiential learning model to improve the learning experience, for the students of Junior High School at Bandung Regency. Learning occurs through experiences that are owned by students, namely through students' reactions to the environment in which they are located. So the tool or means of education is the learning experiences possessed by students. Learning experience indicates that students are active participants, in which some characteristics of the environment attract their attention and in this case they act (Tyler, 1949: 63-64).

In general, types of learning experiences that are effective in achieving goals include:
1. Learning experience to develop thinking skills.
2. Learning experience that helps in obtaining information
3. Learning experiences that help in developing social attitudes.
4. Learning experiences that help develop interest. (Tyler, 1949: 68-79).

The researcher is interested to try to develop a learning model which is based on experiential learning approach. It hopefully helps Junior High students develop their learning experiences, in turn, will develop their higher order thinking skills as it is found by some studies (Silberman, 2007; Hamilton, J & Joanne, M.K, 2011). Hopefully. this research will give some benefits either theoretical significance or practical significance.

II. Research Method

1.1 Research Design

The researchers will carry out the Research and Development Method. The purpose of using R and D is to be able to answer the research questions raised and test hypothetical or tentative models that have been developed. This is in line with what was stated by Borg and Gall (1989), research and development is a process used to develop and validate educational research. Research and development is a process or steps to develop a new product or improve existing products that can be accounted for (Sukmadinata, 2005).

The R and D method is considered appropriate in this study because it has a rational and systematic stage process based on the situation before creating the model, as stated by Sugiyono (2010) that the research and development method is the research method used to produce certain products, and test effectiveness of the product ".

The research approach used is a research and development method with a qualitative-quantitative approach (mixed). This research and development aims to develop an Experiential learning model English learning to enhance the students' learning experience for Junior High School at Bandung Regency.

Experiential learning models developed include:
a. Learning design
b. Implementation of learning
c. Standard conditions and learning environment
d. Learning evaluation system
e. Principles of learning

1.2 The Site and Participant

The subjects are students of Junior high school at Bandung Regency. There were about 4-7 schools involved in the study. The research has been conducted from the last academic year. The subject of learning is English. There were also some English teachers from the site of the research were involved in the study. They were interviewed, observed in the process of the study.

1.3 Research Instruments

The focus of the research is firstly, the conditions of English learning at Junior High school at Bandung Regency (which are studied in the preliminary study) Secondly, the development of experiential learning models, and thirdly, the validation of the results of the development model.

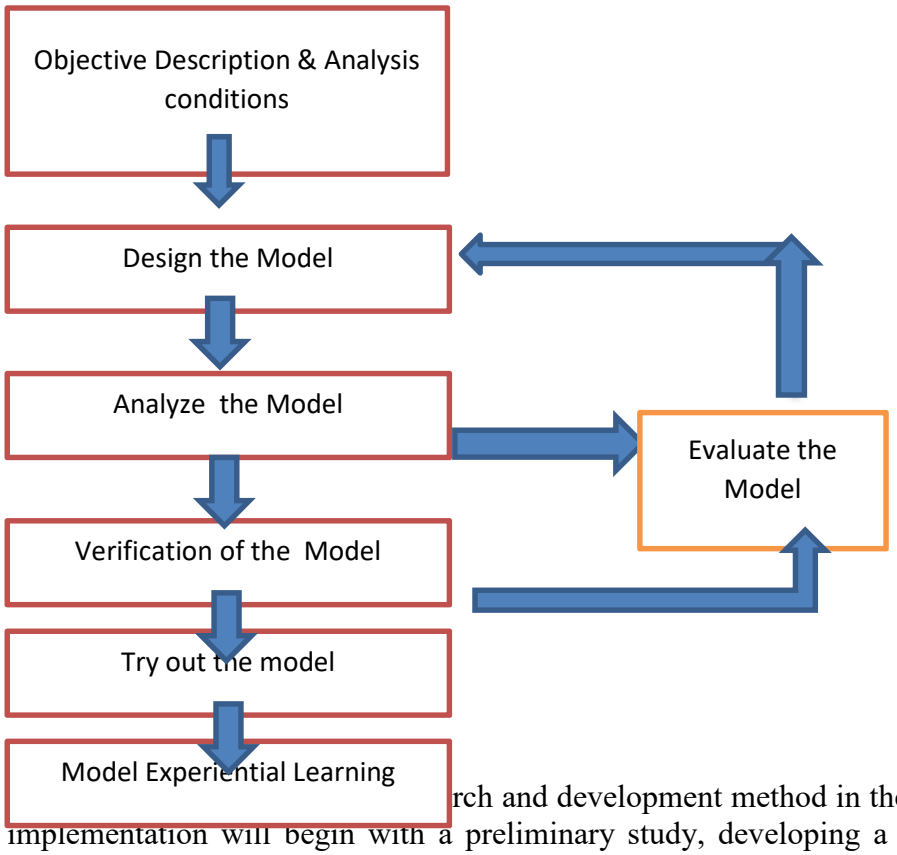
The research instruments used in answering research questions are as follows:

1. Observation, researchers make field notes about the behavior and activities of the individuals under study. In this field note the researchers recorded both structured and semi-structured activities at the research site. Observer plays as a non-participant role.
   There were some points to take into account when observing other teacher (Brown, 2001) and some categories of a good language-teaching characteristics (Brown, 2001; Harmer, 2001). Those principles were applied in observation. Those collected data will be then transcribed and organized into some groups for further description and analysis. After classifying all the observation data- an empirical generalization will be formulated.
2. Interview
   The researchers will conduct face-to-face interviews with respondents if possible, interviews by telephone or in a focus group interviews. The interviews with respondents included their attitudes, opinions and impressions on learning process, learning experiences and learning outcome, especially higher order thinking skills they gained.
3. Questioners
   The researchers will also administer open and closed questionnaires to the participants, the students, in this case, to support the data collection and make the research much more valid. As Dawson (2009) points out that in open questions, respondents use their own words to answer a question, whereas in closed questions, prewritten response categories are provided. Thus, the students just selected the appropriate answer by crossing it. If the options do not cover all the students' choice, there will be a space available to provide the other responses based on the students own choices.
4. Analysis of documents.
   During the research process, researchers will collect relevant documents, in this case curriculum documents, such as syllabus, RAT, SAT, teaching materials, UT graduates Scores. The documents will be analyzed, as the supporting data of the research. The analysis looked at closely on learning models and the students' outcomes.
5. Focus Group Discussion (FGD)
   A focus group discussion involves gathering people from similar. backgrounds or experiences together to discuss a specific topic of. interest. It is a form of qualitative research where questions are asked about their perceptions attitudes, beliefs, opinion or ideas. The people involved in FGD will be an expert or professional in online English Learning.
6. Tests
   Summative test will be carried out at the end of teaching or a learning unit. It is used to know how far students are achieving the intended teaching objectives. Tests are given at the end of a learning period which aims to state the quality of the preparation of learning materials by students or to provide grades. Although the results are mainly used for giving grades, this test can contribute to the future learning process by providing information to assess the effectiveness of teaching.

1.4 Research Procedures

The procedures of the research can be shown in the table below:

Table 2.1



rch and development method in the field of education. The implementation will begin with a preliminary study, developing a draft model, testing for model validation.

The initial steps in research and development as highlighted by Borg and Gall (1989) are as follows:

1. Research and Data Collection (Research & Information Collecting)

The first step taken is a needs analysis, literature study and small research.

   a. Need analysis
      This is done by finding information related to problems faced by the location or region that is targeted for product development. In addition, looking for information or data related to what is needed to resolve the problem at that location. For example, if you are going to develop a product in a school, researchers first find out what learning problems are faced by teachers and students. Then, the researcher will also begin to identify what things or products may solve the learning problems in the school.
   b. Literature studies
      It relates to the search for information and empirical data through theory and relevant research related to the product to be developed. This will guide researchers in developing products that will be produced.
   c. Small-scale research
      This is intended as a result of the identification that has been done by researchers related to the product if it is needed to ascertain whether the product that the researcher will develop can really be a product that can solve the problem at the place

2. Research Planning (Planning)

Planning in R&D research includes formulating research objectives, estimating the things needed in research, formulating the qualifications of researchers and forms of participation in research.

3. Design Development (Develop Preliminary of Product)
   These stages include: 1) Creating a product design to be developed, 2) defining the facilities and infrastructure needed during the research, 3) Determining the stages of design testing in the field.
4. Preliminary Field Testing (Preliminary Field Testing)
   This stage relates to: 1) Conducting initial testing of product design, 2) The testing is limited, 3) Field trials are carried out many times in order to get the design that suits our needs. During this trial the information will be collected through observation, interviews and questionnaire filling.
5. Revising Main Product
   This stage is an improvement from the results of the initial field trials. In this initial product improvement phase, it will be done with a qualitative product approach.
6. Main Field Testing
   This stage deals with product testing more broadly, which includes:
   1) Testing the effectiveness of the product design,
   2) Testing the effectiveness of the design using the repetition model experimental technique,
   3) The results of the field test are effective designs, both in terms of substance and methodology. Data related to product use is collected to see the effectiveness and efficiency of the product.
7. Operational Product Revision
   This stage is the second improvement after a broader field test. Product enhancements at this stage will further strengthen the products to be developed. Refinement at this stage is not only based on the quality aspect but also its quantity based on student learning outcomes which in the learning process have been tested to use the products developed.
8. Operational Field Testing
   This stage deals with testing the effectiveness and adaptability of product designs involving product users. This test is carried out using interviews, observations, questionnaires, which then the results are analyzed.
9. Final Product Revision
   This revision is based on input from due diligence. This step will further enhance the product being developed. Improvement of the final product is deemed necessary for the accuracy of the product being developed. At this stage, a product with an effectiveness level can be obtained.
10. Dissemination and Product Implementation
    Publish the results of products developed so that they can be implemented in general or in a wider scope.

III. Result and Discussion

1.1 Definition of Experiential Learning

The experiential learning model is a model of teaching and learning process that activates learners to build knowledge and skills through direct experience. Kolb (1984: 38) states that "learning is the process where knowledge is created through the transformation of experience". The knowledge created from this model is a combination of understanding and transforming experience. Experiential learning is developed by David Kolb around the early 1980s. This model emphasizes a holistic learning model in the learning process. In Experiential learning, experience has a central role in the learning process. This emphasis distinguishes Experiential

learning theory from other learning theories. The term "experiential" is used here to distinguish between cognitive learning which tends to emphasize cognition more than affective. And behavior learning theories that eliminate the role of subjective experiences in the learning process.

Similarly, Hamilton, J & Joanne, M. K (2011) maintains that several considerations emerge when integrating a critical thinking orientation with experiential course design. First, a strong critical thinking foundation may be most effective with a deliberate, focused approach, one that is embedded in the design of course activities and content. This suggests explicit critical thinking objectives be specified along with content objectives. Second, so as to better match course objectives, the selection of experiential activities requires an instructor to evaluate the task structure and content dimensions of an experiential activity. This alignment ensures that instructional activities support targeted learning and cognitive processes at the intended level. Finally, to attain higher-order levels of thinking skills, reflection is a necessary element of instructional activities.

Experiential learning according to Silberman (2007:8) is “it refers to (a) the involvement of learners in concrete activities that enable them to “experience” what they are learning about, and (b) the opportunities to reflect on those activities.”

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The experiential learning model gives students the opportunity to decide what experiences they focus on, what skills they want to develop, and how they conceptualize the experience they are experiencing. This is different from the traditional learning approach where students become passive listeners and only the teacher controls the learning process without involving students.

1.2 Syntax of Experiential learning

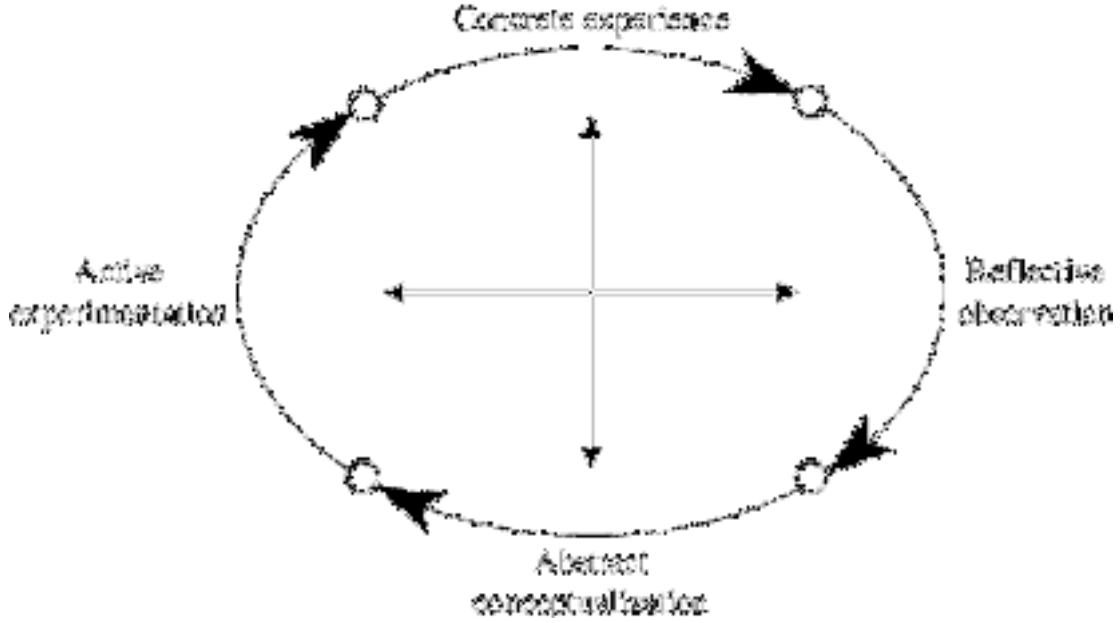

Figure 3.1 Syntax of Kolb's Experiential Learning

David Kolb's Model Experiential Learning cycle Learning Model Experiential Learning begins by doing (do), reflect (reflect) and then apply (apply). If elaborated again it will consist of five steps, starting from the experience, sharing, analyzing the experience (process), taking lessons or generalizing, and applying. So goes back to the first phase, naturally. This cycle actually never stops. Each of the goals of these circuits then comes the steps in the learning process, namely: Concrete experience, Reflective observation, Abstract conceptualization, Active experimentation.

Some important points that must be considered in the experiential learning model are as follows:

a. The teacher carefully formulates a learning experience plan that is open minded about potential outcomes or has a set of certain results.
b. Teachers must be able to provide stimuli and motivation to recognize experience.
c. Students can work individually or work in small groups / whole groups in learning based on experience.
d. Students are placed in real situations, meaning students are able to solve problems and not in replacement situations.
e. Students actively participate in the available experience, make their own decisions, accept the consequences based on the decision.
f. The entire class presents the experience that has been poured into the writing in connection with these subjects to broaden the learning experience and students' understanding in carrying out the meeting which will later discuss the various experiences.

The stages of Model Experiential Learning need to begin with something that is considered challenging for students. The point is to let them experience first, reflect and interpret what they have learned. In addition to several things that must be considered in the experiential learning model above, the teacher must also pay attention to the learning method through this experience, which includes three things below:

a. Learning strategies through experience using inductive sequence forms, student-centered and activity-oriented.
b. The emphasis in learning strategies through experience is the learning process, and not learning outcomes.

c. Teachers can use this strategy both in the classroom and outside the classroom.

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1.3 Experiential Learning Strategies

Experiential learning can have various forms of learning strategies as follow:

1. On- the job assignment
2. Field experiences
3. Action learning projects
4. Creative play
5. Role play
6. Games
7. Simulation
8. Visualization
9. Story telling
10. Improvisation
11. Adventure activities

Experiential learning is not limited to workshops, but can be a class of learning sessions, group meetings, coaching sessions, e-learning for individuals and groups (Silberman, 2007). Moreover, Silberman (2007) maintains the advantages of the role of experiential activities in the process of changing behavior and attitudes, including creating openness, improve understanding, consider new attitudes and behaviors, experimenting and obtaining support.

1.4 Result

At the preliminary study, the writer observed what is going on in the process of English teaching learning. The writer also interviewed some students and teachers to support the data. Based on the data analysis, it reveals that most of the students and the teachers have similar ideas that the experiential learning is important to increase the students' experiences. All teachers agreed that they need a specific strategy in learning that make the students be active, creative and communicative in the learning.

Based on the fact, some teachers have applied communicative learning process, some are still in a traditional method such as explaining, listening and writing. For the communicative teachers, they have already prepared all instruments and media when they are teaching. The experiential learning model gives them a chance and challenges to apply in their learning. They support all the process to join the research. The characteristics of the experiential learning is rather similar to what is called 'lesson study", in term that some teachers observe the process and learning, make a reflection, and give feedback for the betterment of learning. All the activities are usually done in a group of teachers. Therefore, many ideas may come up and make a progress for learning.

In developing an experiential learning design, the researcher followed the syntax of Kolb' experiential learning. It revealed that the students were challenged to share their learning experiences in the active experimentation stages. They likely enjoyed some learning in form of projects based learning or out classroom learning.

Although the final result of the research has not been fulfilled yet since the research are still in the progress, for temporary result shows that experiential learning is beneficial for English learning in increasing the students' learning experiences.

IV. Conclusion

Based on the preliminary study, it reveals that most of the students and the teachers have similar ideas that the experiential learning is important to increase the students' experiences. All teachers agreed that they need a specific strategy in learning that make the students be active, creative and communicative in the learning.

Some teachers in the site have applied communicative learning process, some are still in a traditional method in teaching. For the communicative teachers, they have already prepared all instruments and media when they are teaching. The experiential learning model gives them a chance and challenges to apply in their learning. All the activities are usually done in a group of teachers. Therefore, many ideas may come up and make a progress for learning.

It also revealed that the students were challenged to share their learning experiences in the active experimentation stages. They likely enjoyed some learning in form of projects based learning or out classroom learning. Although the final result has not been fulfilled yet, it shows that experiential learning is beneficial for English learning in increasing the students' learning experiences.

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VISUAL TO VERBAL COMMUNICATION MEDIA FOR ENHANCEMENT EDUCATION AUTIS KIDS BASED ARTIFICIAL INTTELLIGENT

Muhammad Ashar
muhammad.ashar.ft@um.ac.id
Ivan Reynaldi Putra
ivanrputra@gmail.com
Yudi Tri Harsono
yudi.tri.fppsi@um.ac.id

State University of Malang
Malang, Indonesia

ABSTRACT

Communication becomes an important role to help the role of humans as social beings. But, not all humans can communicate verbally due to various factors such as hearing loss, physical disability, development disorders, learning disorders, autism disorders etc. To overcome that problem, alternative communication is needed to replace or learn verbal communication using the media of Augmentative and Alternative Communication (AAC) which prioritizes the use of visual media. One of the information technology techniques that can help the development of Augmentative and Alternative Communication media is detection of image object. Support Vector Machine (SVM) and Histogram of Oriented Gradients (HOG) algorithms have been applied in the detection of image object and proven to provide high accuracy values. Therefore, this study uses the SVM and HOG algorithms to develop AAC media. In this research 1900 image data with 5 different object categories were used obtained from sketchy.eye.gatech.edu. Based on the research that has been done, the results of the average accuracy using the 10 Fold-Cross Validation method are 92,61% with the greatest accuracy 95,61% and the lowest 87,36%. With the result of the accuracy obtained, the Support Vector Machine and Histogram of Oriented Gradient methods proven to be used to develop Augmentative and Alternative Communication media using image object detection.

Keywords— *Autis Kids, Augmentative and Alternative Communication (AAC).*

INTRODUCTION

The communication sometimes experiences various obstacles or disturbances caused by various factors, one of which is the limited ability of individuals to convey messages. In fact, not all children can communicate well due to disorders such as hearing loss, physical disability, developmental disorders, learning disorders that result in the ability to interact and socialize [1]One disorder that needs help for alternative communication is individuals who experience or suffer from autism. According to [2] autistic children have visual memory that is far more than their auditory memory. Alternative and Augmentative Communication (AAC) are techniques that replace oral communication for individuals who experience obstacles in speech or are unable to communicate through spoken language [3]. AAC prioritizes the use of media or tools in the form of visuals or images. One of the researches at AAC is Augmentative Communication Media for Autistic Children with Disorder Spectrum [4] In the study it provided improved communication skills before and after using AAC media that proved the effectiveness of AAC. Detecting objects on images is important to assist in the development of AAC media. The media that will be developed is to identify the image object in an image. Which is the purpose of the media is to help communicate with children who have problems communicating verbally.

Support Vector Machine algorithms have previously been used to classify data such as image data in meat image detection cases that provide quite good accuracy with a percentage of 87.5% [5] and in cases of classification of dental and oral diseases by giving accuracy values quite large, at 94.44% [6]. The advantage of the Support Vector Machine algorithm is that it can classify non-linear data with fairly good accuracy compared to other classification algorithms. And another advantage is SVM have Trick Kernel, Support Vector Machine can complete classification with complex data [7]. And the Histograms of Oriented Gradients algorithm has the advantage of being insensitive to small shifts and illuminations, so that it can encode object shapes more efficiently [8]. So from that this study uses the Histogram of Oriented Gradient algorithm and Support Vector Machine.

RESEARCH METHODS

1.1 *Histogram Oriented of Gradient*. Histogram Oriented of Gradient is one of the image data feature extraction methods introduced by Robert K. McConnell. Feature extraction itself involves reducing the number of data sources needed to describe large amounts of data, so that the number of image data features is not large and can speed up the image data classification process. There are several stages in the Histogram Oriented of Gradient as follows method:

a) Define Kernel to calculate gradient.
b) Determine the number of cell to calculate the histogram.
c) Find Magnitude and Direction Gradient.

To calculate the values of Magnitude and Direction Gradient on each pixel of image data, Histogram Oriented of Gradient use the following formula:

$$g = \sqrt{g_x^2 + g_y^2} \qquad (1)$$

$$\theta = arctan\frac{g_y}{g_x} \qquad (2)$$

Where :

g_x *= value of gradient x in cell or pixel n*

g_y *= value of gradient y in cell or pixel n*

d) Add bin to histogram.

1.2 *Support Vector Machine.* SVM works well with data that has high dimensions and can use kernel functions to map original data into higher dimensions. Classification is a data mining task for data classification. In simple terms, the concept of Support Vector Machine (SVM) in this study can be explained as the search for the best hyperplane. Hyperplane functions as a separator of two classes in input space [9].

Determining the value of a hyperplane is a very important process for separating data in a particular set consisting of two classes, namely new classes yi = {+1, -1}. In classifying linear processing data, the hyperplane equation is <w, x> + b = 0, then determines the value of the set / class with the negative value of the equation <w, x> + b ≤ -1, and determines the set / class value with positive value whose equation is <w, x>

+ b ≥ 1, the description of the equation that is w is the data weighting value, while the x value of each data in each set and b is the value of bias / predictive value. The Kernel Trick function is a function that can do mapping from training data to feature space with higher dimensions. The function of the kernel trick can be formulated with the following equation:

Kernel Trick :

$$K(X_i, X_j) = \Phi(X_i), \Phi(X_j) \quad (3)$$

Keterangan :

K = *Kernel Trick.*
X_i = Data set in class i
X_j = Data set in class j
Φ = Function to map each data

After the hyperplane or kernel has been found, the next step is to determine the alpha value, the data weighting value, and the bias value of each data [10]. The alpha value is the value obtained from each matrix data value which is added to each K (Xi, Xj) kernel.

Alpha Formula:

$$\alpha = \frac{jumlah\ kernel\ yang\ diperoleh}{\sum(K(X_i, X_j) * Z)} \quad (4)$$

Where :

a = Alpha
Z = The results of multiplying two sets of Xi and Xj.

Formulation of Data Weighting Values:

$$A = a * [z];\ W = A * K(X_i, X_j) \quad (5)$$

Formulation of bias values:

$$b = \frac{1}{2}\ ((\sum_i^n W * K(X_i)) + (\sum_j^n W * K(X_j))) \quad (6)$$

Where :

i = The first data set value
j = The last data set value
W = Data weighting value
$K(x)$ = The kernel value for each set.

1.3 *Dataset*. The dataset used in this study was obtained from the sketch of an image object drawn according to a real object by an artist and non-artist. The dataset obtained on the sketchy.eye.gatech.edu website which provide open dataset for sketch image detection. The dataset used in this study includes sketched image data with 5 different object categories with 1906 data. The categories of objects requested include "Circle, Eyeglasses, Star, People, Cup". The number of proposals for data per object category can be seen in Table I. Sample datasets that will be used in this study can be seen in Table II.

TABLE I. Propotion Amount of Data

Kategory	Amount of Data	Percentage (%)
Circle	392	20.5
Eyeglasses	446	23.3
Star	326	17.1
People	324	16.9
Cup	418	21.9

TABLE II. Example Data for Each Kategory

No.	Gambar	Kategori
1		Star
2		Circle
3		Cup
4		Eyeglasses
5		People

1.4 *Design Experiment*. In this study two types of algorithms were used. The algorithm used is Histogram Oriented of Gradient for feature extraction and Support Vector Machine algorithm for detection of image objects. Histogram Oriented of Gradient is used for extracting image data features after the preprocessing stage. After all image data has gone through the feature extraction stage, then the data is used by Support Vector Machine to do the object detection process. The flow of work in this study can be seen in Figure 1.

At Fig. 1, the dataset to be used must go through the preprocessing stage. At the preprocessing stage, data that is not feasible to be used in the study will be eliminated. Then the image dataset will be resized to 32x32 pixels. For the distribution of training data and test data, the K-Fold Cross Validation method is used where k = 10, so the comparison of training data and test data is 9: 1. Then all data will go through the feature extraction process using the Histogram Oriented of Gradient algorithm. After the

histogram on each image data is obtained, then the Support Vector Machine algorithm learning process is carried out. The test data is then used to test the detection of image objects. The results obtained will then be evaluated with the Confusion Matrix to obtain the accuracy of image object detection.

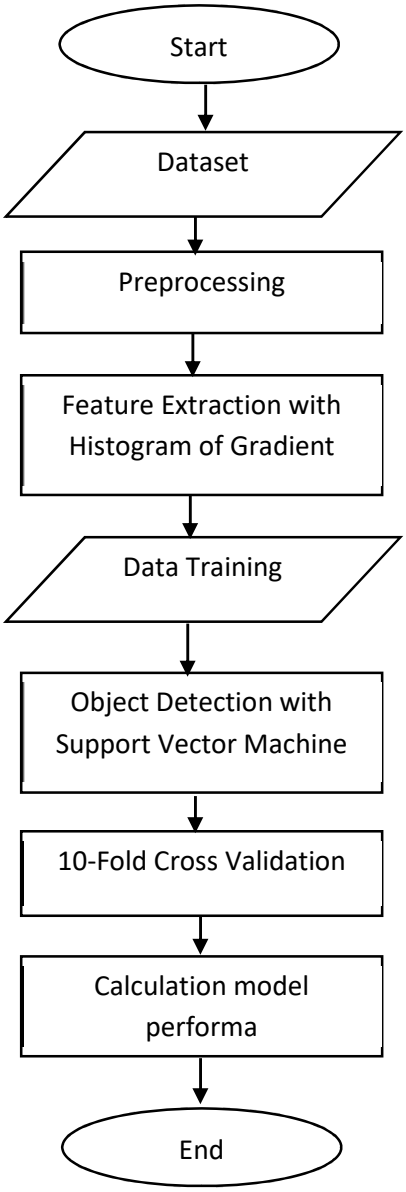


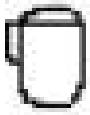
Figure 1. Research Step

The hardware that used in this research was a notebook with Intel Core i3 Processor specs 2.30 Ghz with 4 GB RAM and Windows 7 64-bit. This research also use Python library like tensorflow, numpy, PIL as tools to process image data using Histogram Oriented of Gradient and Support Vector Machine algorithm.

C. RESULT AND DISCUSSION

1.1 *Histogram Oriented of Gradient Feature Extraction*. In this study the feature extraction process is done by extracting 32x32 pixel image data into 288 features. The Histogram Oriented of Gradient method uses a 1-D centered kernel. The HOG algorithm extracts 32x32 image data by dividing it into 4 cells measuring 16x16 and block switching 50% in each cell. Then the histogram value is calculated and put in bin size 8. So that every extraction of image data produces 288 features. The results of the feature extraction process using the Histogram Oriented of Gradient algorithm can be seen in Table III.

TABLE III. THE RESULTS OF HISTOGRAM ORIENTED OF GRADIENT

Data	**Histogram**				
	F-1	**F-2**	**F-3**	**F-n**	**F-288**
	5.6725	0.0000	0.0000	….	0.0000
	1.5883	4.6025	3.6561	.....	0.0000
	1.1727	1.1322	2.4406	.....	0.0000
	2.6531	1.6448	9.6004	…..	0.0000
	7.8397	1.2205	2.9376	….	0.0000

1.2 *Support Vector Machine Object Detection*. The histogram value that has been obtained from the feature extraction process of the Histogram Oriented of Gradient algorithm will then be used for the object detection process with the Support Vector Machine algorithm. In the process of detecting this object a Linear kernel will be used.

At the detection stage it will be done using the K-Fold Cross Validation method with a value of k = 10, then 10 tests will be carried out and evaluated using the Confusion Matrix. The results obtained in object detection can be seen in Table IV.

TABLE IV. CONFUSION MATRIX IMAGE OBJECT DETECTION

Trials	**TP**	**TN**
1	180	10

2	178	12
3	180	10
4	168	22
5	182	8
6	174	16
7	176	14
8	172	18
9	166	24
10	176	14

Based on the test results of detection of image objects on each test data and training data used, there is an error or incorrect detection with the actual data. Therefore, with an error obtained from the detection process of image objects in this study, each experiment carried out was evaluated using the confusion matrix evaluation method. Every data detected correctly will be divided by the amount of test data and training data used to find the accuracy value. After the accuracy of each test is obtained, the amount of accuracy is divided by the number of tests and multiplied by 100% to get the average accuracy on all tests performed. The following is the result of evaluating the value of accuracy in each test data and training data used in the test using the Confusion Matrix in Table V.

TABLE V. CONFUSION MATRIX IMAGE OBJECT DETECTION

Trials	**Accuracy (%)**
1	94,73%
2	93,68%
3	94,73%
4	88,42%
5	95,78%
6	91,57%
7	92,61%
8	90,52%
9	87,36%
10	92,61%

From the test results using the confusion matrix above, the value of accuracy in each experiment was carried out with an average of 92.61%. From the average accuracy obtained using confusion matrix, it can be seen that the average value is classified as very good because the average accuracy of all experiments is not less than 90% (<90%).

Based on the test results in Table V, the accuracy value of each experiment has different values with a minimum accuracy value of 87.36% and a maximum of 95.61%. Besides that, there were also 2 tests which got accuracy values below 90% and 8 tests above 90%. In the tests carried out there is a lower accuracy value than other tests, the difference in the value of accuracy on each test is because each dataset has a number of training data and test data that varies in each category.

D. CONCLUSION

Based on the analysis obtained prove that the Histograms of Oriented Gradients algorithm and Support Vector Machine can produce good accuracy values for detecting objects in image data. This can be obtained because the amount of training data used is quite large in each class. In addition, the effectiveness of the Histograms of Oriented Gradients algorithm in extracting image data features has proven to help Support Vector Machine algorithms to process image data optimally.

However, the processing time of the Support Vector Machine algorithm in the training data phase is relatively long. The old process in training data uses the Support Vector Machine algorithm because Support Vector Machine is a binary classification method, so One vs. All technique is used which requires training every single category with a combination of other categories and also due to features in the image data totaling 288. But the processing time used for object detection testing relatively quickly.

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The Evaluation of Process Standard Implementation in Junior High Schools Level in Sorong City

1) Eka Susilawati, ekasusilawati87@upi.edu
2) Rusman, rusman@upi.edu

Universitas Pendidikan Indonesia

ekasusilawati87@upi.edu

Abstract. The quality of education basically comes from the quality of learning process, because the learning process includes services to students as the main consumers of education. Educator has a big responsibility in the learning process, because it is an activity held by school and centered on students' needs, includes planning, implementation, assessment, and supervision activities. All activities related to the learning process are arranged in the Education National Standard, especially the Process Standard. If it was held well, then the quality of education would be good too. This is a descriptive study which was aimed to describe the report of education quality on the process standard implemented in junior high schools in Sorong City. Results show that the average score of schools for: (1) indicator of planning is 6.80 (classified as 5 stars) which means has achieved the Education National Standard; (2) indicator of implementation is 6.78 (classified as 5 stars) which means has achieved the Education National Standard; (3) indicator of assessment and supervision is 6.40 (classified as 4 stars) which means headed to the Education National Standard.

Keywords: evaluation, process standard, implementation

A. INTRODUCTION

In 2017, the quality of Indonesia's education ranked 108th in the world with a score of 0.603. In general, the quality of Indonesian education falls below Palestine, Samoa and Mongolia. Meanwhile, the ranking of the quality of Indonesian education in Southeast Asia ranks 5th below Singapore, Brunei Darussalam, Malaysia and Thailand (PISSA 2017). Based on the ranking data, Indonesia needs a lot of improvement in its efforts to improve the quality of education. High quality education is a measure of educational success. Education is very important in improving the living conditions of citizens throughout the world. This is the only tool for the sustainable development of individuals and states. Educated countries contribute to the development of their countries. Therefore, it is important for states to offer quality education to their citizens [1].

Quality problems or the quality of education do not stand alone, but are associated with a system of mutual influence. Governments in any country try to balance broad-based participation with high-quality results, in addition to limited fiscal positions [2]. The subject of quality education has received increasing attention. The quality of education has been the

subject of a large number of investigations by academics over the past few decades [3]. Regarding the quality of education, Sayed and Ahmed [4] said that the definition of quality education is difficult to understand and continues to grow. This perspective is based on different but complementary dimensions of education. Hoy and Miskel [5] provide effective school indicators, namely the existence of Input, Process, and Output components. To improve the quality of education in Indonesia, the government has established National Education Standards which are the basis in planning, implementing and supervising education in the context of realizing national education.

Charles Hoy explained that the quality of education is an evaluation of the educational process with high expectations to be achieved and develop the talents of education customers in the education process [6]. The quality of education in schools can be interpreted as the ability of schools in operational management and efficiency of components related to schools so as to produce added value to these components according to applicable norms or standards. Quality in education includes the quality of inputs, processes, outputs, and outcomes. The quality of education has an important role in improving the quality of quality education human resources. Republic of Indonesia Government Regulation Number 19 of 2005 concerning National Education Standards [7]. Article 4 of the PP states that National Education Standards are a means of ensuring the quality of education services. Educational standards include the content, process, workforce, facilities and infrastructure standards, management, evaluation, financing, and graduate competencies. With the existence of these national standards, the direction of improving the quality of Indonesian education becomes clearer. If every education unit has reached or exceeds the national education standard, it is expected that the quality of education will be achieved.

Broadly speaking, the implementation of the curriculum includes four indicators of eight national education standards, namely the standard content which consists of the basic framework and structure of the curriculum, learning load, and educational calendar. While the standard process includes planning the learning process, and implementation. Evaluation standards consist of evaluation and supervision. Graduation standards are intended to determine the achievements of the three standard processes mentioned above. Related to the above, reforms in education are not enough just to change in terms of the curriculum sector, both the curriculum structure and the formulation procedure. Curriculum changes will be more meaningful if followed by changes in learning practices. Indicators of curriculum change are indicated by the existence of patterns of learning activities, selection of methods, media, and determination of assessment patterns that determine outcomes. In order to implement process standards, schools must work hard, in this case all the educators, principals including school supervisors. Education has a very big responsibility in preparing, planning teaching, and evaluating. While the principal, as the school management, and school supervisors as supervisors must be able to perform their functions properly in schools where they must motivate teachers in teaching. If this can be done well the quality of education will be successful.

1.1. Evaluation

Evaluation is an activity to collect, obtain, and provide information for decision makers [8]. It is an activity to find out the difference between what exists and a predetermined standard and how to state the difference between the two. Assessment is a strong force in education [9]. Evaluation is an activity to gather information by comparing with a standard which can then be used for decision makers. Evaluation of educational programs can be used to evaluate various aspects of education for example: curriculum, subject learning processes and methods, educational services, educators, and so on [10].

1.2. Process Standard

According to Government Regulation No.19 of 2005 Article 1 paragraph (6) what is meant by the process standard is "national education standards relating to the implementation of learning in one educational unit to achieve the competency standards of graduates". Process standards, both related to planning, implementing, evaluating, and supervising learning, were developed by BNSP, and established by Ministerial Regulation. Broadly speaking, the standard of the learning process can be described as follows [11]: (1) The learning process in the education unit is carried out interactively, fun, challenging, motivating students to participate actively, as well as providing sufficient space for initiative, creativity and independence in accordance with students' talents, interests, and physical and psychological equipment; (2) In the learning process, educators provide role models; (3) Every year educators conduct planning, implementation, assessment, and supervision of learning, for the implementation of an effective and efficient learning process; (4) Planning of the learning process includes a syllabus and learning implementation plan that contains at least the learning objectives, teaching materials, methods, learning resources, and assessment of learning outcomes; (5) The implementation of the learning process must pay attention to the maximum number of students per class and the maximum teaching load per educator, the maximum ratio of learning textbooks per student and the maximum ratio of the number of students per educator; (6) The learning process is carried out by developing a culture of reading and writing; (7) Assessment of learning outcomes using various assessment techniques, which can be in the form of written tests, observations, practical tests, and assignments of individuals or groups, in accordance with the basic competencies that must be mastered; (8) For subjects other than science and technology at the elementary and secondary education levels, individual observation assessment techniques are carried out at least once a semester; and (9) Supervision of the learning process including monitoring, supervision, evaluation, reporting, and taking the necessary follow-up steps.

1.3. Curriculum Implementation

Implementation is the actualization of a written curriculum that is applied in the form of learning [12]. Successful implementation of the curriculum is obtained from careful planning that focuses on three factors, namely the program, the process, and the parties involved in it [13]. Thus, curriculum implementation is basically a process of actualization or application of concepts, ideas, programs or curriculum designs that have been prepared by the parties involved to be tested through learning practices that are tailored to the conditions, needs and characteristics of students. The success of curriculum implementation is influenced by three

factors, including curriculum characteristics, implementation strategies, and characteristics of curriculum users [14]. The success of implementing a new curriculum is often related to teacher perceptions about curriculum content, teaching materials, and training opportunities [15]. Factors that hinder the implementation of curriculum reform include the following [16]: (1) The workload of teachers is still heavy. Although the curriculum has been trimmed and restructured, it has reduced administrative workload. For this reason, teachers need to be included in professional development training, especially in critical thinking skills, diversity of students, and inclusive education; (2) Diversity of students is considered to hamper the successful implementation of the curriculum. This is especially so for large classes so that teacher teaching practices in dealing with diverse students (inclusions) will be more successful in smaller classes (number of students); and (3) Encouragement for the creation of collaborative culture and community learning groups in many schools and also to further enhance communication and collaboration among teachers, curriculum leaders and school principals so that they have a better understanding of their respective roles so they can provide contributions in different ways to meet the needs of students at various levels.

B. RESEARCH METHOD

2.1 Method

This is a qualitative descriptive study which aims to describe and explain about observed object based on the collected data.

2.2 Participant

Participants in this study consist of five junior high schools which are representatives of five sub-districts in Sorong City, either public or state schools.

2.3 Instrument

Data in this study were obtained from the quality report which was distributed by Lembaga Penjamin Mutu Pendidikan (LPMP) in Papua Barat Province.

C. RESULT AND DISCUSSION

The following is a report of the Process Standards in junior high schools in Sorong city obtained from LPMP Province Papua Barat in 2018. There are three indicators that are aspects of the assessment, namely: (1) indicators of planning the learning process according to the provisions; (2) indicators of implementing an appropriate learning process; and (3) authentic indicators of supervision and assessment conducted during the learning process.

Table 1
Report Score of Process Standard in Junior High School of Sorong City

Nb	Indicator	School					Average Score
		A	B	C	D	E	
3.1	Plan the learning process by following the policies	6,97	6,75	6,79	6,73	6,78	6,80
3.2	Implement the learning process well	6,68	6,84	6,86	6,53	7	6,78
3.3	Supervise and evaluate the learning process	6,29	6,64	6,47	6,08	6,54	6,40

3.1. Planning

Planning is determining in advance what will be done [17]. Planning is also a whole process of thought and determination in the things that will come in order to achieve predetermined goals [18]. In this case, the planning of process standard for learning plays a very important role in a learning, the success or failure of a learning depends on what the planning is designed by the teacher. Based on the results of the study, for the learning process planning indicators according to the provisions, it is known that the average value of five schools is 6.80, which is the 5-star category which means it has reached the National Education Standards.

3.2. Implementation

Implementation is an action of a plan that has been prepared in a mature and detailed manner, implementation is usually carried out after the planning has been considered ready [18]. Implementation leads to the activities, actions, or mechanisms of a system. The expression mechanism means that the implementation is not just an activity, but an activity that is planned and carried out seriously based on certain norms to achieve the objectives of the activity. Based on the results of the study, for indicators of the proper implementation of the learning process obtained an average value of five schools is 6.78, which is the 5-star category which means it has reached the National Education Standards.

3.3. Supervision and Evaluation

Supervision is a systematic effort to establish performance standards in planning, to design information feedback systems, to compare actual performance with predetermined standards, to determine whether a deviation has occurred, and to take corrective actions needed to ensure that all sources corporate or government power has been used as effectively and efficiently as possible to achieve the objectives of the company or government [19]. Supervision is important in carrying out a plan. With the supervision, the planning expected by management can be fulfilled and run well. Monitoring, evaluation, coaching, and supervision are an inseparable part of routine supervision. To help schools improve quality well, there needs to be observation, monitoring, coaching, supervision, continuous control, and ongoing. Based on the results of research for authentic indicators of supervision and assessment conducted in the learning process, the average value of five schools is 6.40, which is a 4-star category, which means that it is towards National Education Standards.

D. CONCLUSION

Evaluation of implementation on process standard for junior high schools in Sorong City includes three indicators, i.e. plan the learning process by following the policies, implement the learning process well, supervise and evaluate the learning process. The average score of junior high schools in Sorong City for each indicator: (1) score for planning of learning process is 6.80 which is classified as 5-stars and means has achieved the National Standard of Education; (2) score for implementation of learning process is 6.78 which is classified as 5-stars and means has achieved the National Standard of Education; (3) score for supervision and evaluation of learning process is 6.40 which is classified as 4-stars and means toward the National Standard of Education. Hence, indicator for supervision and evaluation of learning

process in the future should be improved as the 5 stars of the National Standard of Education could be achieved well.

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DEVELOPING DIGITAL LITERACY SCALE FOR PRIMARY SCHOOL STUDENTS

Nacep Hamrat, Toto Ruhimat
Email: nacephamrat@gmail.com
Universitas Pendidikan Indonesia

ABSTRACT

Digital literacy was a skill needed in 21st century learning. This research aims to develop digital literacy measurement scales for primary school students. Respondents in this study were 5th grade elementary school's students in Kemayoran. Total sample was 179 respondents. Digital literacy instruments were formed by four dimensions of digital literacy, which are, internet searching, hypertextual navigation, content evaluation, and knowledge assembly. This research used structural equation modelling (SEM) to test the digital literacy scales. The results of the construct validity test showed that the model formed was already fit, which fulfilled Goodness of Fit, $\chi 2 = 113.97$, df = 40, p = 0.00, RMSEA = 0.102, RMR = 0.023, GFI = 0.90, and AGFI = 0.83. The results of the confirmatory factor analysis showed that the loading factors of 11 indicators had positive values. Ranged loading factors were between 0.76 to 0.84. This indicates that all indicators in digital literacy scales were significant.
Keywords: Digital Literacy, Structural Equation Modelling, Primary School

A. INTRODUCTION

Rapid technological advances made access to the information were obtained more easily. Today, the use of digital devices to collect information could not be separated from our lives. Digital devices made it easy for someone to gain unlimited access to information. The abundance of information received was needed to be addressed to individual literacy abilities. Literacy was the ability to read and write that individuals need for their social, political, economic and cultural lives (Sari, 2018). Chan, Churchill, & Chiu (2017) stated that digital skills were needed by students in the industrial era 4.0. Correspondingly, Deonisius, Lestari, & Sarkadi (2019) said that the progress of digital technology also had an impact on student information acquisition. Thus, digital literacy skills were needed by 21st century learners.

Hague (2011) stated that digital literacy refers to the knowledge, skills, and understanding needed to use technology and media to create and disseminate information. Digital literacy was an individual's skill in using technology to process information so that it becomes a new form of thinking that will be used in problem-solving (Chan et al., 2017; Ferrari Anusca, 2012; Hsu, Wenting, & Hughes, 2019; Julien & Genuis, 2011; Yanti, 2016; Zhao, Kynäshlahti, & Sintonen, 2018). This research was conducted to test the construct validity and construct reliability of digital literacy scales based on aspects of digital literacy; internet searching, hypertextual navigation, content evaluation, and knowledge assembly (Gilster, 1997).

B. RESEARCH METHOD

This research was conducted on 5thgrade students in elementary schools in Kemayoran District, Central Jakarta. The research sample was calculated using a random sample technique. Data collected using google form. Respondents accessed the questionnaire from the link given. Digital literacy instruments were formed into four aspects of digital literacy; internet searching, hypertextual navigation, content evaluation, and knowledge assembly. The instrument consists of 11 statements compiled using a Likert scale. Scoring consists of five categories from "frequently" (score 5) to "never" (score 1). The method used in this research was confirmatory factor analysis (CFA) to measure the validity and reliability of the instrument. Digital literacy scales models are tested using structural equation modeling (SEM).

C. RESULT AND DISCUSSION

SEM models that have been being formed need to be tested for model compatibility assumptions, to see the level of empirical data matches obtained with the research model. The model was fit if it met at least one of the goodness of fit test (Hair, Black, Babin, & Anderson, 2009). The goodness of fit test of this study was used chi-squared, Adjusted Goodness of Fit Index (AGFI), Root Mean Square Residual (RMR), Incremental Fit Index (IFI), Goodness of Fit Index (GFI), Normed Fit Index (NFI), Non-Normed Fit Index (NNFI), Comparative Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA).

The results of the goodness of fit test indicated that the research model was fit. The results of the goodness of fit test were presented in Table 1.

Table 1. The Results of Goodness of Fit Test

Goodness of Fit	Cut-off Value	Result	Description
$\chi 2$ (df=40, p=0.00)	$<$ 120.77	113.97	Good Fit
GFI	$\geq$ 0.90	0.90	Good Fit
AGFI	$\geq$ 0.90	0.83	Marginal Fit
CFI	$\geq$ 0.90	0.98	Good Fit
TLI/NNFI	$\geq$ 0.90	0.97	Good Fit
NFI	$\geq$ 0.90	0.96	Good Fit
IFI	$\leq$ 0.90	0.98	Marginal Fit
RMSEA	$\leq$ 0.08	0.102	Poor Fit
RMR	$\leq$ 0.05	0.023	Good Fit

df=degree of freedom; **GFI**=Goodness of Fit Index; **AGFI**=Adjusted Goodness of Fit; **CFI**= Comparative Fit Index; **NNFI**= Non-Normed Fit Index; **NFI**= Normed Fit Index; **IFI**= Incremental Fit Index; **RMSEA**= Root Mean Square Error of Approximation; **RMR**= Root Mean Square Residual

The goodness of fit test showed that the model had shown a good index. It means that the sample covariance matrix is relatively fit with the estimated covariance matrix.

In the next step, we tested the construct validity and reliability of the indicators that formed latent digital literacy variables. We used the Confirmatory Factor Analysis test (CFA). The results of this test consisted of the loading factor and validity of the variables on a digital literacy scales. The results of the Confirmatory Factor Analysis test (CFA) for the digital literacy scales were presented in Table 2.

Table 2. The Results of Confirmatory Factor Analysis of Digital Literacy Scales (Indicator of Digital Literacy's Aspect)

Indicator	Loading Factor			R^2	CR	VE
	SE	β	T-Value			
Internet Searching (D1)						

I use a search engine to find information related to subjects matters **(D11)**	0.14	0.84	6.52	0.70		
I am using search engines to finish my assignment **(D12)**	0.14	0.84	12.66	0.70		
I am looking for an exercise task using search engines **(D13)**	0.16	0.79	11.67	0.62		
Hypertextual Navigation (D2)						
I am good at organizing links when surfing **(D21)**	0.20	0.76	8.06	0.58		
I can determine the exact keywords when using the search engine **(D22)**	0.13	0.83	11.56	0.70		
I am more comfortable using an e-book than a physical book **(D23)**	0.13	0.84	11.59	0.70	**0.98**	**0.66**
Content Evaluation (D3)						
I confirm the truth about the information I got from the internet **(D31)**	0.14	0.85	6.98	0.72		
I give an assessment of the content of a website **(D32)**	0.20	0.76	12.05	0.58		
I often give feedback on the website **(D33)**	0.16	0.77	12.08	0.59		
Knowledge Assembly (D4)						
I made sure the information obtained from friends using the internet **(D41)**	0.12	0.87	5.23	0.75		
I discuss information obtained from the internet with a friend **(D42)**	0.17	0.81	12.17	0.65		

The results of the construct analysis of latent variables with indicators aspects were indicated by the value of the loading factor. The loading factor which to value more than 0.5 indicates that indicators on scales could be used to measure latent variables (Hair, Black, Babin, & Anderson, 2009). The distribution of loading factors of digital literacy scale indicators is presented in Figure 1.

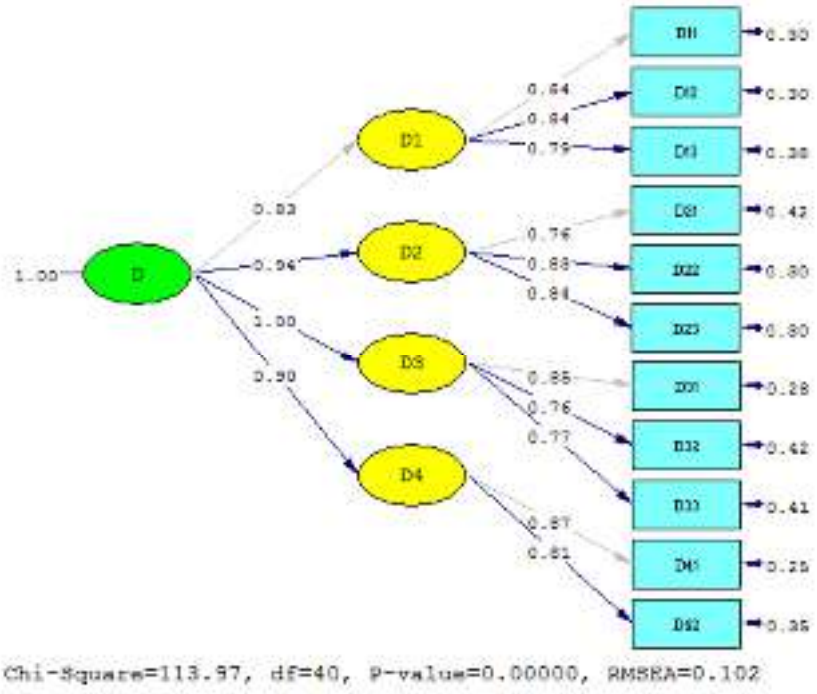

Figure 1. Results of Loading Factor 2nd Order CFA Digital Literacy Scales

The distribution of the loading factors of the 2nd Order CFA of the digital literacy scales showed that the value of the loading factor was between the range of 0.76 to 0.84. All loading factors of each indicator were scoring more than 0.5. The next step was to see the significance of the loading factor of latent digital literacy variables.

T-value on the 2nd Order CFA digital literacy scales showed values between 5.23 and 12.67. This score is more than 1.96. Thus, 11 indicators of digital literacy scales are valid and significant items. The results of the 2nd CFA construct validity of the digital literacy scale's aspect could be seen in Table 3.

Table 3. Results of The 2nd CFA Construct Validity Digital Literacy Scales (Aspect of Digital Literacy)

Aspect	Loading Factor	T-Value	Description
Internet Searching (D1)	0.83	9.34	Significance
Hypertextual Navigation (D2)	0.94	9.14	Significance
Content Evaluation (D3)	1.00	10.53	Significance
Knowledge Assembly (D4)	0.90	9.77	Significance

Table 3 showed that all aspects of Digital Literacy; internet searching (D1), hypertextual navigation (D2), content evaluation (D3), and knowledge assembly (D3) have been valid and significant to measure digital literacy. In the calculation of the reliability construct, the CR value is 0.98 and the VE value is 0.66. The CR value and VE value have fulfilled the cut-off, which is, CR≥0.7 and VE≥0.5. Thus the digital scale of literacy has good reliability.

Based on the results of the analysis of construct validity and reliability, it can be concluded that all aspects and indicators which forming the digital literacy scales can be declared valid and reliable. The dominant aspect that reflects the digital literacy of elementary school students is Content Evaluation (D3) with the main indicator is "I confirm the truth about information obtained from the internet." The lowest aspect that reflects the digital literacy of elementary

school students is Internet Searching (D1) with the main indicator is "I use search engines to find information related to subjects and to do the assignments."

D. CONCLUSION

The measurement of digital literacy scales on elementary school students using the 2nd Confirmatory Factor Analysis showed the scales was valid and reliable. Digital literacy scales could be used to measure the digital literacy skills of elementary school students. The results of the confirmatory factor analysis showed that the loading factors of 11 indicators had positive values. Digital Literacy Scale was reflected in four aspects that form digital literacy; Internet Searching (D1), Hypertextual Navigation (D2), Content Evaluation (D3), and Knowledge Assembly (D4). The most dominant aspect that reflects digital literacy is Content Evaluation (D3), and the lowest aspect that reflects digital literacy in elementary school students is Internet Searching (D1). Goodness of fit test results from digital literacy scales showed the value $\chi 2 = 113.97$, $df = 40$, $p = 0.00$, RMSEA = 0.102, RMR = 0.023, GFI = 0.90, and AGFI = 0.83. The results showed that the theoretical model of digital literacy scales was fit with empirical data.

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ANALISIS KEBUTUHAN DESAIN PENGEMBANGAN KURIKULUM PENDIDIKAN DAN PELATIHAN TEKNIS BAGI PKB AHLI PERTAMA

Cucu Nurpalah dan Anis Ilahi
cucunurpalah@upi.edu, anisilahi06@upi.edu
Universitas Pendidikan Indonesia

Abstract

Peningkatan kompetensi melalui pendidikan dan pelatihan memiliki tujuan untuk dapat melaksanakan tugas dan jabatan yang diemban, sehingga dapat berkinerja efektif dan mencapai sasaran. Pusdiklat Kependudukan dan KB BKKBN memiliki sebuah kewajiban melatih PKB Ahli Pertama, salah satu kompetensi yang dilatihkan adalah kompetensi teknis yang meliputi kompetensi Demografi, KIE, Advokasi, Pencatatan dan Pelaporan serta Pendataan Keluarga. Dalam merencanakan pelatihan tersebut terlebih dahulu dibuat desain kurikulumnya, dimana langkah-langkah pengembangan nya meliputi (1) Analisis Kebutuhan; (2) Desain Program Diklat; (3) Pengembangan Bahan ajar dan Media; (4) Pelaksanaan Diklat dan (5) Evaluasi. Salah satu komponen yang sangat penting dalam siklus tersebut yaitu Analisis Kebutuhan Diklat. Analisis kebutuhan diklat disini bukan lagi bertujuan untuk menentukan kompetensi apa yang ingin ditingkatkan dalam pelatihan, melainkan untuk menghimpun informasi terkait materi, strategi, media, dan evaluasi seperti apa yang akan dikembangkan dalam desain kurikulum untuk pelatihan tersebut. Analisis kebutuhan dasar ini dilakukan pada level jabatan, dengan sasaran Penyuluh Keluarga Berencana pada level Ahli Pertama . Populasi dari penulisan ini adalah PKB ahli pertama di BKKBN dengan cara pengambilan sampel secara *porpotional random sampling*. Metode yang digunakan adalah metode survey dengan pendekatan deskriptif kuantatif dan instrumennya berupa kuesioner. Hasil dari tulisan ini adalah penulis mendapatkan data akurat mengenai kebutuhan dasar terkait materi, strategi, media dan evaluasi dalam pendidikan dan pelatihan teknis bagi PKB ahli pertama di BKKBN.

Keyword: Analisis Kebutuhan Diklat dan Desain Kurikulum

A. INTRODUCTION

Berdasarkan Peraturan Menteri Pendayagunaan Aparatur Negara dan Reformasi Birokrasi No. 21 Tahun 2018 tentang Jabatan Fungsional Penyuluh Keluarga Berencana, Jabatan fugsional Penyuluh Keluarga Berencana adalah jabatan yang mempunyai ruang lingkup tugas, tanggung jawab, wewenang untuk melakukan pelaksanaan kegiatan terkait program Kependudukan, Keluarga Berencana dan Pembangunan Keluarga (KKBPK). Tugas jabatan penyuluh KB yaitu melakukan pengelolaan program KKBPK yang meliputi penyuluhan, pelayanan, penggerakan dan pengembangan di bidang pengendalian penduduk dan keluarga berencana. Dalam jabatan fungsional Penyuluh KB terdapat dua kategori yaitu kategori Keterampilan dan kategori Keahlian. Kategori keterampilan terdiri dari jenjang Terampil/Pelaksana, Mahir/Pelaksana Lanjutan dan Penyelia. Sedangkan untuk jenjang keahlian terdiri dari Ahli Pertama, Ahli Muda, Ahli Madya dan Ahli Utama.

Berdasarkan Peraturan Kepala Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN) Nomor 2 Tahun 2017 tentang Standar Kompetensi Penyuluh Keluarga Berencana, Penyuluh KB memiliki tiga Standar Kompetensi yaitu kompetensi Teknis, kompetensi Manajerial dan kompetensi Sosial Kultural. Hal ini juga diperkuat

oleh Permenpan RB nomor 38 tahun 2017 tentang Standar Kompetensi ASN. Dalam standar kompetensi Jabatan terbaru, seorang PKB Ahli Pertama dituntut untuk dapat meguasai kompetensi teknis Demografi, Komunikasi, Informasi dan Edukasi KKBPK, Advokasi KKBPK, Pencatatan dan Pelaporan serta pendataan keluarga. Untuk mencapai kompetensi ini, PKB diberikan pelatihan.

Peningkatan kompetensi yang dilakukan melalui pendidikan dan pelatihan adalah kegiatan pendidikan yang lebih singkat dengan tujuan atau kompetensi yang spesifik. Pelatihan ini bertujuan untuk meningkatkan kompetensi peserta nya agar dapat melaksanakan tugas dan jabatan yang diemban, sehingga berkinerja efektif dan mencapai sasaran. Dalam merencanakan pendidikan dan pelatihan, sebuah lembaga diklat memiliki siklus program Diklat, yaitu (1) Analisis Kebutuhan; (2) Desain Program Diklat; (3) Pengembangan Bahan ajar dan Media;(4) Pelaksanaan Diklat dan (5) Evaluasi.

Analisis kebutuhan diklat merupakan salah satu komponen yang sangat penting dalam siklus tersebut, digunakan untuk menentukan program apa yang akan dilatihkan pada pegawai, sasaran pelatihan, atau bahkan dalam pengembangan kurikulum pelatihan itu sendiri. Kegiatan Analisis Kebutuhan Diklat dilakukan di Pusdiklat Kependudukan dan KB Badan Kependudukan dan Keluarga Berencana Nasional (BKKBN) bertujuan untuk mendapatkan informasi yang akan digunakan untuk mengembangkan materi, strategi, media, dan evaluasi dalam pelatihan teknis bagi PKB ahli pertama. Untuk itu dibutuhkan sebuah instrument untuk dapat melaksanakan kegiatan analisis kebutuhan tersebut. Berdasarkan kondisi di atas, penulis mengangkat permasalahan ini untuk menjadi topic penelitian, yaitu mengembangan *tools* Analisis kebutuhan untuk pengembangan Kurikulum Diklat Teknis bagi PKB Ahli Pertama.

B. RESEARCH METHOD

Metode pada penulisan ini menggunakan metode survei dengan pendekatan deskriptif kuantitatif. Menurut Ali (2014, hlm. 120) mengemukakan bahwa: "Metode penelitian deskriptif digunakan untuk memecahkan masalah yang sedang dihadapi pada masa sekarang, yang akan datang, dilakukan dengan langkah pengelolaan data, membuat gambaran tentang sesuatu dengan cara obyektif mengadakan perbaikan-perbaikan". Cresweel (2010, hlm. 24) menyatakan bahwa, “pendekatan kuantitatif adalah pengukuran

data kuantitatif dan statistik objektif melalui perhitungan ilmiah berasal dari sampel orang-orang atau penduduk yang diminta menjawab atas sejumlah pertanyaan tentang survei untuk menentukan frekuensi dan prosentase tanggapan mereka". "Metode survei pada dasarnya merupakan pemeriksaan secara teliti tentang fakta atau fenomena perilaku dan sosial terhadap subyek dalam jumlah besar. Merujuk pada riset pendidikan, survei bukan semata-mata dilakukan untuk mengumpulkan data atau informasi, seperti tentang pendapat atau sikap, tetapi juga untuk membuat deskripsi komprehensif maupun untuk menjelaskan hubungan antar berbagai variabel yang diteliti." (Ali, 2014, hlm. 35).

Sasaran dalam penelitian ini adalah PKB Ahli Pertama yang berada di BKKBN. Menggunakan teknik penyampelan *proportionate stratified random sampling,* teknik ini digunakan karena populasinya tidak homogen (Sugiyono, 2013 hlm. 82) dengan rumus :

$$\mathrm{n} = \frac{N}{N.d^2 + 1}$$

n = Jumlah anggota sampel

N = Jumlah populasi

d^2 = Presisi atau tingkat kepercayaan (95%)

Adapun jumlah PKB Ahli Pertama seluruh Indonesia adalah 560 orang, untuk sampel yang digunakan dengan menggunakan rumus di atas adalah 234 orang berdasarkan rumus tersebut.

Instrumen dalam penulisan ini menggunakan kuesioner dalam bentuk daring *(online*) berupa *google form,* karena melalui kuesioner ini penulis dapat menggali banyak informasi dari responden dengan masalah penelitian yang menjadi fokus utama. Sejalan dengan Sugiyono (2013, hlm. 199) "kuesioner merupakan teknik pengumpulan data yang dilakukan dengan cara memberi seperangkat pertanyaan atau pernyataan tertulis kepada responden untuk dijawab".

C. RESULT AND DISCUCCION

Data hasil kuesioner yang disebar kepada 234 orang PKB Ahli pertama diseluruh Indonesia ditemukan sebaran kompetensi yang memerlukan penekanan lebih banyak untuk dipelajari oleh peserta pelatihan (PKB Ahli pertama). Kompetensi tersebut adalah

kompetensi yang berfokuskan pada aspek kognitif dengan materi Demografi dan Advokasi

Hasil sebaran kuesioner dalam bentuk pembelajarannya responden membutuhkan pelatihan menggunakan kelas tatap muka, hal ini menjadi kan sebuah pelatihan yang dapat memiliki metode berdiskusi, berkolaborasi, berlatih dan praktek agar semuanya terasa hidup dan bersemangat, dengan bimbingan dari seorang *fasilitator*.

Waktu pelaksanaan pelatihan pun, responden membutuhkan waktu 5 hari pada pelatihan PKB Ahli Pertama ini. Media yang dibutuhkan berupa media bahan cetak berupa modul yang berisikan materi secara teknis dalam pelatihab PKB Ahli pertama. Adapun teknik tes atau penilaian dari pelatihan ini, responden membutuhkan tes tertulis dan tes unjuk kerja. Tes tertuilis merupakan tes yang soalnya harus dijawab oleh peserta didik dengan memberikan jawaban tertulis baik pilihan ganda atau jawaban singkat. Tes unjuk kerja merupakan penilaian yang dilakukan dengan mengamati kegiatan pesera didik dalam melakukan suatu pekerjaan atau tugas. Sebagai rencana tindak lanjut dalam pelatihan responden menyetujui untuk membuat suatu rencana aksi yang akan dilakukan setelah pelatihan dan membuat laporannya.

D. CONCLUSION

Dari hasil penelitian terdapat kompetensi yang harus lebih mendapatkan penekanan unutk ditingkatkan, yaitu Kompetensi yang berfokuskan pada aspek kognitif dengan materi Demografi dan Advokasi. Dengan melaksanakan kelas tatap muka yang memiliki metode berdiskusi, berkolaborasi, berlatih dan praktek.

Hasil dari penelitian ini mengindikasikan bahwa dibutuhkan pengembangan desain kurikulum pendidikan dan pelatihan teknis bagi PKB Ahli pertama di BKKBN yang menyesuaikan dengan hasil analisis kebutuhan.

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NEEDS ANALYSIS OF TECHNICAL TRAINING FOR CIVIL SERVANTS IN NATIONAL POPULATION AND FAMILY PLANNING BOARD (BKKBN)

Weni Kurniawati and Debora Pratiwi S.

wenikurniawati@upi.edu and deborapratiwis@upi.edu

Universitas Pendidikan Indonesia

ABSTRACT

Based on the new Competency Dictionary of BKKBN, there is a need to increase technical competencies, particularly in the area of policy making and policy advocacy for civil servants in BKKBN. However, until now there is no technical training curriculum designed by BKKBN to meet the needs for these competencies. Therefore, the Education and Training Center of BKKBN must immediately design a training curriculum related to technical competencies for civil servants of BKKBN. To design the training curriculum, the curriculum designer must conduct a training needs analysis to ensure the curriculum developed will be in accordance with the needs of the education and training institution. This research aims to identify the needs for technical training curriculum and providing recommendations for technical training programs as a solution to improve technical competencies of civil servants in the non-ministerial institution of BKKBN. This research uses the Design and Development (D&D) research method according to Richey and Klein with the category of product and tool research. This D&D research has four phases which are analysis, design, development, and evaluation. The training needs analysis conducted in this study is part of the analysis phase. In collecting the data for training needs analysis, researchers use survey, observations, and documentation as the instruments within the civil servants in BKKBN. Respondents in this research are the staff, *Widyaiswara* elements, and related components from the Human Resources Department and the Training and Development Department which taken using simple random sampling technique. Based on the training needs analysis conducted, there is a need for technical training for the civil servants of BKNBN to improve their technical competencies in the area of policy making and policy advocacy at the executive level. By analyzing the needs for technical training, the process of designing, developing, and evaluating the technical training curriculum can be carried out at the later phases of this research.

Key words: *needs analysis, technical training curriculum*

A. Introduction

The Civil Servants or *Aparatur Sipil Negara* (ASN) has a strategic role and duty in public services, governance tasks, and certain development tasks. In carrying out its duties and obligations, each ASN is required to have competence in order to become a public servant and be able to unify the nation. (BKN) statistics as per June 30, 2019 shows the number of Civil Servants (ASN) in Indonesia reached 4,286,918 people spread across central and regional institutions consisting of structural leaders, general functional officials, and functional officials (health workers, technical personnel, and teacher). The quantity of the ASN must be balanced with quality in supporting the main tasks and functions as human resources (HR) in Indonesia. Based on Law No. 5 in 2014 about Civil Servants (ASN) states that "Every ASN employee has the right and opportunity to develop competencies, among others through education and training, seminars, courses, and upgrading that must be evaluated by the Authorized Officer and used as one of the bases in appointment and career development". Every ASN must have

technical, managerial, and social cultural competences. Furthermore, in Government Regulation No. 11 in 2017 about Management of Civil Servants, supports for fulfilling competency development for each ASN should be carried out at least 20 (twenty) hours of study in 1 (one) year. Government Regulation No. 101 in 2000 about Education and Training of Civil Servants Position (Article 1) which establishes a teaching and learning process in order to improve the ability of civil servants. To achieve the level of use which determined by the board and the level of education, Civil Servants should improve their service, quality, expertise, abilities, and skills.

Generally, the difference between education and training is that education is an attempt to improve general knowledge and attitudes of employees and put more emphasis on theory. While training is an activity to improve skills. The training emphasizes more on practical activities. Education and training are two words that have different meanings but have the same goal which as the method used to develop employees in achieving organizational goals. Employees according to Armstrong (2009) as the human capital that the knowledge, skills, and abilities are used to develop and possessed by people in an organization. Therefore, the organization should conduct an education and training for employee development. Education according to Knowles (2005) is an activity undertaken or initiated by one or more agents that is designed to effect changes in the knowledge, skills, and attitudes of individuals, groups, or communities. Thus, educators should be emphasized as agents of change who provide stimulation and reinforcement for learning and activities that have been designed so that participants can be changed too. Besides, the definition of training according to Stone (2011) is activities that teach workers how to work on their current jobs to be better. Dessler (2013) also states that training is present oriented training that focuses on individual's current jobs. Thus, training is closely related to efforts in gaining expertise, experience, and certain knowledge that can help trainees in carrying out their work. Education and training are the main elements in developing employee capabilities. Educational activities are provided to increase knowledge that will improve employee performance.

In order to carried out education and training activities effectively and efficiently, a needs analysis of training is needed so that the training program can be done right on target. Stone (2011) states that without information about what and how critical needs are, training and development efforts are likely to continue the "spray" and "pray" strategies which have too often characterized them. It means that education and training without a needs analysis

beforehand are only the actions which results just rely on the lucky factor and not exactly achieve the goals that has been set. According to Mangkunegara (2003), Training Need Analysis (TNA) is a systematic study of an educational problem by collecting data and information from various sources, to get a solution for a problem or suggest the further action. Information on the education and training needs that are produced will help the company to determine the priority of education and training's type that will be carried out, so that it will help the company in determining the schedule, budget, and other resources. This can also be done to minimize unnecessary training. The training needs analysis is also a diagnosis to determine the current problems and future challenges that must be prepared in the present through the training and development program (Rivai and Sagala, 2009). This is reinforced by Kaufman and Valentine in Stone (2011) which states that education and training refer to needs assessment as the process for identifying and prioritizing gaps in performance. Based on that statement, education and training should be able to bridge the existing problems in the field. Kozlowski and Salas in Ferdous, Tahmina, and Razzak (2012) also states that training needs assessment is traditionally considered as a diagnostic process that occurred before training. The purpose of formal needs assessment is to identify the training targets. Therefore, what can be achieved in education and training based on the results of the analysis of education and training needs can be realized.

Requirement conditions of Training Need Analysis (TNA) for an organization are very diverse, but in this case the conditions where a TNA is needed are as follows: (1) there is a mismatch between the performance standards that have been determined with the performance and work performance of employees caused by internal factors and external employees themselves, (2) the existence of new policies from the organization both in terms of targets, new products produced, and new markets that are the destination, (3) the existence of a new work structure as an effort to expand or streamline the business, (4) there is a modernization policy in the field of management, facilities and infrastructure, and (5) there are new laws and government regulations that demand changes to the organization. The purpose of the needs analysis according to Panggabean (2004) includes to identify specific job performance skills needed to improve performance and productivity, to analyze the participants' characteristics to ensure that the program is suitable for their level of education, experience, and skills also one's attitude and motivation, and to develop specific, measurable, and objective knowledge. At this stage there must be confidence that performance degradation can be increased through training and not due to dissatisfaction with compensation.

According to Kircpatrick (2006), to make an effective training programs, there are several ways to determine needs. Here are some that are usually done according to determine needs, there are: (1) asking participants, (2) asking the participants' leader, (3) asking others who understand the work and how it is done, including colleagues, friends and customers, (4) participants' test, and (5) analyze performance research forms. Thus, according to Barbazette (2006), there are 3 stages of the needs analysis process: (1) gather information, analysis that includes gathering information that aids important decisions. The information obtained can be information that already exists or information that is still new. (2) Analyze information: After getting the information, analyze it, interpret and draw a conclusion from the information. This becomes very important and helps researcher who obtain the results of their needs analysis independently and interpret opinions for their conclusions. At this stage, the needs analysis is more effective if there is a collaborative process with all parties involved. (3) Create a training plan: After analysis and interpretation of information and offering conclusions, the information becomes the basis of training plans that aim to reduce ineffective performance.

In order to support the realization of ASN professionalism and to carry out a Merit System in ASN management required a standard of occupational competency, which consists of Technical Competencies, Managerial Competencies, and Sociocultural Competencies. Technical competence is knowledge, skills, and attitudes or behaviors that can be observed, measured and developed specifically related to the technical field of the position. Technical competency dictionary according to MENPANRB Regulation No. 38 in 2017, that the technical competency dictionary is prepared and determined by PPK Ministries / Institutions, PPK Secretariat of State Institutions, and PPK Secretariat of Non-Structural Institutions in accordance with government affairs which become its authority after obtaining Minister's approval. For this reason, the National Population and Family Planning Agency (BKKBN) has compiled technical competencies for ASN that were approved by the Minister of Administrative Reform and Bureaucracy Reform on October 23, 2019. Based on the dictionary competency, each BKNBN ASN must have generic technical competencies, namely Policy Making and Advocacy Policy for Population Control, Family Planning and Family Development. Meanwhile, based on the Regulation of the Head of the State Administration Agency No. 13 in 2011, it is stated that Technical Training is a Training conducted to provide knowledge and / or mastery of skills in the field of tasks related to the work of civil servants so as to be able to carry out their duties and responsibilities professionally.

To fulfill technical competence in the implementation of PNS tasks, a Technical Training is conducted which aims to: *First*, increasing knowledge, skills, skills, attitudes and behaviors to be able to carry out technical tasks in a professional manner based on the personality and ethics of civil servants in accordance with the technical competence of their positions. *Second*, creating apparatuses capable of acting as reformers and adhesives of national unity and integrity. *Third*, strengthen the attitude, behavior, and spirit of service-oriented, support, and community empowerment. *Fourth*, it creates a common vision and dynamic mindset in carrying out the tasks of general government and development for the realization of good governance. The technical competencies of a generic BKKBN are as follows: (1) Preparation of Population Control, Family Planning and Family Development Policy, namely the ability to identify, collect, process and formulate the concept of population control policies, family planning and family development, discuss and harmonize the concept of policy with other policies, monitor and evaluate, identify feedback on the application of policies public and develop theories, concepts, techniques for the formulation of population control, family planning and family development. (2) Advocacy of Population Control, Family Planning and Family Development Policy, namely the ability to make systematic planned efforts to influence, seek changes in stakeholders through socialization of persuasion, facilitation, guidance, consultation, and assistance, to adopt and implement population control policies, family planning and family development. Generic technical competence is a technical competency that must be possessed by all (every position) positions that responsible for government affair. The competency dictionary is the basis for developing an appropriate training program for technical training for ASN implementing positions in the BKKBN. For this reason, BKKBN needs to develop an appropriate curriculum design in accordance with the needs of the executive post.

B. RESEARCH METHOD

This research uses the Design and Development (D&D) research method according to Richey and Klein (2007) with the category of product and tool research. This D&D research has four phases which are analysis, design, development, and evaluation. The training needs analysis conducted in this research is part of the analysis phase. In collecting the data for training needs analysis, researchers use questionnaires, observation, and documentation as the instruments within the civil servants in BKKBN. However, this research is specifically presenting the result of data collections from the questionnaires as the instrument in conducting needs analysis phase. Respondents for the questionnaires are the staff and *Widyaiswara* elements which taken

using simple random sampling technique. Total respondents from the executive level staff is 71 people and total respondents from the *Widyaiswara* elements is 22 people. Milles & Huberman in Ali (2014: 440-442) stated that data analysis could be pursued in three the main steps: reduction of the data, presentation of the data, and verification of the data. During the step of data reduction, the researcher is examined the findings by selecting the data, focusing data to the problems stated, simplifying the data, and abstracting the data, and transforming the data into findings which reflects the aims, goals, and objectives of the curriculum model. The presentation of the data included the steps to organize the data into a set of precise and concise information, so that the researcher can make a verifiable and replicable conclusion. In the end, the verification of the data covered the process of rechecking to verified the conclusion in order to sustain and suggest a continuation of the next phases of this research.

C. RESULT AND DISCUSSION

There are two main findings gathered from two questionnaires distributed to the respondents consist of staff in executive level and *Widyaiswara* in the BKKBN. The results of these questionnaires indicate the fact that there is a need for technical training on policy making and advocacy. The following results and discussion were found in the needs analysis conducted through two questionnaires as the instruments:

This first questionnaire was asked to the executive level staff in the BKKBN to see their further opinions related to technical training, specifically about policy making and policy advocacy.

Training Objectives

Regarding the training objectives, the response of respondents in the range of 64% -68% stated "Agree" to held technical training in order to support the main tasks and functions as executive level staff, and also to improve skills, skills and attitudes in supporting work.

Training materials

Components of Policy Making Materials

No	Contents/Materials	(%)	Response
Policy Making Materials			
1	Basic Concept of Policy	32%	“Neutral”
2	Steps on Policy Making	38%	“Neutral”
3	Steps on Policy Implementation	33%	“Neutral”

4	Policy Monitoring	36%	“Neutral”
5	Policy Evaluation	31%	“Neutral”
6	Providing Information to Society	34%	“Neutral”
7	Providing Information to Stakeholders	30%	“Neutral”

The table above shows that more respondents chose "Neutral" or were not so sure about their understanding of the material related to the KKBPK policy making indicators with the materials consisting of: basic concepts, formulation steps, implementation steps, monitoring and evaluation policies, and providing to the society and stakeholders. Respondents who stated "Agree" related to their understanding of these indicators were only in the range of 19% -30%. While respondents who stated "Disagree" related to their understanding of the indicators above were in the range of 7% -14%.

Components of Policy Advocacy Materials

No	Contents/Materials	(%)	Response
Policy Advocacy Materials			
1	Basic Concept of Advocacy	35%	“Neutral”
2	Objectives of Advocacy	25%	“Neutral”
3	Foundations of Advocacy	39%	“Neutral”
4	Steps on Advocacy Making	34%	“Neutral”
5	Steps on Advocacy Implementation	34%	“Neutral”
6	Techniques on Advocacy	38%	“Neutral”
7	Identification on Advocacy Needs	39%	“Neutral”
8	Monitoring on Advocacy	38%	“Neutral”
9	Evaluation on Advocacy	38%	“Neutral”

Based on the table above, it appears that more respondents chose "Neutral" or were not so sure of their understanding of the KKBPK policy advocacy indicators which consisting of: basic concepts, objectives, foundations, formulation steps, implementation steps, advocacy techniques, identification of needs, advocacy monitoring and evaluation. Respondents who stated "Agree" related to their understanding of these indicators were only in the range of 19% -36%. While respondents who stated "Disagree" related to their understanding of the indicators above were in the range of 8% -15%.

Learning strategies

Regarding to the learning strategies used in technical training, respondents who "Agree" with classical learning strategies are 48% and 47% of respondents "Agree" on non-classical learning strategies. While, 55% of respondents choose "Agree" if the technical training is done with Blended Learning as the learning strategies.

Learning methods

In the learning method, 53% of respondents stated that they could easily access and follow online learning with clear instructions. Only 26% of respondents "Agree" if technical training for the executive level uses lecturing and presentation as the learning methods. Whereas, 52% of respondents stated "Agree" for the question and answer and group discussion as the learning methods. As many as 68% of respondents also stated "Agree" if they use more variety of learning methods by adjusting their learning process to technological developments.

Instructional Media

For the learning media used for training, 42% respondents agreed that the media could show the procedures or materials through drawings in more detail and in most appropriate way to understand the training material. Whereas, 45% of respondents agreed that electronic media (audio, visual, audiovisual) were the most suitable for understanding training materials.

Learning Evaluation

As for the evaluation of learning that can be done, 47% of respondents said they were able to get good grades in the evaluation through objective tests. While, 46% of respondents said they were able to get good grades in evaluation through authentic assessments (portfolios and reports). Then, 54% of respondents said they were able to get good grades in evaluation through performance tests.

The second questionnaire was addressed to *Widyaiswara* or training instructors in the BKKBN, to see their further opinions related to the direction of technical training for executive level staff in the BKKBN.

Training Objectives

The questionnaire results related to the training objectives show that the competence of KKBPK policy advocacy and policy making is important to be conducted with the respondents' responses in the range of 77.2% -90.9% stating "agreed". The respondents “Agree” that technical training can improve their knowledge, skills, and attitudes in the range of 86.3%-95.4% in the responses.

Training materials

Components of Policy Making Materials

No	Contents/Materials	(%)	Response
Policy Making Materials			
1	Basic Concepts of Policy Making	90,9%	“Agree”
2	Steps on Policy Making	95,5%	“Agree”
3	Steps on Policy Implementation	100%	“Agree”
4	KIE Policy	90,9%	“Agree”
5	Monitoring on Policy Making	90,9%	“Agree”
6	Evaluation on Policy Making	95,4%	“Agree”
Contents of Policy Making Materials			
7	A set of facts/data/regulations of Laws	100%	“Agree”
8	A set of scientific concepts/theories	77,2%	“Agree”
9	Work procedures and mechanism	90,9%	“Agree”
10	Work cultures/work ethics/values	81,8%	“Agree”
11	Techniques of using tools/organization of work materials	90,9%	“Agree”

The table above shows that for KKBPK policy making materials, respondents generally agreed that the indicators consisted of: basic concepts, formulation steps, implementation steps, KIE policies, monitoring and policy evaluations. The input from respondents related to policy-making materials included: evidence-based advocacy, public policy theory, and the results of the SDKI analysis.

Components of Policy Advocacy Materials

No	Contents/Materials	(%)	Response
Policy Advocacy Materials			

1	Basic Concept of Advocacy	90,9%	"Agree"
2	Objectives of Advocacy	95,5%	"Agree"
3	Foundations of Advocacy	90,9%	"Agree"
4	Steps on Advocacy Making	100%	"Agree"
5	Steps on Advocacy Implementation	100%	"Agree"
6	Techniques on Advocacy	100%	"Agree"
7	Identification on Advocacy Needs	100%	"Agree"
8	Monitoring on Advocacy	86,4%	"Agree"
9	Evaluation on Advocacy	95,4%	"Agree"
Contents of Policy Advocacy Materials			
10	A set of facts/data/regulations of Laws	90,9%	"Agree"
11	A set of scientific concepts/theories	72,7%	"Agree"
12	Work procedures and mechanism	95,5%	"Agree"
13	Work cultures/work ethics/values	90,9%	"Agree"
14	Techniques of using tools/organization of work materials	90,9%	"Agree"

Based on the table above, most respondents "Agree" that material related to policy advocacy consisted of: basic concepts, objectives, foundations, formulation steps, implementation steps, advocacy techniques, needs identification, advocacy monitoring and evaluation. The input from respondents related to policy advocacy materials included: Organizational ethics and communication, advocacy implementation practices, advocacy follow-up, strategic planning, and public organization theory.

Learning strategies

Regarding to the learning strategies, respondents who "Agree" with classical learning strategies are 45.5% and 54.5% of respondents "Agree" that learning strategies could be conducted by non-classical learning strategies (e-learning, distance learning, etc.). While, 86.3% of respondents chose to agree that learning could be done through Blended Learning.

Learning methods

The suitable learning method in technical training for executive level staff according to 50% respondents who stated "Neutral" for lecturing and presentations. While, 81.9% of respondents

said "Agree" for the learning method such as questions and answers session and also group discussions. Meanwhile, 95.4% of respondents stated "Agree" for the learning methods such as case studies and worksheets. Other learning methods that the respondents suggested on learning methods such as direct practice, field practice, coaching, benchmarking, role-play, internships, and problem based learning.

Instructional Media

For instructional media used for technical training, 100% respondents agreed that media could show the procedures of materials through pictures and media also could present the training materials in more detail and more suitable ways. While, 81.8% of respondents agreed that electronic media (audio, visual, audiovisual) were the most suitable for understanding training materials. As for other learning media suggested to be used in this training from the respondents include making pocket book and turning sheets for training participants.

Learning Evaluation

As for the suitable learning evaluation that can be done, according to the 45.5% respondents who stated “Neutral”, through an objective test. While, the evaluation of learning through authentic assessment (portfolio and report), 77.3% respondents stated "Agree". Thus, the most appropriate evaluation of learning according to respondents is through performance tests because 100% of respondents said "Agree". Based on respondent suggestions, other learning evaluations that can be done include assignments, quizzes, follow-up plans (RTL), seminars, and making projects of changes.

D. CONCLUSION

Based on the results of the needs analysis instruments that has been distributed and the discussion above, it can be concluded that technical training is needed by all parties, both executive level staff and *Widyaiswara* in non-ministerial institutions of BKKBN. The technical training curriculum that will be designed based on the questionnaires results at the later stages which includes two indicators of policy making and policy advocacy that aimed to increase technical competences at the executive level staff. This technical training can also support the main tasks and functions of the employee in the executive level staff, as well as improve their knowledge, skills, and attitudes towards their duties and responsibilities. The learning strategy that is expected to be used is blended learning by using various learning methods such as case studies and worksheets with more media uses in learning such as audio, visual, and other

electronic media. Respondents also suggested to use other learning methods such as field practice, role-play, and internships, as well as suggested to create the specific learning media to support the training such as pocket books and turning sheets for participants. Finally, in evaluating learning, respondents support the existence of objective tests, authentic assessments, and performance tests with additional suggestions to use various types of learning evaluations such as making projects of changes, quizzes, and seminars about technical training competencies.

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THE ROLE OF TEACHER COMPETENCY IN IMPROVING LEARNING OUTCOMES

(1 st Author) Tingga Sari Novi Prakaswati , email: tinggasari@upi.edu
(2 nd Author) Sumartini , email: sumartini.susanti@gmail.com
(3 rd Author) Ikaputera Alert email: ikaputerawaspada@upi.edu

ABSTRACT

Entering the 21st century technological advances have entered into various aspects of life, not least in the field of education, education has a very important role in shaping the human personality. In the world of teacher and student education are two inseparable components, a number of challenges and opportunities must be faced by students and teachers in order to survive in the age of knowledge in this information age. The teacher is *the key actor in the learning*. In the teaching and learning process, there is an interaction between the teacher and students that produce an output that is learning outcomes. One of the factors that influence learning outcomes is teachers are required to have competencies, teacher competency consists of four main competencies, namely pedagogical, professional, personal, and social, if teacher competency is low then student learning outcomes are low, and vice versa. With teacher competence, high quality students will be produced, academically, expertness, emotional maturity, moral and spiritual. Thus, future generations will be produced who are ready to live with the challenges of their times.

Keywords: Teacher Competence, Learning Outcomes

A. Preliminary

Entering the 21st century technological advances have entered into various aspects of life, not least in the field of education, education has a very important role in shaping the human personality. There is a process of engineering and human formation into capable resources in accordance with the goals set in education. This is in accordance with the main purpose of education is to educate the nation's life and develop student morale.

One of the main factors that determines the quality of education is the teacher. In the process of teaching and learning, there is an interaction between the teacher and students that produce outputs that are learning outcomes. Student learning outcomes are the level of ability of a student in an effort to carry out their learning activities and study the subject matter in school which is obtained in accordance with the weights to achieve from the test results regarding a number of specific subject matter. Sahat R (2015, p. 15)

The influential factor in determining learning outcomes is the teacher. Teachers and students are two inseparable components in the world of education. The teacher is tasked with educating every student to be more productive. Teachers also have a very important role because they hold education and teaching in schools so that it can be one of the determining factors for student success. If teacher competency is low, student learning achievement is also low, and vice versa. Jejen Musfah (2011, p. 3).

With teacher competence, it will produce students who are qualified, academically, skills (skills), emotional maturity, and moral and spiritual. Thus, future generations will be produced who are ready to live with the challenges of their times. Therefore, we need a teacher who has high qualifications, competence and dedication in carrying out his

professional assignments. According to Sukmadinata (2006, p. 197) "Teachers must know and understand students well, understand the stages of development they have achieved, their abilities, advantages and disadvantages, obstacles encountered and the dominant factors that influence it". In the Republic of Indonesia's National Ministerial Regulation No. 16 of 2007 concerning Academic Competent standards and Teacher Competencies states that "Teachers must master four main competencies, namely pedagogic, professional, personality, social competence and integrated in teacher performance".

Results of study into the starting measure the success of students in the study of material that was delivered by the teacher during the period specified. The purpose of learning is considered achieved when students obtain the results of learning are satisfactory. Results of study can be known after the teacher doing the evaluation results of learning of students.

Student learning outcomes are the output of the learning process that he runs at school. The more high- outcome study were obtained, then in the indication of the more effective the process of learning that takes place. Measuring high and low learning outcomes at this time still use the national final exam result. Exam National is one of the indicators that show a high to low quality of education, because the value of the test nationwide the result that in getting students in the process of learning in school. By thus, is expected to increase the quality of education at all levels can improve the quality of the competence of teachers in Indonesia. As where we know that in order always want to change the quality of the teacher or the source of the power of human but not coupled with the quality of education, things have resulted gap in the world of education.

2. Research methods

Articles is using study literature as a method of research and reference in the making and drafting. Study literature using research studies previously were similar as a source of data for the ingredients of the preparation of the article is. This method dissects and discusses previous research in more depth so that it finds what, why, and how the results of the research are obtained so that it can be used as a reference in making articles.

3. Results and Discussion

The 21st century is a century of knowledge, as well as a century of information and technology. Because knowledge, information and technology dominate this century, so it is also called the era of globalization, because of the sophisticated use of knowledge, information and technology in sharing aspects of life that give rise to global relations.

By because it is already naturally when the century is, teachers is expected to have competence in the use of technology learning , especially the Internet, so that he is able to utilize a wide range of knowledge , technology and information to carry out the task of primary teaching and forming the competence of participants learners.

The use of technology in education and learning that is intended to facilitate and streamline learning activities. By because it is a professional teacher should be able to utilize the technology of information and communication, such as the use of the Internet and more.

One of the successes of teachers in improving their competence can be seen from the results of student learning. Results of study by Nana Sudjana (2011, p.22) " The result of learning is the ability of the ability which owned the student after he receives the experiences". Meanwhile, according to Reigeluth who cited keller in Rusmono (2012, p.7), " the result of learning is all due to what can happen d 's can be used as an Indic ator about the value of using a method under conditions that differ ". Snelbeker in Rusmono (2012, p.8) also said that " the results of learning is change or the ability of the new who obtained student after doing the act of learning ".

Referring to the opinion of the above approaches are used to solve the problem the result of learning students to use the theory of Gagne. According to Gagne (in Schunk, 2012 p.164) learning consists of three important components, namely: 1). External conditions are stimuli from the environment in learning; 2). Internal conditions that describe the internal state and cognitive processes of students; 3). The results of study which illustrates the information verbally, the skill of intellectual, ability of motor , attitude and tactics cognitive .

One of the factors that affect the result of learning of students is the competence of teachers. Based on the Law of the Republic of Indonesia on Teachers and Lecturers 14 years in 2005 and Ministry of Education's Decree No. 16 years in 2007 on Standard Qualifications for Academic and Competence of Teachers, stated that the competence of teachers consists of four competencies, namely competency pedagogy, competence professionalism, competence personality, competence social.

Teachers who have good pedagogical competence in managing learning will make the learning process interesting so that it makes it easier for students to master the material taught through various learning methods applied by educators. This will have a positive impact on learning outcomes. Likewise with the professional competence of the teacher mastering the material that must be taught in class along with the method, the material being taught is getting more quality, active and interactive which has a positive impact on good learning outcomes. The teacher must have personality competence because the teacher is a role model for students. When the teacher has a good personality in the teaching and learning process, then the admiration of students towards the teacher will be better and have an impact on the desire of students to learn. In addition, teachers must have good social competence, for example teachers interact with their students so that they can add closeness to the learning process.

4. Conclusion

Competence of teachers as educators professional with the task of primary educating, teaching , guiding , directing , train , assess , and evaluate the participants of their students and one of the successes of competence of teachers be seen from the study results the student 's own . Factors that affect the results of study one of them is a teacher required to have competence, competence of teachers consists of four competencies major, namely pedagogic, professional, personable, and social , if the competence of teachers lower then the result of learning of students was low , so also vice versa . Teachers as educators of children of the nation, in addition to the teacher as well as a transmitter of knowledge or information to the children of their students. Therefore a teacher must be competent in delivering knowledge because the glory of a State relies on science. Delivery process of science it requires a person who is really an expert in his field.

5. Suggestion

The active involvement of students as the main subject in learning is needed to improve teacher competency and learning outcomes. Efforts can be made by mentoring both teachers and parents and the community in order to form superior student character in accordance with educational goals. One of them is by increasing student learning outcomes. The next researcher is expected to be able to increase the diversity of variables that have not been studied in this study.

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DEVELOPMENT EVALUATION INSTRUMENTS OF VOCATIONAL CHEMISTRY ANALYSIS CURRICULUM FOR 4 YEARS EXPERIENCE USING CIPPO MODEL

Asep Nugraha , asepnugraha@upi.edu
Universitas Pendidikan Indonesia

Dr. Rusman, M.Pd, rusman@upi.edu
Universitas Pendidikan Indonesia

ABSTRACT

Vocational education 4-years competency expertise is an implication of the development of future vocational education concepts to develop graduate capacity with 5C Higher Order Thinking Skills (HOTS), namely: 1) Critical Thinking; 2) Creativity and Innovation; 3) Communication; 4) Collaboration; 5) Cellebration as a result of the implementation of the shift in the concept of vocational education from obtaining employment to mastering adaptive abilities in finding, caring for work and updating skills / employability. Research on evaluation of vocational chemistry analysis curriculum for 4-years experience was carried out using the context, input, process and product/Outcomes (CIPPO) evaluation model approach. Context Evaluation through documentation studies and interviews related to policies and curriculum development goals. Input Evaluation through document study and observation of curriculum structure, students as intakes, number and qualifications of teaching staff, learning administration, conditions of learning infrastructure and school management standards. Process Evaluation through observation and questionnaire related to the implementation of the curriculum as the students interaction with learning sources. Product Evaluation through observation and questionnaire on the results of curriculum implementation related to attitude, soft skills, knowledge (cognitive) and motoric skills of students. Outcomes Evaluation through a questionnaire relating to the competitiveness assessment by the relevant Industrial.

Keyword: Curriculum Evaluation, CIPPO, Vocational Education

A. INTRODUCTION

4-year vocational education implementing concept of education from employment (Soeharto, 1988) to mastering adaptive abilities and updating skills / employability (Hollander & Mar in Soenarto et al, 2017). Technically, 4-year vocational education as the development of future vocational education with the concept of Higher Order Thinking Skills (HOTS) 5C, namely: 1) Critical Thinking; 2) Creativity and Innovation; 3) Communication; 4) Collaboration; 5) Cellebration (Widjajanti, C, et al. 2017).

But in reality, some stakeholders have not been able to accept 4-year vocational education policy. Common points of objection include: a) subjective complexity of competencies; b) the concept of future vocational education must be accommodated by Competency Standards which are dominantly influenced by students' attitudes, soft skills, cognitive and motoric skills.

This research will focus on evaluating 4-year vocational education curriculum through policy of curriculum development goals, study of curriculum structure, curriculum implementation as well as outcome of curriculum implementation.

Curriculum Concepts

1) Curriculum as a Plan

The curriculum is a plan to achieve educational goals (Ornstein & Hunkins, 2013). According to Taba (Ansyar, M., 2017) the curriculum as "... a plan for learning". Tanner and Tanner (1975) define the curriculum as a planned and programmed learning experience. According to Marzano et. al (1993) there are five dimensions of the curriculum as a learning plan, namely: (a) positive attitude & perceptions about

learning, (b) acquiring & integrating knowledge, (c) extending & refining knowledge, (d) using knowledge meaningfully, and (e) productive habits of mind. The curriculum as a learning plan includes scope, sequence, learning material and learning strategies (Saylor, Alexander and Lewis in Ansyar, M, 2017).

2) Curriculum as Subjects and Teaching Materials

Curriculum means content to be taught (Ornstein and Hunkins, 2013). Doll (Ansyar, M., 2017) defines the curriculum as teaching content as a source of knowledge in developing skills, attitudes, appreciation and values under teacher responsibility. Dick and Carey (1991) view the curriculum as a process of transferring teaching content. The curriculum as a subject is functional if it has an arrangement of materials based on the level of difficulty, learning strategies and methods as well as the media as a supporting factor in facilitating students to master competencies (Print, 1993).

3) Curriculum as a Learning Experience

The curriculum is a planned learning experience (Foshay, 1969). Saylor and Alexander (1974) define the curriculum as an effort to achieve goals through learning. Mark and Jamisson (Ansyar, M., 2017) defines the curriculum as a set of learning experiences in learning. Doll (1970) noted the curriculum concepts, from curriculum content to planned learning experiences. The curriculum as a learning plan will be dysfunctional if there is no active involvement of students to be constructed into learning experiences (Zais, 1976).

4) Curriculum as Learning Outcomes

The curriculum is designed to achieve student learning outcomes (Johnson, 1968; Wiles, 2009). According to Zais (1976) Curriculum as a learning result shows a shift in curriculum as a tool (curriculum plans) to an objective (learning outcomes).

Curriculum Evaluation

Evaluation, Measurement and Tests

Nunally; Mehrens and Lehmann; Thordike and Hagen (Hasbullah, 2017) place evaluations, measurements and tests as inseparable. Tests are in the main position in measurement (Hamid Hasan, S., 2014). Whereas measurement is one part of evaluation. The existence of a qualitative evaluation causes the measurement does not occupy a central position in the evaluation.Test is narrower than measurement and scope of measurement is narrower than evaluation (Ahman and Glock; Mehrens and Lehmann; McCormick and James, in Hamid Hasan, S.,2014)

Conceptual Evaluation of Curriculum

According to Ornstein and Hunkins (1998) curriculum evaluation aims to identify the curriculum before and after implementation. Evaluation results are used as a strategy for continuous improvement (Hasbullah, 2017). According to Scriven (Hasan, S.H, 2014) the evaluation function consists of formative and summative. The formative function provides information and curriculum improvement considerations. While the summative function gives consideration to the results of curriculum development.

Scope of Curriculum Evaluation

The scope of curriculum evaluation related to curriculum development (Hamid Hasan, S., 2014) includes: 1) Development of curriculum ideas at the national level; 2) development of education unit curriculum documents; 3) curriculum implementation.

Context, Input, Process, Product / Outcomes (CIPPO) Evaluation Model

CIPP (Stufflebeam) Evaluation Model

According to Stufflebeam (T. Kellaghan, D.L., 2003) CIPP evaluation models have four components, namely context, input, process, and product. The CIPP model relies on the definition of evaluation as a process of describing, obtaining and providing for the determination of several alternative decisions (Oliva, 2013)

Context Evaluation: Sax (1980) explains that Context evaluation is the delineation and specification of the project's environment, its unmet needs, population and sample of individuals to be served, and project objectives. Context evaluation provides a rationale for justifying a particular type of intervention program. Stufflebeam & Shinkfield (1985) explains

> "To assess the object‟s overall status, to identify its deficiencies, to identify the strengths at hand that could be used to remedy the deficiencies, to diagnose problems whose solution would improve the object‟s well-being, and, in general, to characterize the program‟s environment. A context evaluation also is aimed at examining whether existing goals and priorities are attuned to the needs of whoever is supposed to be served".

Input Evaluation: According to Stufflebeam & Shinkfield (1985) the orientation of input evaluation is determining how the objectives are achieved. The input evaluation component includes: (a) human resources (b) supporting facilities, (c) funds/budget, and (d) various procedures and rules needed.

Process Evaluation: According to Stufflebeam & Shinkfield (1985), the essence of process evaluation is checking program implementation. Worthen & Sanders (1981), explains that process evaluation emphasizes three objectives: (1) predicting the procedural design; (2) to provide information for programmed decisions; (3) to maintain a record of the procedure as it occurs.

Product Evaluation: Stufflebeam & Shinkfield (1985) explains the purpose of product evaluation is to measure, interpret, and determine the achievement of the results of a program. According to Sax (1980), function of product evaluation is "... to make decisions regarding continuation, termination, or modification of programs".

CIPPO Evaluation Model as CIPP Innovation

The CIPPO model is CIPP evaluation model from Stufflebeam which was refined by Gilbert Sax by adding components of outcomes (Susilawati et. al, 2016; Isjuandi and Sutisna, A., 2017; Rani Sintiawati, R et al, 2018; Fattah, A., 2015). According to Suharsimi, A., and Jabar S.A. (2007) CIPP model stops at measuring products, while CIPPO arrives at the implementation of output. Jaedun (2010) explained that evaluating a program requires an evaluation of the outcome, namely how the success of graduates in their workplaces. According to Supradewi (2014) and Isjuandi (2017) to find out the results of a comprehensive evaluation, a CIPPO evaluation model is needed so that the outcomes evaluation can be used as advocacy material for policy makers. Government Regulation Number 39 of 2006 concerning Procedures for Controlling and Evaluating the Implementation of Development Plans explains that "... the main focus of evaluation is directed to outputs, outcomes and impacts ...".

According to McNeil (2011):

> "The outcomes evaluation activity in the CIPP model needs to be done by focusing on the evaluation of the program process and its impact on stakeholders, such as students, graduates, work environment and industry, society and government because the core evaluation is held to assess the quality of a program with 2 (two) main functions : 1) for the efficiency of processes that focus on program content and implementation in order to identify strategies for improving program quality; 2) to evaluate the

impacts (outcomes) by focusing on program results and impacts to identify service improvement strategies and program administration ".

According to Amir, M F (2014) the importance of outcomes evaluation for:

"Assessing the results of program achievements with technical guidelines both short-term, medium-term and long-term that contribute to: 1) the development of a sustainable learning community that can have a positive impact on program improvement; 2) improving the quality of learning services and education management; 3) improving the quality of education in the regions which in the aggregate increases the quality of national education ".

Vocational Education Curriculum

Vocational Education

Vocational prepares a person to have an ability to work in one field of work (Rupert Evans quoted by Wardiman, 1998). Hamalik (1990) argues that vocational is a form of developing talent, skills and habituation of work. Djohar (2007) argues that vocational prepares students to become professional workforce. Philosophically, there are 3 objectives of vocational education, namely: 1) essentialism, which is to meet the needs of the workforce; 2) pragmatic, namely to meet the needs of individuals and life and 3) pragmatic reconstruction, namely to change work to be more democratic, more proactive and inequality in work issues (Rojewski, 2009). According to Finch and Cruncilton (1984), the characteristics of vocational are developing interests, talents and potential of students through learning that is carried out with dignity and adequate facilities as well as creative, innovative, and experimental.

New Concept of Vocational Education

Shifting concept of vocational from employment to employability skills means that vocational must improve the ability of graduates to have individual skills in searching, finding, caring for jobs and always updating skills. Employability skills is a person's ability that involves mental and physical activities in developing themselves in work processes including work readiness, work habits, interpersonal skills, learning skills, thinking skills and adaptation power (Widjajanti, C, et al., 2017).

Competencies that support employability skills include: 1) Critical thinking and problem solving; 2) creativity and innovation; 3) collaboration, teamwork and leadership; 4) cross-cultural understanding; 5) communications, information and media literacy; 6) computing and ICT literacy; 7) career and self-reliance learning

4 Years Vocational Education

- **4-year Vocational Education Competency Degrees with a minimum qualification of 3 KKNI**
  Competency qualification 4-year vocational education program is a level 3 KKNI qualification equivalent to Diploma 1 with a qualification of an operator position 3. Description of level 3 include:
  - Able to carry out a specific set of tasks by translating information and using tools, based on a number of choices of work procedures, and able to demonstrate performance with measurable quality and quantity, some of which is the result of his own work with indirect supervision;
  - Having complete operational knowledge, general principles and concepts related to the facts of the field of expertise so as to be able to solve a variety of common problems with appropriate methods.
  - Able to work together and communicate within the scope of work

- Responsible for one's own work and can be given responsibility for the quantity and quality of the work of others

➢ **Graduates Competency Standards**

Competency standards of 4-year vocational graduates have the following competencies in the attitudes, knowledge and skills dimensions:

- **Competency Standards for 4-year Vocational Graduates Attitude Dimensions**
  - ✓Have faith and fear God Almighty
  - ✓Honest, disciplined, empathetic and true learner for life
  - ✓Proud and love the motherland, proud of his profession and national culture
  - ✓Maintain physical, spiritual and environmental health
  - ✓Think critically, creatively, work ethically, cooperate, communicate and be responsible for one's own work and can be given responsibility for the quantity and quality of the work of others according to the field and scope of work in the context of oneself, family, school, community, nation local, national, regional and international, state and industry scope

  The work attitude of 4-year vocational graduates in addition to having competency in being responsible for one's own work has also reached the ability to delegate responsibility to work underneath operators (Widjajanti, C, et al. 2017).
- **Competency Standards for Vocational Graduates of 4 Years Knowledge Dimension**

  Factual, conceptual, advanced operational and metacognitive thinking in a multidisciplinary manner according to the field and scope of work at the technical, specific, detailed and complex level with regard to: 1) science; 2) technology; 3) art; 4) culture and 5) humanities, in the context of developing self potential as part of the family, school, world of work, citizens of local, national, regional and international communities. In the realm of factual and conceptual knowledge, the ability of 4-year vocational education graduates has reached advanced operational levels with multidisciplinary metacognitive skills so that they are demanded not only to understand their own field of work but to understand the field of work of others (Widjajanti, C, et al. 2017).
- **Competency Standards for Vocational 4 Year Skills Graduates**

  Acting productively, independently, collaboratively and communicatively in:
  - ✓Carry out tasks using tools, information and work procedures that are commonly done and solve complex problems according to the field of work.
  - ✓Displays independent performance with indirect supervision from the employer based on the measured quantity and quality in accordance with work competency standards and is responsible for the work of others.

  Managerial and leadership skills are the distinguishing features of 4-year and 3-year vocational graduates (Widjajanti, C, et al. 2017).

B. RESEARCH METHODS

Purpose of this research is to produce an instrument of vocational curriculum evaluation by using research and development (R & D) method. The method consisting of 10 simplified steps into four steps: (1) initial investigation, (2) design stage, (3) expert validation and; (4) trials, evaluations, and revisions (Borg & Gal, 1983). The procedure of CIPP model evaluation instrument development on the implementation of portfolio assessment includes steps as follows: 1) conducting the preliminary study, 2) determining the specifications instrument, 3) developing an evaluation instrument, 4) determining the scale of instruments, 5) determining the system of scoring, 6) reviewing of evaluation instruments, 7) assembling an evaluation instrument, 8)

trying out, 9) analysing the test results, 10) fixing the instrument, 11) carrying out measurements, 12) interpreting measurement results.

C. RESULT AND DISCUSSION

Research Approaches, Methods and Design

Macroscopically, evaluation of 4-year vocational curriculum is carried out with the principle of research evaluation as a process of description and analysis of data about the quality, effectiveness, values and results of curriculum implementation products (L. R. Gay et al, 2012).

Approach in Research

The research approach includes: 1) research assumptions as a framework of thought and philosophical research; 2) research design; and 3) data collection, analysis, and interpretation as a research method (Creswell, John W., 2014). According to Saylor & Alexander (Ansyar, M., 2015) there are 3 research approaches, namely: 1) qualitative research; 2) quantitative research and; 3) qualitative-quantitative research (mixed methods). Qualitative research is an approach to explore, understand and interpret meaning by inductive data analysis. While quantitative research is an approach to test the theory in an objective deductive way by analyzing the relationships between variables through measurable statistical values. The qualitative-quantitative research (mixed methods) is an approach that involves collecting quantitative and qualitative data by integrating two forms of data in the form of philosophical assumptions and theoretical frameworks. According to Cronbach (Ansyar, M., 2015) proposed two main approaches in evaluation, namely: 1) the scientistic ideals approach, which prioritizes experiments to obtain quantitative data that are analyzed statistically; and 2) the humanistic ideals approach that prioritizes qualitative data.

In evaluating 4-year vocational curriculum, the research approach used is qualitative-quantitative research (mixed methods) by involving the collaboration of the scientistic ideals approach and the humanistic ideals approach. This is based on the thought that: 1) this evaluation involves the results of curriculum implementation which in domain is in contact with the assessment of students so that it requires statistical data analysis in accordance with the scientistic ideals approach; 2) this research is seen in terms of curriculum development that operates in naturalistic education settings to obtain benefits in the form of a description which is reduced to qualitative data in accordance with the humanistic ideals approach. Whereas the criteria for determining a qualitative-quantitative research approach (mixed methods) based on research problems and research questions from a 4-year vocational curriculum evaluation that requires: (a) identification of factors that influence outcomes; (b) the utility of the intervention; and (c) predictive analysis of results, obtained through a quantitative approach. On the other hand, evaluation of 4-year vocational curriculum raises the phenomenon of dualism of expertise which needs to be explored using a qualitative approach (Creswell, John W., 2014)

The research method is a logical and scientific step carried out systematically and objectively in discovering the truth empirically (Ali, M, 2014). Evaluation of 4-year vocational education curriculum using a qualitative-quantitative research approach (mixed methods) with the application of exploratory methods in data collection. The exploratory method stage starts from the interactive phase of qualitative description which is expected to provide an overview of the policy and implementation of the 4-year vocational education curriculum through data and information collected in research instruments, such as: 1) documentation studies; 2) interview (interview); 3) observation; and 4) questionnaire (questionnaire). The qualitative description results are then supplemented with findings based on quantitative analysis in the form of systematic and structured statistical data that results in objective validity values.

Research Designs and Models

4-year vocational curriculum evaluation is carried out using the context, input, process and product/Outcomes (CIPPO) model evaluation approach. The evaluation flow is as follows: 1) determination of the scope of the evaluation; 2) determining the type of data needed in decision making; 3) collection of relevant data; 4) determination of evaluation quality criteria; 5) data analysis based on criteria; and 6) information exposure on decision making results (Saylor & Alexander in Ansyar, M., 2015). The CIPPO evaluation model is considered a comprehensive curriculum evaluation model because it does not only focus on product evaluation (summative), but also on formative evaluation which includes evaluating context, input and process (Ornstein & Hunkins; Miller & Seller in Ansyar, M., 2015).

Completeness of information and data accuracy is carried out through 4 stages, namely: 1) description stage where the stage of determining respondents as subjects and sources of data is carried out; 2) data and information collection methods; 3) compile and make instruments as data collection tools: and 4) analyze and describe data. The components of the 4-year vocational education curriculum evaluation include:

a. Context evaluation through documentation studies and interviews relating to policies and objectives of developing a 4-year vocational education curriculum.
b. Input evaluation through document study and observation of 4-year vocational education curriculum structure in achieving KKNI levels / levels. Supporting input evaluation is observed by students as intake, number and qualifications of teaching staff, learning administration, conditions of learning infrastructure and school management standards.
c. Process evaluation through observation and questionnaire related to curriculum implementation as the interaction of students with learning material in learning activities carried out both in theory and practice. Supporting the process evaluation is observing the Prakerin / PKL / Internship activities in the Industry.
d. Product evaluation through observation and questionnaire (questionnaire) on the results of curriculum implementation related to attitude, soft skills, cognitive and motor skills of students.
e. Evaluation of outcomes through questionnaires (questionnaire) related to the absorption, competitiveness and assessment of graduates by the relevant Industrial World.

Evaluation Criteria

Approach to the evaluation criteria of 4-year vocational education curriculum is the development of Pre-Ordinate, Fidelity and Process (Based-Field) criteria according to the following description:

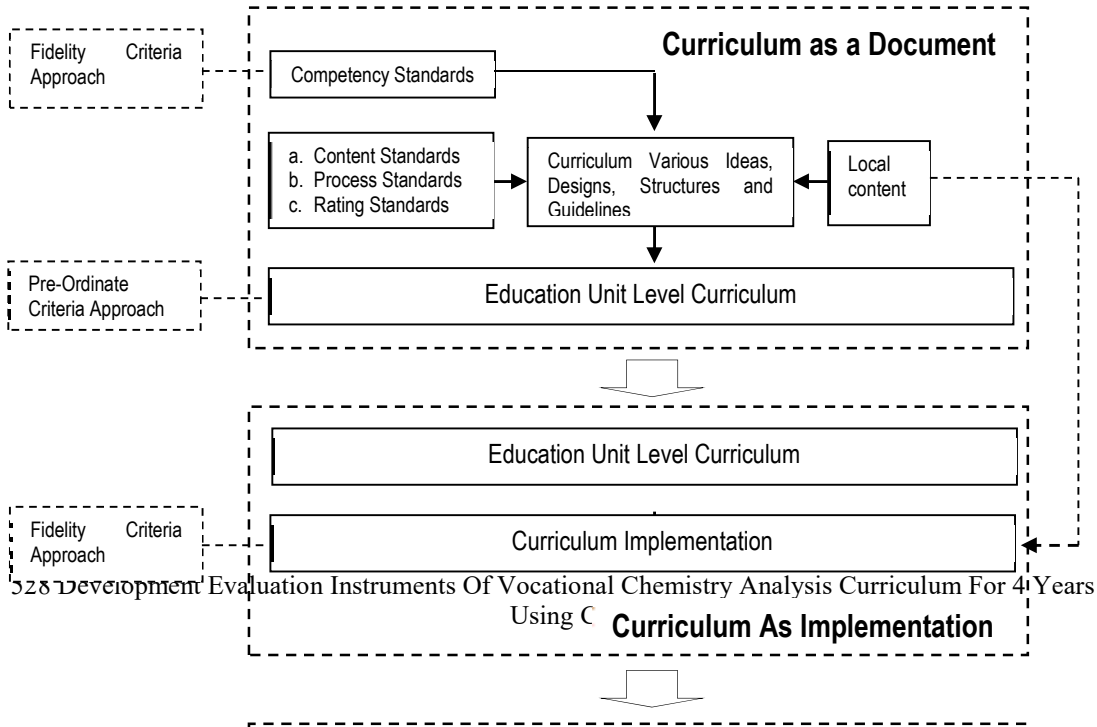

Figure 1. Curriculum Evaluation Criteria

Sampling Technique

According to Sugiyono (2014), research results are influenced by 2 things, namely: the quality of research instruments and the quality of data collection. The quality of the instrument is related to the validity and reliability of the instrument, while the quality of data collection is related to the accuracy of how to collect data (Ali, M., 2014)

Purposive Sampling Technique

Evaluation of 4-year vocational education curriculum uses purposive sampling technique to capture data and information (Sugiyono, 2014). The method used is Key Informants, where information is collected from certain individual conditions and samples (Tayibnapis, F, Y, 2019).

Measurement of Number of Samples

Sampling can be divided into 2 (two) ways, which are non-tiered and tiered. Non-tiered sampling is done only once purposively or randomly (Ali, M., 2014). In determining the sample size a formula can be used:

$$n = \{(z/e)^2 [p (1 – p)]\}$$

n = the number of subjects in the sample to be used
z = price of z from the table according to the level of significance
e = possibility of error in sampling from the population
p = chance of emergence of different sample characteristics

Research Instruments

Research instruments are instruments used to collect research data, divided into non-measurement instruments and measurement instruments (Ali, M., 2014). In evaluations, instruments are prepared to capture the information needed by researchers as evaluators to be used for consideration of decision making (Mulyadi, Y., 2017). The instrument for evaluating 4-year vocational education curriculum uses non-

measurement instruments, including: 1) documentation study sheet; 2) questionnaire (questionnaire); 3) structured interview guidelines; and 4) observation sheet (investment checklist).

Documentation Study

Documentation study is a data collection technique by studying documents to obtain information related to the problem under study. In evaluating the 4-year vocational education curriculum, document studies were conducted on: 1) Primary documents in the form of: a) Vision, Mission and Objectives of Vocational School 4 years; b) curriculum structure / spectrum; c) educational unit level curriculum (KTSP) and; d) KKNI; 2) Secondary documents in the form of SKKNI and school management documents. Data sources from this instrument are the Director General of Community Participation, the principal, deputy headmaster.

Interview

Interview techniques in evaluating 4-year vocational education curriculum are structured in-depth interviews (Bogdan & Biklen, 1982; Kartwol, 1997 in Ali, M., 2014) regarding the policies and objectives of developing a 4-year vocational education curriculum. The data source of this instrument is the Director General of PSMK / Department of Education.

Questionnaire

Questionnaires are information gathering techniques that analyze attitudes, beliefs, behavior, and characteristics (Ali, M., 2014). In evaluating the 4-year vocational education curriculum, the type of questionnaire used was open-ended questionaires, where the merging of structured questionnaires (closed answers) was then given an open answer. The questionnaire was used in gathering data on the perception of 4-year vocational education curriculum for respondents as follows:

1) Questionnaire relating to the interests, interests, learning experiences and interactions of students towards learning material as curriculum implementation is carried out both in theory and practice. Data sources from this instrument are students
2) Questionnaire related to interests, interests, learning experiences in Industrial Internship activities as a support for curriculum implementation. Data sources from this instrument are students who have already carried out Industrial Internship activities.
3) Questionnaire on attitude, soft skill, cognitive and motor skills assessment of students as a result of curriculum implementation. Data sources from this instrument are teachers, homeroom teachers, parents of students and graduates working in relevant industries.
4) Questionnaire related to the assessment of graduates' absorption and competitiveness. The data source of this instrument is the relevant industry.

Observation (Observation Checklist)

Observation is a systematic observation and recording of symptoms that appear in research subjects (Ali, M., 2014). Observation of the evaluation of 4-year vocational education curriculum is done directly with the principle of non-participatory, where the evaluator does not participate in the observed activities (Sugiyono, 2014). The observation instruments used include:

1) Observation of students, teachers, learning administration, conditions of facilities and infrastructure and school management standards. Data sources from this instrument were the PPDB selection committee, deputy head of student affairs, deputy head of curriculum field, deputy head of facilities, and head of administration.
2) Observation related to the implementation of the curriculum as the interaction of students with learning material in learning activities carried out both in theory and practice. Data sources from this instrument are teachers and students.

3) Observations relating to the assessment of student competency achievement measured as: 1) Academic grades in the form of national-based school exam scores, National Exam scores for productive subjects and Competency test scores; 2) actualization of academic achievement; and 3) actualization of non-academic achievements that demonstrate soft skills and hard skills of students. The data sources of this instrument are the deputy head of the curriculum, the head of expertise competency and the non-academic achievement mentor teacher.

Instrument Validation and Reliability

Instrument Validation

The validity of the instrument means that there is a match between each question item in the instrument guide with the data that should be collected in the research (Sugiyono, 2014; Ali, M., 2014). Instrument validation is divided into 2 (two) parts, namely: content validity and construct (Ali, M, 2014). Content validation means the suitability of the contents of the question with the purpose of the survey (L. R. Gay et al, 2012). Content validation is tested by assessment by experts who have expertise in related fields (Ali, M, 2014). The construct validation means the suitability of the questions raised by the concept or theory that is used as a reference (Creswell, John W., 2014). Construction validation is tested through assessment and / or through empirical testing (Ali, M, 2014). Meanwhile according to Naga, D S (2013), content validation and instrument construction were carried out to see the appropriateness of measurements with the assessment indicators. The validation process of the research instrument is divided into 2 (two) parts, namely: 1) the validity of the manufacture, with regard to the suitability of the measuring instrument made with the measurement objectives; and 2) validity of use, with respect to the suitability of the measuring instrument chosen with the measurement target (L. R. Gay et al, 2012).

The instrument validity data analysis uses the Alken's V index validity method, where if the V value is higher it can be concluded that the research instrument is in accordance with the measurement objectives (Creswell, John W., 2014). The equation of the Alken's V validity index is formulated as follows:

$$V = \sum \frac{s}{[n\,(c-1)]}$$

Where

S = r - lo

lo = lowest validity rating number (in this case = 1)

C = highest validity rating (in this case = 5)

R = number given by expert assessors

Furthermore, the validated instrument concludes whether the instrument can be used, revised or must be removed.

Instrument Reliability

Instrument reliability shows the consistency of the data generated (Ali, M., 2014). The question items have a low degree of reliability, if questions are repeatedly asked to the same respondent, different answers are obtained (Sugiyono, 2014). Reliability testing was carried out through 3-5 expert panel judgments (Ali, M., 2014).

V. CONCLUSIONS

Research on vocational education curriculum evaluation of the 4-year analytical chemistry expertise competency was carried out using the context, input, process and product / Outcomes (CIPPO) evaluation model approach. Context Evaluation through documentation studies and interviews relating to policies and

curriculum development goals. Input Evaluation through document study and observation of curriculum structure, students as intakes, number and qualifications of teaching staff, learning administration, conditions of learning infrastructure and school management standards. Process Evaluation through observation and questionnaire (questionnaire) related to the implementation of the curriculum as the interaction of students with learning material. Product Evaluation through observation and questionnaire on the results of curriculum implementation related to attitude, soft skills, cognitive and motor skills of students. Outcomes Evaluation through a questionnaire relating to the absorption, competitiveness and assessment by the relevant.

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DIGITAL COMPETENCY FOR TEACHER IN 21ST ERA

Sarip Hidayat[1, a)] and Dinn Wahyudin[2, b)]
[a)]Corresponding author: sariphidayat@upi.edu
[b)] dinn_wahyudin@upi.edu

Abstract. The developments of digital technology that occurred in the 21st Century gave birth to new challenges for teachers or educators and they were required to improve their competence. teachers must have digital competence in order to develop 21st century students according to their future needs. This paper will explore the digital competencies that teachers must possess by collecting and analyzing articles and other sources related to digital competencies. The design used was literature review, articles were collected using the Google search engine and on the journal provider's website. The purpose of this paper is to analyze and describe how digital competencies teachers must possess. The results of his research aim to contribute in increasing insight or knowledge about digital competencies for teachers.

Keywords: Digital Competence, Teacher Competencies, 21st Century Competencies,

A. INTRODUCTION

Digital technology is currently developing rapidly in line with the development of Information and Communication Technology (ICT) that continues and is increasingly sophisticated. Digital technology has entered various aspects of life such as economics, transportation, health, education, and other aspects. The existence of digital technology has provided convenience and efficiency in every aspect mentioned. These phenomena have consequences changing the way we live, such as how to communicate, how to fill time, how to work, and how to learn.

Lately, digital competence has become the target of stakeholders' policies. Special Staff in the Field of Foreign Cooperation and Public Communication Ministry of Education and Culture (Kemendikbud) Suparto said currently teacher resources in Indonesia still have a low level of technological knowledge. In the digital context, the teacher in Indonesia is still behind the student (gatra.com, 2019). Firman Adam, Secretary of the Department of Education (Sekdisdik) of West Java, said "Digital competence must be mastered because today's learning must be collaborated with the use of technology to face the industrial revolution 4.0. The educational design is prepared by all of us, by educators," (sekolahkampus.id, 2019). National and European policies have long recognized the need to equip all citizens with the competencies needed to use digital technology critically and creatively (Redecker, 2017). Digital competency is one of the eight main competencies that must be possessed (European Commission, 2006).

In recent years, digital competence has become a key concept in various discussions related to the skills needed by students in the current era. However, digital competence has been interpreted with various meanings. For example Digital Literacy, Digital Competence, e-Literacy, e-Skills, e-Competence, Computer Literacy, and Media Literacy. Both in policy documents, academic literature, and in teaching, learning and certification practices. All these terms highlight the need to handle technology in the digital age (Gallardo-Echenique, Oliveira, Marqués-Molias, and Esteve-Mon, 2015; Ferrari, 2012; Gallardo-Echenique, 2012).

According to a survey conducted by the European Commission in 2014 on inclusion and digital skills in the European Union, as many as 47% of the EU population did not have digital competence, even 23% did not have digital competence at all. Whereas 72% of the EU population uses the internet every week and the vast majority of the EU population (62%) uses the internet every day (European Commission, 2014). This illustrates that digital competence is not only limited to knowing how to access and use ICT. Although everyday side by side with digital technology, it does not mean having sufficient digital competence. Someone can be said to be digitally competent when they have the right knowledge, skills and attitudes in using ICT. Digital literacy is interrelated with media and information literacy, and is at the core of 21st century skills (Ferrari, Punie, and Redecker, 2012).

Based on this background, we believe that digital competency is one that teachers must have in responding to the challenges of learning in the 21st Century. However, what digital competencies are appropriate for educators or teachers? The answers to these questions are the focus of the discussion in this paper.

B. RESEARCH METHOD

The method used to answer this research question is literature review. Reviews are conducted on sources obtained through the search terms "digital competence", "digital competence for educators", and "digital competence for teachers". We search sources in the google database, google scholar, and taylor & francis online. Sources taken are sources that can be considered to have a level of value, or "strength" for the literature review, as stated by Denney & Tewksbury (2012). These sources are academic journal articles and academic books (not textbooks).

C. RESULT AND DISCUSSION

3.1. Digital Competence: Concepts and Theories

In recent years, digital competence has become a key concept in the discussion of the types of skills and understanding that society needs in the 21st century. The term originally had the same goal of digital competence, according to Bawden (2001) is computer literacy. Computer literacy refers to basic computer skills and the ability to perform certain functions (McGarr & McDonagh, 2019). Digital competence is often also associated with digital literacy. Janssen et al (2013) explain that digital literacy is more often used in policies and initiatives related to e-inclusion. Whereas competency is more widely used in the educational context.

The term that refers to digital competence is not just computer literacy and digital literacy. But according to Gallardo-Echenique, et al (2015), there are many other terms related to digital competence and have been widely discussed. The following are the terms:

Tabel 1. Terms referring to digital competence

Term	Reference	Year	Design	Type
Media literacy	Aufderheide & Firestone	1993	Theoretical	Report
	Bawden	2001	Theoretical	Journal
	Henry J. Kaiser Family Foundation	2003	Theoretical	Report
	New Media Consortium	2005	Theoretical	Report
	Pérez-Tornero & Varis	2010	Theoretical	Book
	Wilson, Grizzle, Tuazon, Akyempong & Cheung	2011	Theoretical	Report
	Aufderheide & Firestone	1993	Theoretical	Report

Term	Reference	Year	Design	Type
New literacies	Buckingham	1993	Theoretical	Journal
	Leu	2000	Theoretical	Journal
	Lankshear & Knobel	2003	Theoretical	Book
	Leu et al.	2007	Theoretical	Book Chapter
	Coiro, Knobel, Lankshear & Leu	2008	Empirical	Book
Multimodality	Kress & Van Leeuwen	1996	Theoretical	Book
	Kress, Jewitt, Ogborn & Tsatsarelis	2001	Theoretical	Book
	Kress & Van Leeuwen	2001	Theoretical	Book
	Kress	2003	Theoretical	Book
	Jewitt & Kress	2003	Theoretical	Book
	Jewitt	2008	Theoretical	Journal
	Walsh	2009	Theoretical	Book Chapter
Computer literacy	Hawkins & Paris	1997	Empirical	Journal
	National Research Council	1999	Theoretical	Report
Digital literacy	Gilster	1997	Theoretical	Book
	Bawden	2001	Theoretical	Book Chapter
	Eshet	2002	Empirical	Conference
	Eshet-Alkalai	2004	Theoretical	Journal
	Pérez-Tornero	2004	Theoretical	Report
	Martin	2005	Empirical	Journal
	Jones-Kavalier & Flannigan	2006	Theoretical	Journal
	Martin & Grudziecki	2006	Empirical	Journal
	Buckingham	2007	Theoretical	Journal
	Somerville, Lampert, Dabbour, Harlan & Schader	2007	Theoretical	Journal
	Eshet-Alkalai	2009	Theoretical	Book Chapter
	Nawaz & Kundi	2010	Theoretical	Journal
	Area, Gutiérrez & Vidal	2012	Theoretical	Journal
	Meyers, Erickson & Small	2013	Theoretical	Journal
Media education	UNESCO	1999	Theoretical	Report
	Pérez-Tornero	2004	Theoretical	Report
	Hague & Williamson	2009	Theoretical	Report
Information literacy	Bawden	2001	Theoretical	Journal
	Association of College and Research Libraries	2000	Theoretical	Brochure
	Jackman & Jones	2002	Theoretical	Report
	Buschman	2010	Theoretical	Journal
	Wilson et al.	2011	Theoretical	Report
Multiliteracies	Cope & Kalantzis	2000	Theoretical	Book
	Unsworth	2001	Theoretical	Book
	Jewitt	2008	Theoretical	Journal
	Hepple, Sockhill, Tan & Alford	2014	Empirical	Journal
	Tan & Guo	2014	Empirical	Journal
ICT Literacy	International ICT Literacy Panel	2002	Theoretical	Report
	Somerville et al.	2007	Theoretical	Journal

Digital competence is often used in an uncritical way, there exists considerable debate as to what it does, and does not, entail, as it is a novel and evolving concept that is not well defined (Ilomaki et al, 2016). The concept digital competence can be used differently in different contexts and by different actors. It also seems to depend on what someone wants to highlight, or whether it is conceptualised in a narrow or wider sense (Olofsson, Fransson & Lindberg, 2019).

Based on a literature review of 76 educational research articles on digital competence, Ilomäki et al. (2016) describe digital competence as: (1) technical competence, (2) the ability to use digital technology in a meaningful way to work, study and in everyday life, (3) the ability to critically evaluate digital technology, and (4) motivation to participate and commit in digital culture.

Livingstone (2003, in Ferrari, Redecker, & Punie, 2012) states that digital competence does not depend on the user but depends on the tool or can be said, depending on the application. For example when we read a print newspaper with an online newspaper it is not the same experience and requires different skills. Such skills are referred to as the ability to move to read other pages using hyperlink text. That is, digital competence is a collection of knowledge, skills, attitudes, abilities, awareness strategies needed when using ICTs and digital media to perform tasks; solve the problem; deliver; managing information; behave ethically and responsibly; collaborate; create and share content and knowledge to work, relax, participate, learn, socialize, empower and consumerism (Ferrari et al., 2012).

The extent explanation is defined by Ilomäki, *et al* (2014), which defines digital competence as consisting of the following elements:

1) Technical skills and practice in using digital technology, which is the main basis for digital competence. This first aspect is close to the study of technology.
2) The ability to use and apply digital technology in a meaningful way and as an appropriate tool for work, study and for various activities in daily life in general. This second aspect integrates all four disciplines, but goes beyond them to include various daily activities and tasks. The emphasis is strong on skills and competencies related to knowledge, which integrate information and digital literacy competencies.
3) Ability to understand digital technology phenomena. This aspect also integrates all disciplinary backgrounds. This means an understanding of ethical issues, limitations and challenges, and the critical use of various technologies, but also a very new interest in understanding computational thinking or the principles of robotics..
4) Motivation to participate and be involved in digital culture. This domain, once again, transcends the background of scientific disciplines and has an orientation towards social and cultural attitudes and problems; it is based on ideas from the three previous elements, which then also create motivation to participate, and be involved. It also has a social aspect: digital culture as part of a democratic society, as suggested by Gansmø (2009).

European Commission (2006) defines digital competence as follows:

> "Digital competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of

computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet."

3.2. Digital Competence for Teacher

The teacher is the director in learning activities. The teacher becomes a motivator for meaningful learning, not just a facilitator, but also as a creator in choosing a variety of strategies that will be collaborated and adapted to the context and students. Students currently living in the era of digital society and education have the responsibility to equip them with the competencies needed to use digital technology. So digital competence must be possessed first by the teacher when he wants to create a digital-based learning experience and develop the digital competence of his students. As recommended by Blayone, Mykhailenko, Oostveen, Grebeshkov, Hrebeshkova & Vostryakov (2017) when they want to create fully online learning, they must first develop the digital competence of teachers and students.

Competence means that teachers act professionally and appropriately in a situation (Koster & Dengerink, 2008) and ensures teachers' undertaking of tasks effectively (achieving the desired outcome) and efficiently (optimising resources and efforts). (Caena & Redecker, 2019). Sehingga perlu ada pemetaan kerangka kompetensi digital seperti apa yang harus dimiliki oleh guru. Jawaban permasalahan tersebut telah dijawab oleh European Commission's Joint Research Centre. The European Commission's Joint Research Centre telah mempublikasikan published the European Framework for the Digital Competence of Educators (DigCompEdu) with a focus on the digital competences that are specific to the teaching profession (Redecker, 2017).

The European Framework for the Digital Competence of Educators (DigCompEdu) consists of 22 digital competencies for educators divided into six areas. The six DigCompEdu areas are in between:

Area 1: Professional Engagement
Use digital technology for communication, collaboration, and professional development.

Area 2: Digital Resources
Source, create and share digital resources.

Area 3: Teaching and Learning
Manage and regulate the use of digital technology in teaching and learning.

Area 4: Assessment
Menggunakan teknologi dan strategi digital untuk meningkatkan penilaian.

Area 5: Memberdayakan Peserta Didik (*Empowering Learners*)
Use digital technology to increase inclusion, personalization, and active involvement of students.

Area 6: *Facilitating Learners' Digital Competence*
Enabling students to creatively and responsibly use digital technology for information, communication, content creation, welfare and problem solving.

The 22 competencies can be seen in the following table:

Tabel 2 The European Framework for the Digital Competence of Educators (DigCompEdu)

No	Kompetensi	Deskripsi
1	Professional Engagement	
1.1	Organisational communication	To use digital technologies to enhance organisational communication with learners, parents and third parties. To contribute to collaboratively developing and improving organisational communication strategies..
1.2	Professional collaboration	To use digital technologies to engage in collaboration with other educators, sharing and exchanging knowledge and experience, and collaboratively innovating pedagogic practices.
1.3	Reflective practice	To individually and collectively reflect on, critically assess and actively develop one's own digital pedagogical practice and that of one's educational community.
1.4	Digital Continuous Professional Development	To use digital sources and resources for continuous professional development.
2	Digital Resources	
2.1	Selecting digital resources	To identify, assess and select digital resources for teaching and learning. To consider the specific learning objective, context, pedagogical approach, and learner group, when selecting digital resources and planning their use.
2.2	Creating and modifying digital content	To modify and build on existing openly-licensed resources and other resources where this is permitted. To create or co-create new digital educational resources. To consider the specific learning objective, context, pedagogical approach, and learner group, when designing digital resources and planning their use.
2.3	Managing, protecting and sharing digital resources	To organise digital content and make it available to learners, parents and other educators. To effectively protect sensitive digital content. To respect and correctly apply privacy and copyright rules. To understand the use and creation of open licenses and open educational resources, including their proper attribution.
3	Teaching and Learning	
3.1	Teaching	To plan for and implement digital devices and resources in the teaching process, so as to enhance the effectiveness of teaching interventions. To appropriately manage and orchestrate digital teaching interventions. To experiment with and develop new formats and pedagogical methods for instruction.
3.2	Guidance	To use digital technologies and services to enhance the interaction with learners, individually and collectively, within and outside the learning session. To use digital technologies to offer timely and targeted guidance and assistance. To experiment with and develop new forms and formats for offering guidance and support.
3.3	Collaborative learning	To use digital technologies to foster and enhance learner collaboration. To enable learners to use digital technologies as part of collaborative assignments, as a means of enhancing communication, collaboration and collaborative knowledge creation.
3.4	Self-regulated learning	To use digital technologies to support learners' self-regulated learning, i.e. to enable learners to plan, monitor and reflect on

No	Kompetensi	Deskripsi
		their own learning, provide evidence of progress, share insights and come up with creative solutions
4	Assessment	
4.1	Assessment strategies	To use digital technologies for formative and summative assessment. To enhance the diversity and suitability of assessment formats and approaches.
4.2	Analysing evidence	To generate, select, critically analyse and interpret digital evidence on learner activity, performance and progress, in order to inform teaching and learning.
4.3	Feedback and Planning	To use digital technologies to provide targeted and timely feedback to learners. To adapt teaching strategies and to provide targeted support, based on the evidence generated by the digital technologies used. To enable learners and parents to understand the evidence provided by digital technologies and use it for decision-making.
5	Empowering Learners	
5.1	Accessibility and inclusion	To ensure accessibility to learning resources and activities, for all learners, including those with special needs. To consider and respond to learners' (digital) expectations, abilities, uses and misconceptions, as well as contextual, physical or cognitive constraints to their use of digital technologies.
5.2	Differentiation and personalisation	To use digital technologies to address learners' diverse learning needs, by allowing learners to advance at different levels and speeds, and to follow individual learning pathways and objectives.
5.3	Actively engaging learners	To use digital technologies to foster learners' active and creative engagement with a subject matter. To use digital technologies within pedagogic strategies that foster learners' transversal skills, deep thinking and creative expression. To open up learning to new, real-world contexts, which involve learners themselves in hands-on activities, scientific investigation or complex problem solving, or in other ways increase learners' active involvement in complex subject matters.
6	Facilitating Learners' Digital Competence	
6.1	Information and media literacy	To incorporate learning activities, assignments and assessments which require learners to articulate information needs; to find information and resources in digital environments; to organise, process, analyse and interpret information; and to compare and critically evaluate the credibility and reliability of information and its sources.
6.2	Digital communication and collaboration	To incorporate learning activities, assignments and assessments which require learners to effectively and responsibly use digital technologies for communication, collaboration and civic participation.
6.3	Digital content creation	To incorporate learning activities, assignments and assessments which require learners to express themselves through digital means, and to modify and create digital content in different formats. To teach learners how copyright and licenses apply to digital content, how to reference sources and attribute licenses.
6.4	Responsible use	To take measures to ensure learners' physical, psychological and social wellbeing while using digital technologies. To

No	Kompetensi	Deskripsi
		empower learners to manage risks and use digital technologies safely and responsibly.
6.5	Digital problem solving	To incorporate learning activities, assignments and assessments which require learners to identify and solve technical problems, or to transfer technological knowledge creatively to new situations.

D. CONCLUSION

The overall aim of the current article has been to contribute to describing the digital competencies that must be possessed by teachers to face the challenges of the 21st century. Changes are happening now with the many digital services changing the way technology is used in education. So that teachers get a challenge to adjust the learning process with the development of digital technology. We sincerely hope that digital competence will be the focus of further research. Because we believe digital competence must be owned by teachers and students in this 21st century.

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APPLICATION OF TEACHING FACTORY IN CLASS BUSINESS MANAGEMENT LECTURES TO IMPROVE STUDENT WORK COMPETENCE

Pipin Tresna. P, Marlina, Mila Karmila, Astuti

ABSTRACT

This research is motivated by problems, there are still many graduates whose competencies are not suitable with the world of work. One effort that can be done is to apply an industry-oriented learning model with the setting of learning in schools as workers in industry. The learning model in question is Teaching Factory (TEFA). The main objective of this research is to apply the Teaching Factory (TEFA) model to Clothing Business Management and determine the effect of the model on aspects of student work competence. The research method used was Classroom Action Research (CAR). Research output in the form of: 1) Clothing Business Teaching Factory (TEFA) learning guide; 2) Articles for publication in accredited national seminars and journals. The research findings show that the planning of the teaching factory work program in the Fashion Business Management lecture has been well planned and is based on a legal basis in accordance with RI laws and regulations. The teaching factory in Fashion Business Management lectures is already good, it can be seen from the availability of competent human resources, good partnerships with companies or agencies around Bandung, adequate facilities and infrastructure, and the presence of student work products in the form of lab coats quality.

Keywords: Clothing Business Management, Implementation, Student Work Competence, Teaching Factory

A. Introduction

The quality of Indonesia's Human Resources (HR) can be seen from several aspects, including: the willingness, skills and expertise that are qualified in a particular field. Increasing the skills and expertise of HR is an added value for nation building that can be obtained through education. Education is considered relevant if the results obtained from education have a functional value for the livelihood of students with their environment, current and future developments in accordance with the demands of employment[3].

Indonesian human competency is one of the biggest challenges in education in Indonesia. The clearest indicator of the lack of maximum competence of graduates in education is the low absorption capacity in the world of work. There needs to be a very fundamental change to overcome these changes, one of which is through reforms in the field of education, so that the graduates produced are ready to use, ready for work, and ready to train, meaning that every graduate produced by an educational institution can be absorbed and able to be accepted in the job market. Therefore, the new paradigm of quality education system that refers to work-oriented education or education with a broad based education system. This education system is oriented towards increasing life skills by accommodating the needs of the business world and the industrial world[7].

One of the learning policies on technology and vocational programs echoed by the government with a link and match policy has not been able to answer the problem at the lower level. Of the many challenges and problems, the link and match is changed by the term

we serve the real world, meaning that what is issued by educational institutions can be served by the world of work. Therefore, a learning model with integrated learning approach must be sought. By using the facilities owned, educational institutions create an industrial atmosphere without having to directly involve the industry[4].

The learning model which is oriented to the world of work must be able to provide the provisions of its graduates so that they can work directly in industry by making a learning setting in schools as workers in the industry. One learning model that can accommodate these needs is the Teaching Factory (TEFA) learning model. Teaching Factory learning model is a learning model based on production, which refers to work standards and procedures that apply in the industry and implemented in an atmosphere like what happens in the industry[2]. The teaching factory concept is based on the praxis view of higher education within the university. In implementing this learning model the lecturer acts as an assessor and consultant helping students, while students act as workers in the industry in accordance with their duties and responsibilities. By playing the roles of industrial workers through this learning model, students experience through learning by doing, in accordance with the role of a factory / industry employee. Through this approach students are not only focused on work competency but also practice to develop social, economic, and independence competencies. [1]

The Fashion Business Management course is one of the courses in the curriculum structure of the Fashion Management Education Program. The Fashion Business Management course aims to equip students about business management in the field of clothing, types of business in the field of fashion, planning and organizing, direction and coordination, purchasing, capital and business costs, bookkeeping and determining the selling price, environmental impact, health, and labor.

Seeing the characteristics of Fashion Business Management Courses that tend to be business oriented, it is necessary to have a learning model that equips students with real experience in the business field. One of the learning models referred to in this study is the Teaching Factory (TEFA). The application of Teaching Factory learning patterns is an interface of the world of vocational education with the industrial world, so there is a check and balance of the educational process to maintain and maintain harmony (link and match) with the needs of the job market.

Based on this background, the formulation of this research is: How is the application of the Teaching Factory (TEFA) learning model in the Clothing Business Management lecture in the Department of Fashion Education Program of the PKK FPTK UPI?

B. RESEARCH METHOD

Research with the title "Application of Teaching Factory in Clothing Business Management Lectures to Improve Student Work Competence" uses the Classroom Action Research (CAR) approach, also known as Classroom Action Research. CAR is carried out in the form of a cyclical assessment process which consists of four stages as follows

a. Planning

The planning stages of a class action research can be carried out as follows:

1) Designing a class action research model in accordance with the problem, planned action activities, and actual classroom situation
2) Set the steps for the class action to be taken
3) Identify the supporting components needed
4) Arranging and arranging class activities schedules that will be carried out
5) Develop a class action design in accordance with the assessment model that will be used

b. Implementation of Actions

1) Conduct activities based on the action plan that has been prepared and determined previously
2) Applying the Teaching Factory model to Clothing Business Management lectures

c. Observations

Observations were made while learning improvements were taking place by applying the Teaching Factory model to Clothing Business Management lectures.

d. Reflection

The results of observations obtained, used as a basis for reflection and revision of the plans and class actions that have been carried out, which are used as a basis in designing and formulating further class action plans to obtain results in accordance with research objective

The subject of this research is the course of Fashion Business Management, while the object of research is students and lecturers of Fashion Business Management courses who are taking the course in Odd Semester Academic Year 2018/2019

C. RESULT AND DISCUSSION

Fashion Management Education Study Program is one of the tertiary institutions that has implemented teaching factory learning, especially in Fashion Business Management lectures. The teaching factory learning process requires careful preparation, because this learning studies the process of production activities and also the application of industrial culture. Expected graduates of Fashion Design Education study programs, among others, Producing

graduates who are able to collaborate with various other professions in developing academic and professional skills in fashion science, as well as producing graduates who are able to open or create jobs in the field of fashion and the ability to manage businesses in the field of fashion such as boutique business, fashion design, fashion studios, atelier, craft and textile, including the ability to work in the fashion industry[5]. In connection with the expected competencies of graduates of Fashion Management Education study programs, the Department of Fashion Management Education of the DPKK FPTK UPI implements teaching factory management in learning on campus.

1. TEFA Planning in Fashion Business Management lectures

In the teaching and learning process, learning program planning plays a very important role, because it determines the steps of implementation and evaluation. The integration of learning as a system is not only between the components of the teaching and learning process, but also between one step and the next step and the teacher in implementing the learning program really must be in accordance with what has been planned [6]. Planning in factory teaching in Clothing Business Management lectures is done by planning work programs that are tailored to the vision and mission of the Study Program.

2. Implementation of TEFA in Clothing Business Management Lectures

Implementation in management can be done with two activities, namely organizing and directing. Organizing is a mechanism, through which all subjects, software and hardware can work effectively, and can be utilized according to their respective functions and proposals [6]. In teaching factory management, so that the contents of the directions given can be carried out properly, a director must at least pay attention to the following principles, namely: exemplary, consistency, openness, tenderness, and policy. In organizing, the implementation of teaching factory learning in Fashion Business Management lectures is done by making students grouping based on their competencies. In the implementation of teaching factory learning in Clothing Business Management lectures in UPI Fashion Design Study Program, there are several aspects that underlie its implementation, namely: aspects of human resources (HR), aspects of partnership, aspects of infrastructure, and aspects of products.

a. HR aspects of the Teaching Factory

Based on Law No.20 2003 Article 39 Paragraph (2) it is stated that educators are professionals who are tasked with planning and implementing the learning process, assessing learning outcomes, conducting mentoring and training, and conducting research and community service, especially for educators at tertiary institutions. The teaching staff / lecturers in the MUB lecture have met the criteria required in the law, because they already

have high competence and professionalism. This can be proven by their success in implementing teaching factory by producing products of sufficient quality. To measure the ability of lecturer qualifications can be seen from three things, namely: (1) having the basic ability as an educator; (2) has general abilities as a teacher; and (3) have special abilities as trainers. This can be fulfilled by Fashion Business Management lecturers, who are proven to be able to educate, train, and direct students to form business units and produce fashion products according to industry standards.

b. Aspects of Partnership (Partnership) in Teaching Factory

Based on the Appendix of the Minister of National Education Regulation No. 19 of 2007 concerning Education Management Standards, that each school has a partnership with other relevant institutions. Partnership deals with the input, process, output, and utilization of graduates. School partnerships can be carried out with government and non-government institutions such as other tertiary institutions, the business world and the industrial world (DU / DI) in their environment. The cooperative relationship between education and industry in the Teaching Factory learning pattern will have a positive impact on building a systematic and planned partnership mechanism based on a win-win solution bargaining position. Fashion Management Education Study Program has established partnerships with DU / DI which are carried out through industrial practice programs (PI) as well as cooperation in absorbing graduates of Fashion Management. This can be proven by the existence of the MOU and also the data of graduates who work in various fashion industries, including cooperating with Rabbani boutiques, Shafira boutiques, Maika, Adity boutiques, Ernade boutiques, Ernade boutiques, Hengky Kawilarang and C59.

c. Means and Infrastructure Aspects in Teaching Factory.

The intended infrastructure must be adequate and meet the minimum standard requirements. The Fashion Management Education Study Program already possesses adequate facilities and infrastructure to support teaching factory learning. Facilities and infrastructure owned include: land and buildings, equipment, and production materials. This includes study rooms, places of worship, libraries, laboratories, workshops, the use of information and communication technology and other learning resources needed to support the learning process. The Fashion Design Study Program already has educational facilities including furniture, educational equipment, educational media, books and other learning resources, consumables, and other equipment needed to support an orderly and continuous learning process. The Fashion Management Education Study Program also has educational infrastructure including: land, classrooms, leadership room for education units, teaching

space, administration room, library room, laboratory room, workshop space, production unit room, power installation, place of worship, and space / other places needed to support an orderly and continuous learning process.

d. Product Aspects in Teaching Factory

Products are the end result of the teaching factory learning process. Teaching factory products in question are the results of production in the form of goods and services. Assessment of teaching factory learning products include: product quality, production systems and after sales service.

1) Product Quality

Teaching factories integrate the learning process in schools to produce products and services. These products and services should be worth selling so they can produce added value. The results showed that students in the Clothing Business Management lecture were able to produce quality lab coat products. This is evidenced by orders from individuals or companies or agencies that are partners

2) Production System

There are several types of industries in a production system including: make to stock, make to order, assemble to order, and engginer to order. In relation to teaching factory learning in MUB lectures at the Fashion Design Education Study Program, the types of industries in the production system are often applied in whole or in part. The production system in the DPKK UPT Fashion Management Education Program uses UPI systems: make to stock, make to order, assemble to order, and engginer to order, depending on the situation and conditions. In accordance with the description above, the implementation of teaching factory management in the Fashion Business Management lectures is carried out as follows:

The step of accepting an order giver is in the form of communication activities. This implies that students act as workers to receive a guest who has an order. In the process of communicating raport between workers with the order giver that must lead to mutual benefit.

The step of analyzing orders is in the form of order analysis activities which are expected to be carried out into finished goods according to the demands of the picture. Students as workers are faced with demands that in the not too long time must be able to provide answers to the ability to work on orders according to specifications and within a certain time, so it requires high confidence to give these answers. For this reason, students must have adequate knowledge so that they are able to carry out an appropriate order analysis. To strengthen their beliefs, students may consult with lecturers.

Step states readiness to work on orders is a statement of readiness to work on orders according to specifications. That statement is impossible when a student is not sure that he can do as requested. Once a student declares his readiness, it means he makes a promise that must be kept. Thus, commitment, and ability or work competence are needed, so that it is expected to generate motivation, responsibility, and work ethic.

The step of carrying out orders involves activities to do work according to the demands of work specifications that have been generated from the order analysis process. Students as workers must obey prescribed work procedures in earnest to produce workpieces that are in accordance with customer specifications.

The step to do quality control is students who act as workers doing an assessment of the workpieces they work on. Assessment of the workpiece produced by comparing the parameters of the workpiece produced with the parameter data in the order specifications. This step requires honesty, caution, and accuracy. Through quality control, students gain confidence that the workpiece produced has met the specifications, because he must demonstrate his work in front of the giver of the order.

Steps to submit orders in the form of communication activities. To be able to communicate, students must have the assurance that the workpiece produced will be acceptable to the order giver, because it meets the specifications. With that capital, workers will be able to communicate without feeling depressed so that productive communication can occur.

D. CONCLUSION

The implementation of teaching factory management in Clothing Business Management lectures is quite good, this can be seen from:

a. Teaching factory work program planning in the Fashion Business Management lecture has been well planned and is based on a legal basis in accordance with the laws and regulations of the Republic of Indonesia, and based on the results of an evaluation of the previous implementation. Analysis of the planned program is an attempt to achieve the stated Study Program objectives.
b. The teaching factory in Fashion Business Management lectures is already good. This can be seen from the availability of competent human resources, the existence of good partnerships with companies or agencies around Bandung, the availability of adequate facilities and infrastructure, and the products of students' work in the form of quality lab coats

c. Evaluation

1) TEFA Evaluation in Clothing Business Management lectures involves all parties, both Head of Study Program, lecturers, and students. Evaluation is used to make further planning.
2) Factors supporting the implementation of teaching factory in Fashion Business Management lectures are: from the scope of business units, the estimated volume of potential buyers, the projected number of buyers in the next 5 years, in terms of production, and adequate raw materials, and have an advantage over manufactured products.
3) Inhibiting Factors for teaching factory implementation in Fashion Business Management lectures are: limitations in receiving large (mass) orders, business capital, punctuality, and inadequate laboratory infrastructur

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Curriculum Design Training Classic And Non Classic (Blended Learning) For Improving Soft Skills

Tris Sutrisno and Cepi Riyana

Email: tris.sutrisno@upi.edu, cheppy@upi.edu
Indonesian Education University

ABSTRACT

The purpose of this study is to design the initial classical and non-classical training curriculum (Blended Learning). Curriculum development is carried out by literature review and conducting surveys related to the magnitude of the participants' interest in attending the training. This design was developed based on several problems in the implementation of classical training. Such as the limited amount of training due to cost factors so that many employees from the Ministry of Energy and Mineral Resources can't follow training at PPSDM Apparatus. The expected goal of the participants is an increase in competency both in the aspects of knowledge, attitudes, and skills. The implementation of competency development in this curriculum is carried out through a blended learning model where participants prior to conducting face-to-face training in class are required to follow in advance E-Learning learning. The implementation of classical training time is carried out face-to-face in class with a period of time tailored to the breadth of the material while non-classical training is carried out through E-Learning with a period of time according to the breadth of the material. Through the E-Learning learning method, participants are expected to be able to master the concepts and theories related to the learning material delivered so that when face-to-face learning in class the participants are focused on case studies and practice. The research used is descriptive research through the study of literature with the aim to provide an overview or explanation of a problem that occurs. The results of this study were to obtain an overview of the design of classical and non-classical training curriculum (Blended Learning).

Keywords: Curriculum Design, Classical Training and Non-Classic, Blended Learning

A. INTRODUCTION

Every Civil Servants (PNS) has the same rights and opportunities to participate in Competency Development. In addition, specifically related to PNS based on Government Regulation No. 11 of 2017 concerning Management of Civil Servants in article 203 paragraph 4, it is explained that the development of competencies for each civil servant is carried out at least 20 (twenty) hours of study (JP) in one year.

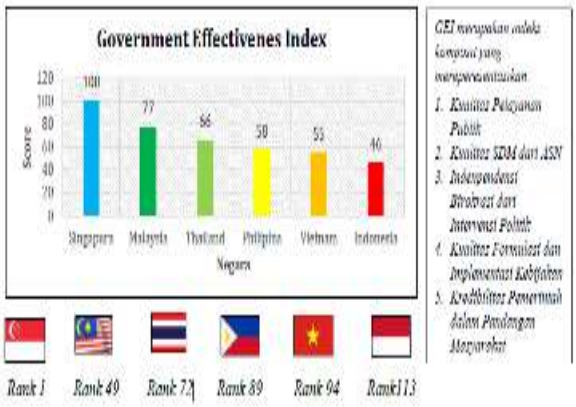
Based on Law of State Civil Apparatus (UU ASN) No 5 Year 2014. the development of ASN Employee competencies is regulated as follows:

1. Every ASN Employee has the right and opportunity to develop competencies, including through education and training, seminars, courses, and upgrading that must be evaluated by PyB and used as a basis for appointment and career development (Article 70 paragraph (1), (2) and (3);
2. In developing competencies, each Government Agency must prepare an annual competency development plan set forth in the work plan of the respective agency's annual budget (Article 70 paragraph (4);
3. PPPK is given the opportunity to develop competencies planned every year by Government Agencies that must be evaluated by PyB and used as a basis for further work agreements (Article 102).

In facing current global challenges, employee competencies, especially ASN, must be able to adjust to ongoing developments. President of the Republic of Indonesia in his speech on July 14, 2019 said "we must realize, that now we live in a very dynamic global environment". The global phenomenon, as we know it, is full of change, full of speed, full of risk, full of complexity, and full of surprises. Furthermore, on October 23, 2019 during the introduction of his cabinet, President of the Republic of Indonesia gave instructions to his cabinet. In these instructions there are several instructions that are indirectly related to soft competency. Like as follows: 1) Don't be corrupt, create a system that closes the gaps of corruption. This means that the minister and his staff through innovation and creativity must be able to create a system that prevents corruption; 2) Fast work, hard work, productive work. Meteri and employees in his ministry must have skills that support his work so that in addition to working fast and hard but also productive. 3) Don't get stuck in a monotonous routine, Meteri and employees in his ministry are required to have creativity so as to create new things or ideas and not get caught up in their daily routine. 4) always check for problems in the field and find solutions, Meteri and employees in their ministries must have problem solving skills so that they can handle any problems that occur in the field.

Based on data released by the State Civil Apparatus Commission (KASN) in 2018 based on data from the world bank that the effectiveness of the administration of Indonesia is at a low level among ASEAN countries.

Figure 1.1. Southeast Asian Governance Effectiveness Index (World Bank, 2016)



The low level of effectiveness of government administration, especially when compared to other countries in Southeast Asia. This condition is partly caused by the low quality of ASN, as a result of recruitment, appointment in office and promotion that has not been based on objective considerations. In addition, based on the results of the competency test conducted by the National Personnel Agency (BKN) in 2015, out of 216 Primary High Management officials who took the competency test, only 8.84% had competency and high potential. Whereas those with low competency and also low potential reached 48%. Competency tests on administrators also show results that are not very good.

Competency development for civil servants as explained in PP No. 11 of 2017 article 210 paragraph 2, that competency development can be carried out in the form of: a. education; and / or b. the training. Competency development in the form of education as referred to in Article 210 paragraph 2 is carried out to improve the knowledge and expertise of civil servants through formal education in accordance with statutory provisions. Whereas

the development of competencies in the form of training referred to is carried out through classical and non-classical training pathways. Competency development in the form of classical training as intended is done through face-to-face learning in the classroom, at least through training, seminars, courses, and upgrading. Whereas competency development in the form of non-classical training as referred to is carried out at least through e-learning, guidance in the workplace, distance training, internships, and exchanges between civil servants and private employees.

Training is an effort to improve competence which includes knowledge, expertise, skills and attitudes. So in the end it is expected that with an increase in competence can eliminate the competency gap or gap in the participants so as to maximize work productivity and organizational goals can be achieved more optimally. According to Eneh, Inyang, & Ekpe (2015) he gap must be closed through job training in order to achieve organizational goals. Elimination of performance gap requirestraining theworkers toacquire additionalknowledge, skill and attitude concerning the job,which they need to performup to standard.

In the implementation of the training course a curriculum is needed in its implementation. The curriculum is not limited to formal education, but also to non-formal education. As revealed by Hasan (1988: 2). "The term curriculum does not need to be limited always to the field of formal education". In developing the training curriculum, the pattern is adjusted to the training needs to be held. The curriculum is one component of training that has an important role in implementing or as a guideline in conducting training so that the achievement of ASN competencies is achieved. This is because the curriculum is as a plan to achieve goals, the plan contains educational and training goals and has been arranged in such a way as an organized format arranged in learning tools. As revealed by Marsh in Amrizal (2018) With the curriculum, the quality of training can be measured and controlled. The existence of the curriculum in the administration of education because the curriculum as an educational plan at least contains, among others, a collection of subjects (subjects) that are most useful in people's lives today (today), all learning activities planned by the school, and overall learning experiences provided for students so that they can achieve general knowledge and skills in a variety of places of learning.

B. RESEARCH METHOD

This study uses qualitative research by conducting a literature study and taking data through surveys in order to provide an overview or explanation of an event or condition in a comprehensive and systematic manner. As said by Ali (2014) qualitative research is an approach in conducting research oriented to natural phenomena or symptoms. Meanwhile, according to Creswell (2010: 415): are methods to explore and understand the meaning that a number of individuals or groups of people consider as social or humanitarian. This qualitative research process involves important efforts, such as asking questions and procedures, collecting specific data from participants, analyzing data inductively starting from specific themes to general themes, and interpreting the meaning of data.

C. RESULT AND DISCUSSION

Competency development in the form of classical training is done through face-to-face learning in the classroom, at least through training, seminars, courses, and upgrading

(Government Regulation Number 11 Year 2017). While competency development in the form of non-classical training is carried out at least through e-learning, guidance in the workplace, distance training, internships, and exchanges between civil servants and private employees (Government Regulation Number 11 Year 2017).

Blended Learning is a combination of face-to-face learning model and e-learning based learning model (Farha, 2016). Blended learning is a new concept in learning where the delivery of material can be done in class and online (Bielawski and Metcalf in Husamah, 2014). Blended learning is learning that combines a variety of ways of delivery, teaching models, as well as various media of various technology (Husamah, 2014). From some of the statements above it can be concluded that blended learning is a learning model that combines more than one way of delivery, generally done online and face to face.

Husamah (2014) mentions some characteristics of blended learning, which are as follows:

a) Learning that combines various ways of delivery, teaching models, learning styles, as well as a variety of diverse technology-based media;
b) As a combination of direct teaching (face-to-face), independent learning, and independent learning via online and offline;
c) Learning supported by an effective combination of ways of delivery, ways of teaching and learning styles;
d) Teachers and learner parents have the same important role, the teacher as a facilitator, and parents as supporters..

According to Noer in Husamah (2014) revealed some of the shortcomings of Blended Learning, namely as follows:

a) The media in Blended Learning are so diverse that it is difficult to implement if there are no supporting facilities and infrastructure;
b) Not all students have adequate internet facilities;
c) ack of knowledge of the general public regarding the use of developed technology.

Based on the results of a survey conducted for employees by taking samples in several work units of the Ministry of Energy and Mineral Resources obtained data related to employee interest in participating in soft skills training as follows.

Table 1. Identification of Training Needs

No.	Training Title	Amount of Enthusiasts
1	Public Speaking	25
2	Problem Solving and Decision Making	24

No	Training Duration	Amount of Enthusiasts
1	1-3 days	44
2	3-5 days	185
3	3-5 days	53

3	Strategic Planning	21
4	Komunikasi Efektif	20
5	Motivasi Kerja	20
6	English For Presentation Skill	19
7	Kepemimpinan Efektif	19
8	Leadership and Management	18
9	English For Negotiator	17
10	Pelayanan Prima	15
11	Conversational English Skill	13
12	Pelayanan Publik	11
13	Keterampilan Negosiasi	11
14	7 Habits of Highly Effective People	10
15	Team Building	10
16	Kepribadian	9
17	Manajemen Stress	8
18	Balanced Score Card	7
19	Leader As Coach	5
		282

Table 2. Identification of Training Time Needs

From the above data it can be seen that the interest of employees to participate in training in improving soft skills is quite high, besides the above time span is also very appropriate to be applied in soft skills training for employees because the time of participants to attend training is very limited. Therefore it is necessary to develop a training method or model that is suitable for training participants who can accommodate both in terms of time and material.

No.	Method	Content	Duration
1.	***E-learning***	Introduction	28 JP 2 JT
2.	***Classroom***	Case Study/ Practice	18 JP 2 JT
3.	***Assessmen***	Assessmen	5 JP
Total JP		**55 JP/T**	

The training model used to improve the soft skills of employees is to use a blended learning model, this is because training time will not take up much time. The trainees who are all employees no longer need to leave the office for a long time. They only need 2 to 3 days to attend training outside the office.

The flow of the blended learning training model is for the first stage participants are required to attend training in a non-classical or through e-learning. After that they take training classically or face to face in class. Own training within the scope of the State Civil Apparatus (ASN) is divided into two types of training. Based on PP Number 11 Year 2017 concerning Management of Civil Servants in article 212 paragraph 1 it is explained that the development of competencies in the form of training is carried out through classical and non-classical training pathways. Competency development in the form of classical training is done through face-to-face learning in the classroom, at least through training, seminars, courses, and upgrading. Whereas competency development in the form of non-classical training is carried out at least through e-learning, guidance in the workplace, distance training, internships, and exchanges between civil servants and private employees.

Table 3. Blended Learning Model Training Design

By using the blended learning model, it is expected that the learning process will be more effective, in addition to that training institutions are expected to be able to add more training

in accordance with the needs of employees so that they can accommodate the employees. Here are some of the results of research related to blended learning that According to the analysis results it can reputed that opinions of the students who studied in blended environment are varying comparing other environments and blended learning environment is more effective than face to face and online learning environments. Furthermore, when in-class observations and student opinions are taken into consideration, it can be reputed that participants have positive opinions for internet supported applications and find blended learning useful (Eryilmaz,2015). Other studies explain that This research concluded that blended learning was effective to assist the students to learn English grammar (Isti'anah, 2017).

D. CONCLUSION

Blended learning is a learning model that combines more than one way of delivery, generally done online and face to face. Blended Learning that is designed in this article consists of three methods of implementation, first online learning or e-learning where the material will be focused on theories and concepts. Furthermore learning in advance or classical, in this classical learning the material will be focused on case studies and practice. Participants will no longer be given material related to theory or concepts. Next is the assessment, the assessment is done online and face to face. Online pre and post tests will be conducted, while face-to-face assessments will be tested through presentation seminars at the end of the training session.

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THE DIFFERENCE OF CREATIVE THINKING SKILL BETWEEN STUDENTS USING MODIFIED FREE INQUIRY (MFI) LEARNING MODEL AND GUIDED INQUIRY (GI) LEARNING MODEL ON THE CONCEPT OF ENVIRONMENTAL POLLUTION

(Quasi Experiment Research on the Concept of Environmental Pollution in SMAN 57 Jakarta)

Muhammad Zar dan Laksmi Dewi

Pengembangan Kurikulum - Universitas Pendidikan Indonesia
Email: muhammadzar@upi.edu, laksmi@upi.edu

ABSTRACT

This study aims to determine the difference of creative thinking skill between students using Modified Free Inquiry (MFI) learning model and Guided Inquiry (GI) learning model on the concept of environmental pollution. This research was conducted at SMAN 57 Jakarta using quasi-experimental method using pretest-posttest control group design. Sampling in this research using simple random sampling technique. The sample of this research is the students of class X MIPA III which amounted to 36 as the first experimental class (class using Modified Free Inquiry (MFI) model and the students of class X MIPA I which amounted to 34 people as the second experimental class (class using Guided Inquiry model (GI)). The instrument in the research is about essay creative thinking as much as 10 items, observation sheet of student and teacher activity, and student worksheet (LKS). Based on statistical hypothesis test with t-test at significant level 0,05 got result of count equal to 8,5006> table equal to 1,99, which means that H0 is not accepted with posttest score 88,96 for first experimental class and 71,47 for second experimental class. This suggests that there were differences of creative thinking skill between students using Modified Free Inquiry (MFI) learning model and Guided Inquiry (GI) learning model on the concept of environmental pollution.

Keywords: Creative Thinking, Modified Free Inquiry (MFI), Guided Inquiry (GI).

A. Introduction

The research findings of Richard Florida et al in The 2015 Global Creativity Index (GCI, 2015) are a scathing criticism for Indonesian education. Based on GCI research conducted in 139 countries it is known, Indonesia's position is very low, which is ranked 67th. The reason that triggered the low Indonesian GCI index is because creativity is blocked. The low GCI index indicates that there is something wrong in the education process in Indonesia. According to Agus Wibowo in his commentary on "*Kreativitas dan Pendidikan Kita*" in MediaIndonesia, all education experts agree that education should not merely be a transfer of knowledge from teacher to student. This situation is also explained by the opinion of Ratno Harsanto in the journal Asri Widowati, that learning currently taking place in schools, many are still solely oriented towards efforts to develop and test students 'memory so that students' thinking abilities are reduced (Widowati, 2008, p. 120).

Formal education that is taking place now tends to only focus on honing aspects of remembering, and understanding, which is a low order of thinking (Widowati, 2016, pp. 1-2). Then Agus Muladi in Edukasi Kompas stated "Indonesian students are still dominant in learning at a low level, or more on the skill to memorize ...". More than that, according to him, education should be able to inspire so as to bring out creativity and innovation in students. Unfortunately, instead of

inspiring, encouraging, and even creating a climate that supports the birth of creativity in students, education today is actually clogging the meeting of these possibilities.

The data is a fact about the conditions of learning that still occur in Indonesian education, which is actually one of the fundamental factors of the birth of creativity in the self. Learning conditions that measure low-level thinking skills are still more dominantly applied to students. So this will not be strange when the research findings of Richard Florida et al before, stated that in the competitive power in the international world, Indonesia's creativity is still lagging behind other countries. This fact is a reflection of learning activities which, when referring to Agus Wibowo's opinion above, are analogous to conditions not yet as expected.

According to the results of interviews with the teachers of class X Biology Lessons 57 Jakarta class X, learning in the class is carried out more with discussion activities. Student learning outcomes actually meet the requirements, but the characteristics of students show indications of creative thinking that is still weak. This certainly needs attention, because such learning causes the underdevelopment of student creativity. Whereas future challenges require learning to develop more creative thinking skills, including High Order Of Thinking (HOTS). HOTS is a component of 21st century intelligence issues (Widowati, 2016, p. 2).

One way that can be applied in creative teaching is to apply inquiry-based learning (Munandar, 1999, p. 84). Inquiry model "... is a series of learning activities that involve the maximum skill of all students to search and investigate systematically, critically, and logically, so that they can find their own knowledge, attitudes and skills as a form of behavior change" (Suhana, 2014, p. 44). The inquiry model is one of the learning models that are deemed appropriate for use in improving students' creative thinking abilities, because the inquiry model provides an opportunity for students to investigate something themselves directly. In inquiry learning activities, students should be more directed and trained to think creatively with stimuli or questions that trigger creative ideas in problem solving.

In theory, according to Sund and Trowbride (1973) in Mulyasa (2006, p. 109), the Inquiry approach has a different type, namely guided inquiry, modified free inquiry, and free inquiry . The difference between the three types of inquiry lies in the level of teacher intervention in learning activities (Putra, 2013, pp. 96-100). In this study the author tries to compare inquiry with different levels of teacher intervention in learning activities, hoping to find out which types of inquiry are more able to increase creativity in students.

Considering free inquiry is a truly free inquiry. This inquiry is intended for scientists, while students studying in class refer to curriculum demands, so the writer tries to compare the two remaining inquiry learning models, namely modified free inquiry and Guided inquiry. In the research activities the author wants to test whether there are differences in students' creative thinking abilities between those who are given a modified free inquiry (MFI) and Guided inquiry (GI) learning model.

B. STUDY OF THEORY

2.1 Inquiry

"... Inquiry is a series of learning activities that maximally involve all students' abilities to search and investigate systematically, critically, and logically, so that they can find their own knowledge, attitudes and skills as a form of behavior change" (Suhana, 2014 , p. 44). The knowledge and skills acquired by students are expected not only to remember facts, but also to find results on their own. The teacher must always design activities that lead to discovering activities, regardless of the material taught (Trianto, 2009, p. 114).

According to the Ministry of National Education in Lukmanul Hakim, "The essence of the inquiry approach is to provide learning to students to deal with the problems they face when dealing with the real world by using techniques applied by a researcher. In inquiry learning means the teacher must plan the situation in such a way that students work like a researcher using procedures to identify problems, answer questions, use research / investigation procedures, and prepare thinking frameworks, hypotheses, and explanations that are compatible with real-world experience (Judge, 2009, p. 49). Inquiry learning requires students to always act seriously and truly be like a scientist in learning. This is corroborated by the opinion of Joice and Weil in Made Wena, that "... the ultimate goal of this model is the formation of new knowledge, so students are faced with something that allows it to be investigated more closely" (Wena, 2014, p. 76).

According to Agoes Dariyo (2013, p. 123) "the inquiry method will be effective for students who are truly concentrated in learning a subject matter, because it is also motivated by seriousness in achieving learning achievement". For that in inquiry activities students must always act seriously and seriously in learning to handle the problems given by the teacher. Students must behave and perform procedures like a scientist when solving the problems they face. So they can learn to find new knowledge in their own way. Based on the explanation outlined above, it can be drawn an outline that the inquiry learning model is a learning model that conditions students learning to think, act, and act like scientists. The inquiry learning model also requires students to investigate carefully, work systematically, and look for answers to a problem presented by the teacher to find knowledge in his own way.

2.1.1 Stages of Inquiry Learning

Wina Sanjaya (2008, pp. 191-193) argues that, the Inquiry learning process through six stages can follow the steps as follows: 1) Orientation is a step to foster an atmosphere or climate of responsive learning. 2) Formulating the Problem is a step to bring students to a problem that contains a puzzle and students are encouraged to find the right answer. 3) Formulating a Hypothesis is a temporary answer to a problem that is being studied through the results of thinking. As a temporary answer, the hypothesis needs to be tested for truth. When an individual can prove his guess, then he will arrive at a position that can encourage further thinking. 4) Collecting Data is an activity to capture the information needed to test the proposed hypothesis. In inquiry learning strategies, collecting data is a mental process that is very important in intellectual development. 5) Testing the Hypothesis is the process of determining the answers that are considered acceptable in accordance with the data or information obtained based on data collection. Testing a hypothesis also means developing the skill to think rationally. That is, the truth of the answers given is not only based on argumentation, but must be supported by

the data found and can be justified. 6) Formulating conclusions, formulating conclusions is the process of describing the findings obtained based on the results of hypothesis testing.

2.1.1 Miscellaneous Theory of Inquiry

Inquiry learning has levels based on complexity in its application.

1. According to Michal Zion

According to Michal Zion in his journal entitled "Moving From Structured to Open Inquiry: Challenges and Limits", Journal of Science Education International ", Volume 23, No. 4, h. 383-386, the amount of autonomy given to students, learning makes inquiry divided into three levels including: 1) Structured Inquiry, 2) Guided Inquiry, 3) Open Inquiry.

2. According to Heather Banchi and Randy Bell

Heather Banchi and Randy Bell (2008, pp. 26-27) divided inquiry learning into four levels including: 1) Confirmation Inquiry, 2) Structured Inquiry, 3) Guided Inquiry, 4) Open Inquiry.

3. According to Lisa Martin

Lisa Martin in her article entitled "Defining the Science Teacher: Inquiry Exploring the Many Types of Inquiry in The Science Classroom", pp. 35-37, divides inquiry learning into four parts, including: 1) Guided Inquiry, 2) Open / Full Inquiry , 3) Coupled Inquiry, 4) Structured Inquiry.

4. According to Douglas Llewellyn

Douglas Llewellyn in his article entitled "Differentiated Science Inquiry" p. 11-17, dividing inquiry learning into four levels, including: 1) Demonstrated Inquiries and Discrepant Events, 2) Structured Inquiries, 3) Guided Inquiries, 4) Self-Directed Inquiries.

5. According to Alan Colburn

In addition, Alan Colburn in his article "An Inquiry Primer, Article California State Universit" p. 42, classifies inquiry learning into four levels, namely: 1) Structured inquiry, 2) Guided inquiry, 3) Open-ended inquiry, 4) Learning Cycle

6. According to Sund and Trowbridge

Meanwhile, according to Sund and Trowbridge in Cucu Suhana (2014, p. 44), inquiry is divided into three types of methods based on the intervention given by the teacher when learning takes place, namely: 1) Guided Inquiry, 2) Free Inquiry, 3) Modified Free Inquiry.

In this study the authors use the theory of Sund and Trowbridge to be compared. Namely comparing Guided Inquiry and Modified Free Inquiry. The explanation is as follows. 1) Guided Inquiry (leading inquiry), which is a method in which the teacher provides extensive guidance

or instruction for students. Learning activities are more oriented towards teacher guidance and instruction. The teacher prepares the formulation of the problem as well as the tools and materials. Students make observations to get data and test hypotheses. Data obtained from observations, then analyzed to make conclusions through group discussion. In this type of inquiry students compile their own procedures for solving problems. 2) Free Inquiry (free inquiry), the method by which students conduct free inquiry as a scientist. Students are given the freedom to determine the problem to be investigated, find and solve problems independently, and design procedures or steps that are needed themselves. 3) Modified Free Inquiry (modified free inquiry), which is an intermediate level inquiry method between the two previous methods. Problems raised by teachers are based on theories that have been understood by students to be investigated for truth. In this type of inquiry approach, the teacher limits providing guidance so that students make an independent effort first, hoping to find a solution for themselves. Where problems that will be used as topics to be investigated remain given or refer to the existing curriculum references. Students can not choose or determine the problem to be investigated on their own, but students accept problems from their teacher to be solved and still get guidance. However, the guidance provided is less than guided inquiry and free inquiry. In this inquiry the teacher gives a problem or problem and then students are asked to solve the problem through observation, exploration and research procedures.

2.2 Creative thinking

Creative thinking is the skill to find many possible answers to a problem, which emphasizes the quantity, accuracy, and diversity of answers (Munandar, 1999, p. 48). Creative thinking is the skill to develop ideas that are unusual, quality, in accordance with the task and be able to redefine a problem effectively and think deeply (Sani, 2014, p. 15).

In the opinion of Amabile in Sani (2014, pp. 14-15), creative thinking is the key to creativity, especially related to: 1) Different thoughts from others and trying to propose solutions that are different from usual; 2) A combination of prior knowledge; 3) Never give up in facing difficult problems; and 4) Skill to seek new views after leaving the solution effort temporarily (incubation period).

A person's creativity will emerge from his creative thinking, that is, when he is able to provide ideas or solutions that are different from others, able to combine his knowledge with new knowledge, not easily give up when experiencing difficult things, and try to look for new views. Creative thinking is the skill to discover, produce and develop original new ideas based on the results of his own thinking that links new information with old information in a unique way and is able to combine some relevant information with new ways to solve a particular problem. So that people who think creatively are able to connect or see things from a new and different perspective, then the ideas generated will be more original and diverse.

2.2.1 Components of Creative Thinking

According to Utami Munandar (1999, pp. 88-91), there are at least 5 components of creative thinking, namely: 1) Fluency of thinking: 2) Flexibility of thinking (flexibility); 3)

Originality of thinking (originality); 4) The skill to develop an idea (elaboration); and 5) the skill to evaluate (evaluation).

Smooth thinking means being able to come up with ideas, answers or solutions to a problem. Flexibility in thinking means the skill to generate ideas or answers that vary or be able to provide alternative answers because the way of thinking or approach is changed to not see a problem from only one point of view but from a different perspective. The skill to think original means skilled or able to produce ideas or answers that are new and different from others. The skill to elaborate or elaborate is the skill to develop and enrich ideas, so ideas or ideas produced are more interesting. The skill to evaluate is the skill to assess themselves and determine whether a right question, a healthy plan, or a wise action, and be able to take decisions on bad situations, and not only spark ideas but also carry them out.

C. RESEARCH METHOD

The research method used in this study is quasi-experimental or quasi-experimental methods. This study uses two class groups namely, experimental class I and experimental class II. In the experimental class I was given a Learning Implementation Plan (RPP) with the Modified Free Inquiry (MFI) model, while in the experimental class II was given a lesson plan Guided Free Inquiry (GI) learning model. This study measures students' creative thinking abilities in the experimental class I and experimental class II.

3.1 Research design

The research design used in this study was in the form of a pretest-posttest control group design, that is before the treatment of the two groups, it was preceded by a pretest to find out the extent of the students' basic creative thinking abilities on the concept of environmental pollution. Then both of them were given different treatments, namely in the experimental class I the Modified Free Inquiry (MFI) learning model was applied, and in the experimental class II a Guided Inquiry (GI) learning model was applied. After being treated in both classes, posttest is done again, it is useful to find out the extent of students' last creative thinking skill after applying a learning model. The research design can be seen in Table 3.1 as follows:

Table 1 Research Design

Group	*Pretest*	*Treatment*	*Posttest*
Eksperiment I	**O_1**	**X_1**	**O_2**
Eksperiment II	**O_1**	**X_2**	**O_2**

Information:

O1	Pretest treatment, given to both groups.
O2	Posttest treatment, given to both groups.
X1	Treatment of teaching and learning process for experimental group I that is applied the Modified Free Inquiry (MFI) learning model.
X2	Treatment of teaching and learning process for experimental group II which applied the Guided Inquiry (GI) approach.

3.2 Sample

The sample representing population in this study were two classes from class X (ten) of SMAN 57 Jakarta. The class that functions as experiment I is class X MIPA III, and the class that functions as experiment II is X MIPA I.

The sampling technique used in this study is simple random sampling, because the population is a population that consists of homogeneous classes in learning skill. In this study two classes of samples were taken, and sample members were taken randomly.

3.3 Research variable

This variable consists of two types of variables, namely the independent variable and the dependent variable. In this study the independent variable is a learning model, while the dependent variable is the result of students' creative thinking on the concept of environmental pollution.

D. RESULTS AND DISCUSSION

The skill to think creatively includes five components of thinking, namely the skill to think smoothly (fluency), flexible thinking (flexible), original thinking (originality), thinking in detail (elaboration), and thinking assessing (evaluation). Based on the results of the pretest, it is known that the experimental class I and experiment II have the same initial skill. The results of the pretest are presented in the diagram as follows:

Figure 1. Pretest Value Graph of Creative Thinking Components in Classroom

Graph 1.a above shows that each class has a value not too different in each component of creative thinking. The experimental class I has advantages in several components, but the experimental class II also has other advantages. If the five components of creative thinking are put together into an average value of creative thinking, then in graph 1.b shows that the results of the initial skill of creative thinking in the experimental class I and experimental class II do not have too much difference in value. The experimental class I had an average initial value of 55.97, and the experimental class II was 55.44. Both are only 0.53 adrift.

The results of the pretest experimental class I and experiment II showed the results are still low. Both classes have an average value in the range of 55, which when categorized by the rating scale criteria in table 3.10 belongs to the category of underestimation. This is because the two classes have not been given any treatment when conducting the pretest test, so that they get low scores and are relatively the same.

This condition can be seen from the results of testing the hypothesis that is by t-test at a significance level of 5% (α = 0.05). The t-test itself is used to find out how significant the effect of MFI on the skill to think creatively. According to the results of the t-test conducted on the average pretest, the results obtained were t count 0.183 while the table was 1.99. Because the value of t count <t table, then declared Ha is rejected and H0 is accepted. This means, in the pretest there is no difference in the skill to think creatively between students taught with the learning model Modified Free Inquiry (MFI) and Guided Inquiry (GI).

Based on the assessment at the learning activity stage, the experimental class II scored higher than the experimental class I. From the achievement data of the LKS (Student Worksheet), the average results of the creative thinking achievement of the experimental class II were higher than the experimental class I. Likewise in the LO assessment (Observation Sheet) student activities, experimental class II gets an average value of achievement of creative thinking higher than experimental class I. In learning activities, students who are given an MFI learning model are indicated experiencing difficulties because MFI is a new model applied in class and involvement fewer teachers than usual. Learning difficulties experienced by students can be seen from a graphical analysis of the value of student achievement in learning activities as follows:

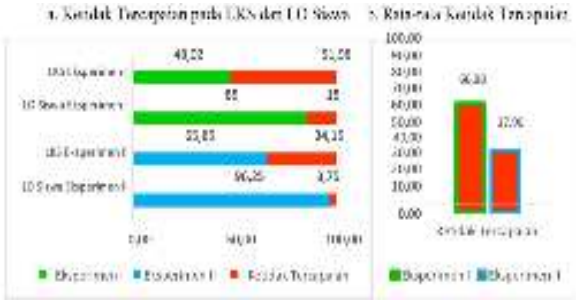


Figure 2. Graph of Achievements and Not Achieved in Activities

Graph 2 above shows the data that, the experimental class I in learning activities (student worksheets and LO) had lower grades than the experimental class II. In LKS, the achievement of experimental class I was 48.02% while the experimental class II reached 65.85%. In the student LO, the achievement of experimental class I was 85.00%, while the experimental class II succeeded in getting 96.25%. This means that the experimental class I encountered difficulties encountered by them in following the MFI learning model so that it resulted in the value of not being achieved in learning, considering that the experimental class I used inquiry with the teacher's little contribution. The value of unachieved experimental class I reached 66.98%. While the experimental class II was only 37.90%, this meant that the experimental class II had not had too much trouble because student activities were fully guided by the teacher.

The lower the value of ignorance in student worksheets and LO in the class given the MFI learning model, indicates a more difficult process in participating in learning activities, where the lack of teacher involvement stimulates students to be more independent in thinking. Experiment I students have a different experience, because they are given more freedom during learning than experiment II. Freedom here is the least help from the teacher, so students experience difficulties, as seen from the graph data above. However, it is these difficulties that students have that make them far use their minds in undergoing and solving problems in MFI learning activities. Students of experimental class I are more accustomed to thinking more than experiment class II. It then becomes a logical key why at the time of the creative thinking test at the end of the learning (posttest), the experimental class I has better grades than the experimental class II.

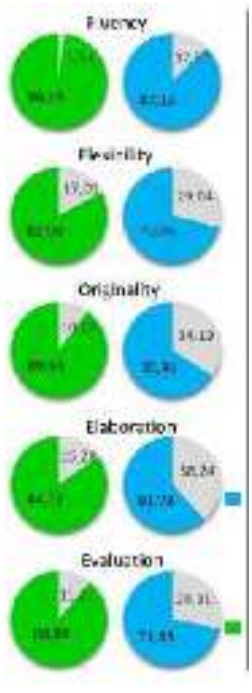
Furthermore, in the posttest test activities, the experimental class I and experiment II were given the same essay questions. Each of the five components of creative thinking contributes two questions to the whole essay question. All posttest results of experimental class I and experiment II are presented in the diagram as follows:

Figure 3. Posttest Value Graph of Creative Thinking Components in Experiment Class I and Experiment II

The way to see the success of a learning model in a class, can be seen from the achievement of the experimental class I and experimental class II of the five components of creative thinking. In the graph 4.3 a above shows the experimental class I is superior to experimental class II in each component of creative thinking.

More clearly, the achievement of each component of creative thinking in the experimental class I and experiment II is presented in diagram 1. Based on diagram 1. below it appears that the percentage of achievement of the components of creative thinking varies greatly between the components themselves and what is achieved by the classes. In the first component, namely fluency, the achievement of experimental class I after learning activities was 98.26%, while the experimental class II was 87.13%. The experimental class I was better than the experimental class II with an achievement gap of 11.13%. The achievement of the initial fluency component of the experimental class I during the pretest was 76.04%, after being given MFI learning activities for two meetings, student achievement rose to 98.26%.

The indicator on the fluency component is asking lots of questions about a problem that is happening and smoothly expressing ideas. The reason why the experimental class I has better grades than the experimental class II in the fluency component is because the Modified Free Inquiry (MFI) learning model makes the experimental class I more trained in asking questions and accustomed to expressing ideas in problem solving. Where in the MFI activities students make questions in the formulation of problems and determine ideas independently. As according to Sitiavata Rizema (2013, p. 99), MFI activities make students only get very limited guidance from the teacher. So that students strive independently to find their own solutions.



Gambar 1. Diagram Persentase Ketercapian Berpikir Kreatif

After students are accustomed to working alone, then when faced with the same problem or new situation, students are able to apply their experiences. Unlike the experimental class II with the GI learning model, students do not make questions in the problem statement. The questions in the formulation of the problem are filled in by the teacher, while students only follow instructions. So students are less able to think smoothly when asked to make their own questions in essay questions. While the experimental class I was more accustomed to making questions about a problem when asked in essay questions.

The fluency component in the experimental class I experienced a value increase of 22.22% from the initial value with an N-Gain of 0.93 which was categorized high. Whereas in the control class, the achievement of the initial fluency component was 71.69%, and the final achievement of learning was 87.13%. In this component the experimental class II only experienced a surge of 15.44% from the initial achievement, lower than the surge in the experimental class I. N-Gain experimental class II in this component also only amounted to 0.55 with the medium category. This means that the treatment of MFI learning activities in the experimental class I is better than the treatment of GI learning activities in the experimental class II. The skill of the MFI learning model in improving students' fluency abilities is better than the GI learning model.

Based on the second component data, namely flexibility, the achievement of experimental class I during the pretest was 52.78%, after being given learning activities Modified Free Inquiry (MFI), student achievement rose to 82.99% when conducting the posttest test at the end of the meeting. In this component, the experimental class I experienced a gain of 30.21% from the initial value, with an N-gain of 0.64 in the medium category. In the control class, the achievement of the fluency component at the time of the pretest was 50.74%, after being given the Guided Inquiry (GI) learning activity for two meetings, the student's final achievement at the posttest changed to 70.96%.

The N-Gain of experimental class II in this component is 0.41 with the same category as the experimental class, which is the moderate category. However, the increase in the percentage value of the experimental class II obscurity is smaller than that of the experimental class I in the same component. The increase in the percentage of achievement of experimental class II was only 20.22%, 9.99% lower than the experimental class I. The indicator on the flexibility component is to explain the benefits of pollution (unusual views) that occur in the environment and spontaneously change the direction of the mind towards a problem. The experimental class I got a higher score at posttest because during the learning activities took place the experimental class I students were trained to make many answers about the benefits of pollution but through a little discussion with the teacher than the experimental class II. With fewer teacher contributions, many student answers are found to be wrong. But on the positive side, students are more free to express their thoughts in expressing their answers. So the results of experimental class I thinking are richer

and more capable of seeing problems from a variety of different personal perspectives. However, at the end of the lesson the teacher evaluates each answer so that students can see the difference between which answers are more appropriate, and which answers are wrong. Unlike the experimental class II which is a class that has more discussion with the teacher. The experimental class II when making answers was more intense conducting discussions with the teacher, so the answers of the experimental class II looked more careful because of the disagreements with the teacher. But on the lack side, the experimental class II is not too free and independent in expressing the answers. In the students' answers more or less there is an influence from the teacher's perspective. Therefore, it is not surprising that during the posttest test, the experimental class I, which was accustomed to being free to think, was able to provide more answer options with a different perspective.

The least contribution of teachers in student learning activities becomes an important aspect of the development of students' independent thinking. As according to Utami Munandar (1999, p. 27) that one aspect of the development of student creativity is the existence of internal and external encouragement from the environment. In this case fewer teacher intervention conditions are part of an external push so that students are more independent in thinking.

Based on the data of the third component, namely originality, the achievement of experimental class I before the application of the Modified Free Inquiry (MFI) learning model was 47.22%, after being given MFI learning activities, student achievement rose to 84.38% at the end of the meeting. In this component the experimental class I experienced a jump in value of 37.15% from the initial achievement value. N-Gain experimental class I in this component is 0.70 with a high category. Whereas in the control class, the initial achievement of the originality component was 50.37%, and the final achievement was 68.75%. The increase in the percentage of achievement in this component experimental class II only experienced a surge of 18.38%, lower than the surge in experimental class I in the same component. The experimental class II N-Gain in this component is only 0.37 in the medium category, which is even less than half the N-Gain value of the experimental class in the same component. This means, in the originality component, the treatment of MFI learning activities in experimental class I is better than the treatment of GI learning activities in experimental class II.

The indicator on the originality component is to submit original ideas that have never been thought by others to solve the problem of pollution that occurs in the surrounding environment, and propose ways of managing the environment themselves well. In the implementation of activities in the classroom, both groups of students in experimental class I and experiment II are welcome to provide as many ideas as possible in solving problems and managing their environment. It's just that the experimental class II is given more guidance so that more learning time is used to confirm answers and discussion with the teacher. The answers of the students in Experiment II also provided a lot of ideas from the teacher. So ideas tend to be general. While the experimental class I used a lot of time to explore their independent answers with group friends. So that students' answers are more original because they come from their own personal and group ideas. Teachers only occasionally monitor their activities and review at the end of learning if there are errors or additions.

The lack of teacher contributions in the aspect of making ideas also gives students the opportunity to proceed in creative thinking, where the understanding of this process according to Conny Semiawan (1984, p. 9) is an activity of students trying to find new relationships, get answers, methods, or new ways of solving a problem. Based on the data of the fourth component, namely elaboration, the achievement of experimental class I during the pretest was 60.76%, after being treated with Modified Free Inquiry (MFI) for two meetings, student achievement rose to this component to 88.89% at the end of the meeting. In this component, the experimental class I experienced a gain of 28.13% from the initial value, with an N-gain of 0.72 in the high increase category. In the control class, the elaboration component achievement at the time of the pretest was 57.72%, after being given the Guided Inquiry (GI) learning activity for two meetings, the student's final achievement at the posttest changed to 71.69%. N-Gain of experimental class II in this component is 0.33 in the medium category. The increase in the percentage value of the experimental class II adherence is smaller than that of the experimental class I. The increase in the percentage of achievement of the experimental class I was 28.13%, while the experimental class II was only 13.97%, 14.15% lower than the experimental class I. This means that the treatment of the experimental class I by applying the MFI learning model to the elaboration component is better than the GI learning model given in the experimental class II.

The elaboration component indicators are having a strong sense of beauty towards the environment itself, so that they are not satisfied with a simple appearance, adding lines, colors, details (parts) to images of their own ideas, and developing or enriching people's ideas other. At the time of learning activities, the experimental class I got lower results than the experimental class II. Based on the results of the LKS experimental class I got an achievement value of 42.19% while the experimental class II got an achievement value of 53.31. Likewise, based on the student's LO assessment, the experimental class I got an achievement score of only 75% while the experimental class II achieved a score of 93.75%. In this component students get instructions for developing ideas and visualizing their ideas. The dick class that gets more supervision is guided by the teacher in the procedure of adding ideas and visualizing ideas. While the experimental class II carried out the task more independently, causing the results of the experimental class I to be lower than the experimental class II. The results of the experimental class I work are still many shortcomings and errors. the additional ideas of the experimental class I did not hit the target because the answers resulted from their thinking independently. Nevertheless at the end of the lesson the teacher aligns the answers of the experimental class I which is correct and which needs to be improved and developed. So the results of that at the posttest experimental class I was able to learn from previous activities, and the results were higher than the experimental class II.

Based on the data of the fifth component, evaluation, the final achievement of the experimental class I was 90.28%, while the experimental class II was only 58.82%. The experimental class I was better than the experimental class II with a final achievement difference of 31.45%. In the experimental class I, the achievement of the initial evaluation component at the time of the pretest was only 43.06%, after being given the Modified Free Inquiry (MFI) learning activity twice, the student achievement in this component rose dramatically to 90.28%.

The evaluation component in the experimental class I experienced the best jumps compared to the other components. The value of the evaluation component achievement spike was 47.22% from the initial value with N-Gain of 0.83 with a high category. Whereas in the control class, the increase in the achievement of the evaluation component was only 16.03%, with a detailed achievement of the initial evaluation component of 46.69% and the final achievement of 58.82%. The N-Gain of the experimental class II in this component was only 0.23 with the information as the lowest increase among the other components in the experimental class II. N-gain component itself is categorized as low. The experimental class I showed the best achievement improvement on this component, while the experimental class II actually showed the worst increase. This means that the treatment of the Modified Free Inquiry (MFI) learning activities in the experimental class I for the evaluation component, is far better than the treatment of the Guided Inquiry (GI) learning activities in the experimental class II. The skill of the MFI learning model in improving student evaluation skills is better than the GI learning model.

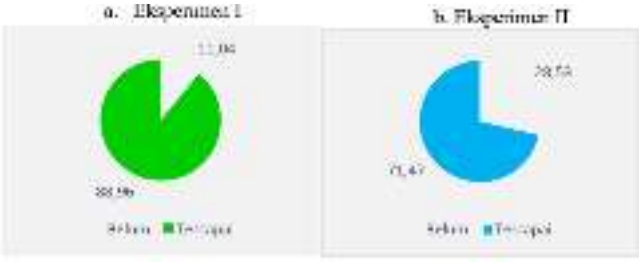
Indicators in the evaluation component are giving consideration to a solution on the basis of their own point of view based on rational reasons, and designing a work plan of ideas made by students. The results of student LKS achievement in the experimental class were 34.38% while the experimental class II was 66.54%. Then according to the results of observers in the activities, the experimental class I gained 87.5%, while the experimental class II gained 100%. In the learning activities of the experimental class I students gave their considerations based on their own point of view which were sometimes still not suitable, and their work plan designs were still lacking. While the experimental class II received full guidance so that it received a perfect score of 100% achievement. Students of experimental class I who scored lower had difficulty in following learning instructions, so they learned to improve their answers. At the end of the learning activity the teacher provides responses and directions so that answers that are still wrongly corrected. At the time of the posttest test the experimental class obtained a score that was actually higher than the experimental class II. The value of the evaluation component achievement spike was 47.22% from the initial value with N-Gain of 0.83 with a high category. Whereas in the control class, the increase in the achievement of the evaluation component was only 16.03%, with an N-gain of 0.23 in the low category.

Referring to the elaboration of the data above, it is clear that the MFI approach is better in raising students' creative thinking skills in the evaluation component. This is because the nature of the evaluation component is to evaluate yourself, whether it is considering ideas, ideas, plans and so forth. The experimental class I in learning activities evaluates a problem, idea and so on more independently. So when finding problems that need evaluation, the experimental class I is more accustomed to conveying their considerations. This is justified by the opinion of Marzano, et al in the journal Ida Bagus Putu Arnyana, with the title "The Effect of Application of Innovative Learning Strategies on Biological Learning Against the Skill to Think Creative High School Students", No. 3, TH. XXXIX, 2006, p. 499-500, that one important aspect of creative thinking is the need for internal evaluation rather than external. Where the internal evaluation activity is accustomed to be done by the experimental class I, while the experimental class II still requires the activity of external evaluation with the help of the teacher.

The data above is the data value of the percentage of achievement of all components of creative thinking at the end of learning (posttest). If the percentage value of the achievement of the five components of creative thinking are fluency, flexibility, originality, elaboration, and evaluation are put together, it will be the average value of the percentage of achievement of creative thinking in general. The average value of the percentage of final achievement obtained by experiment class I and experiment II is presented in the following diagram:

Figure 4. Percentage Diagrams of General Thinking Deficiency in General Thinking

Diagram 4 shows the percentage of achievement of all components of creative thinking differ between the two classes. The achievement of experimental class I was 88.96%, while the experimental class II was 71.47%. The average value of the percentage of first class students' obscurity was 55.97, after being given two Modified Free Inquiry (MFI) treatments, student achievement rose to 88.89% at the end of the meeting. N-Gain average of experimental class I is 0.75 with high category. While the experimental class II, the average value of the initial percentage of achievement was 55.44%. After being given Guided Inquiry (GI) treatment for two meetings, student achievement rose to 71.47% at the end of the meeting. N-Gain average of experimental class II is only 0.36 with the medium category. From these data it can be seen that the N-Gain in the experimental class II is smaller, even less than half the N-Gain achieved by the experimental class I. This means that the increase in the average value of the creative thought classness of the first thought of the experimental class I is more significant than the increase in the average value class experiment II. Thus it can be concluded that, the MFI learning model has a significant effect on improving students' creative thinking abilities in the experimental class I.



The reason why the experimental class I has a higher spike value, higher N-Gain, and better achievement than the experimental class II, because during learning activities, the experimental class I is far better trained to use their thinking skills to deal with difficulties more independent. Where according to Ahmad Susanto (2014, pp. 115-117), stimulus in the form of problems prepared by the teacher to be solved by students is part of the steps that can bring up the creative process in a person. The independence of students in solving problems is also intended as a manifestation of "Extending effort", namely giving broad opportunities to students in solving problems.

Another reason why the experimental class I got higher creative thinking scores in each component was because the experimental class I had many difficulties in learning. That is because the MFI learning model is a new model that is not accustomed to being applied to students, which is precisely the reason students are able to have better thinking skills.

This new condition according to Winkel (1991) in Evelin Siregar (2010, p. 12), is an extreme event that plays a role in a series of internal events that take place experienced by students so that students are able to learn. an indication of the success of the learning process, which is in the form of changes in new behavior as a whole, as a result of the individual's own experience in interaction with his environment. Where according to Aunurrahman (2010, p. 35) that changes in learning outcomes are marked by changes in thinking skill.

The lower the value of the neatness in student worksheets and LO, this means that students have greater difficulty. The low level of ignorance experienced by experimental class I during learning activities indicates that there is a more difficult process in participating in learning activities, which from the beginning are set to stimulate students to be more independent in thinking. Students get a different experience than usual, because they are given more freedom during learning, and teacher involvement is less than usual. so students have difficulty. However, it is these difficulties that students get that make them far use their minds in living and solving problems in learning activities Modified Free Inquiry. It then becomes a logical key why at the time of the creative thinking test at the end of learning, the experimental class I has better grades than the experimental class II. Because they are accustomed to think more beforehand.

The limited contribution of teachers in student learning activities makes them try more, and gives students more freedom to determine for themselves how they go through learning activities, and use their creative thinking in the face of difficulties. While the experimental class II tends to focus on following learning instructions and relies more on guidance by the teacher. So the development of their thinking is less developed independently. As Aunurrahman (2010, p. 38) states that, a learning model where the teacher does not give too many instructions or direction but emphasizes the more active student thinking will be able to encourage the acceleration of changes in one's thinking skill.

This fact is also evidenced by the t-test analysis at the significance level of 5% ($\alpha = 0.05$) which was carried out on the average posttest of experimental class I and experimental class II. Obtained the results of the t count of 8.50 is greater than the table of 1.99. Thus Ha is accepted and H0 is rejected. So it can be concluded that, in the posttest there are differences in the skill to think creatively between students who are taught with the learning model Modified Free Inquiry (MFI) and Guided Inquiry (GI) on the concept of environmental pollution.

E. CONCLUSION

Based on the results of research conducted, t-test results obtained at the posttest, namely the t-test value of 8.5006> t-table of 1.99, so it can be concluded that in this study there are differences in the skill to think creatively between students taught with the learning model Modified Free Inquiry (MFI) and Guided Inquiry (GI) on the concept of environmental pollution. The average score of the creative thinking skill obtained by the experimental class I (MFI) was 88.96 with a very good category, while the average value of the experimental class II (GI) was 71.47 with a good category. Both classes adrift of values of 17.49. The average N-Gain of the experimental class is 0.75 with the high category. While the average N-Gain value of experimental class II is 0.36 with the medium category. Both classes have an average value difference of 0.41,

which even when compared to the N-Gain value of the experimental class II, the difference value itself is much greater. This shows, that the experimental class I students increased the skill to think creatively more than the experimental class II.

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IN-SERVICE PHYSICS TEACHERS CRITICAL THINKING SKILLS AND THEIR BEHAVIOR IN ONLINE LEARNING: PREPARATIONS FOR THE 21ST CENTURY TEACHING AND LEARNING IN ERA. 5.0

1) Heni Safitri, henis@student.upi.edu
2) Ida Hamidah, idahamidah@upi.edu
3) Wawan Setiawan, wawan@upi.edu
4) Ida Kaniawati, idakaniawati@yahoo.com

Correspondence: henis@ecampus.ut.ac.id

Abstract

Article presents critical thinking skills of in-service physics teachers (IPTs) and their behavior in online learning as a preparation for 21st century learning in 5.0. This research is a survey that describes the profile of IPTs critical thinking skills and their behavior in online learning. This survey involved 46 IPTs of four semester at Open University in Indonesia. Data related to IPTs' critical thinking were collected through the General Critical Thinking Test by Lauren Starkey, while the data related to IPTs' critical thinking skills were collected through tests of critical thinking skills. Data were analyzed by using quantitative descriptive technique. Based on the results of the data analysis, it was concluded that generally the IPTs' critical thinking skills can be categorized dominated as low, while their behavior in online learning dominated only read and view the activities. The result of critical thinking skills and their behavior in online learning will be used as a reference in developing a problem based learning in the online physics learning context.

Keywords: Critical thinking, online learning, problem based learning, IPTs behavior

A. Introduction

One of the goals of education in the 21st century is to prepare students to have a deep understanding of knowledge and apply critical thinking effectively to face challenges in every changing society [1, 2]. To address the challenges facing the global community, the education system can change the values, attitudes and behavioral patterns to bring about social change [3]. In the era of 5.0, technology was not only used in solving problems but also prepared to build capabilities and skills that adapt to the technology itself. One of these skills is critical thinking.

Critical thinking is a skill that can be used well in solving problems in difficult and effective situations and in intense communication with others [4] Critical thinking skills can help students have a critical view of the problems that occur in society and try to overcome them [1]. Critical thinking skills are the ability to think reflectively and skillfully assess, so students can decide kinds of information that appropriate and kinds of actions should be taken during reasoning and problem solving [2]. The term critical thinking skills refers to many skills such as identifying, analyzing, synthesizing, and evaluating information for decision making, and disposition to apply skills [5]. Critical way of thinking is a way of thinking in a complex, tiered, and systematic way. This ability can be trained in the learning process in the classroom. That is, by providing

space for students to discover the concept of activity-based knowledge. This can encourage students to build critical thinking.

Models that can teach and develop critical thinking, one of which is problem based learning. Some researchers suggest that problem-based learning can improve critical thinking skills, because it contain activities refers to interpretation of collected data, predicting results, drawing conclusions, and presenting results [6]. PBL approach improved students' critical thinking by teaching them explicit critical thinking learning process skill (i.e., evaluate all the relevant information and knowledge to solve a particular issue; thus by this phase the application of critical thinking subset will occur, making an inference, making an assumption, deduction, interpretation and also evaluation of argument). Other research likewise suggests that activities that expose students to use of critical thinking skills such as discussion in class and in a small group, experimental analysis, data management and problem solving, are capable of increasing their critical thinking skills [7].
This research analyzes level of critical thinking of IPTs' who take online learning. However, it also explains how their behavior in online learning as well as opportunities in developing problem based learning in online learning. The results of this study are used as a basis for developing online learning which is expected to develop critical thinking skills.

B. Research Methods

This is research a survey research focused to describe the profile of IPTs' critical thinking skills and their behavior in online learning. Survey involved 46 IPTs (M = 20, F = 26) who registration course at the Open University in Indonesia. Data were collected through the test that consist of the critical thinking test. Instrument to investigate IPTs' critical thinking adopt some of the standard Critical Thinking Test by Lauren Starkey (10 multiple choice questions). IPTs' critical thinking skills was interpreted on the Lauren Starkey indicator [8]. Instrument of CT skills was synthesized based on its characteristics formulated by Facione [9], data of CT skills were analyzed by using quantitative descriptive analysis technique. IPTs' behavior in learning is observed for one semester, analysis is done using data reports contained in the Moodle 3.5 LMS application.

C. Result and Discussion

3.1 Profile IPTs' critical thinking skills

Result of data analysis shows that the profile of IPTs' critical thinking skills can be shown in figure 1.

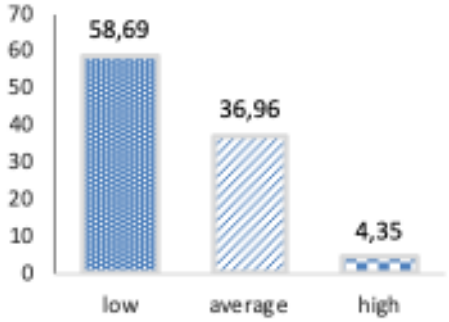

Figure 1. IPTs' critical thinking skills profile.

Figure 1 shows the 4th semester IPTs' critical thinking skill at Physics Education Program. As seen on figure 1, there are 58,69% critical thinking skills with low category that has not been able to answer questions relating to interpretation, analysis, evaluation, inference and explanation. Most of subject cannot answer three indicators of critical thinking skills, i.e. build basic skills, conclude and organize strategies and tactics. This finding is in line with previous research results that students have weaknesses in explaining, conclusion and evaluating [6, 21, 22, 23, 24]. To improve critical thinking skills students, four strategies are needed in the learning process that is: enough time to think about problem solving, organize groups to discuss problem solving, presentations to discuss their projects, and reflection exercise [6]. Characteristics of learning methods have an important role to improve students' critical thinking skills required to respond or answer.

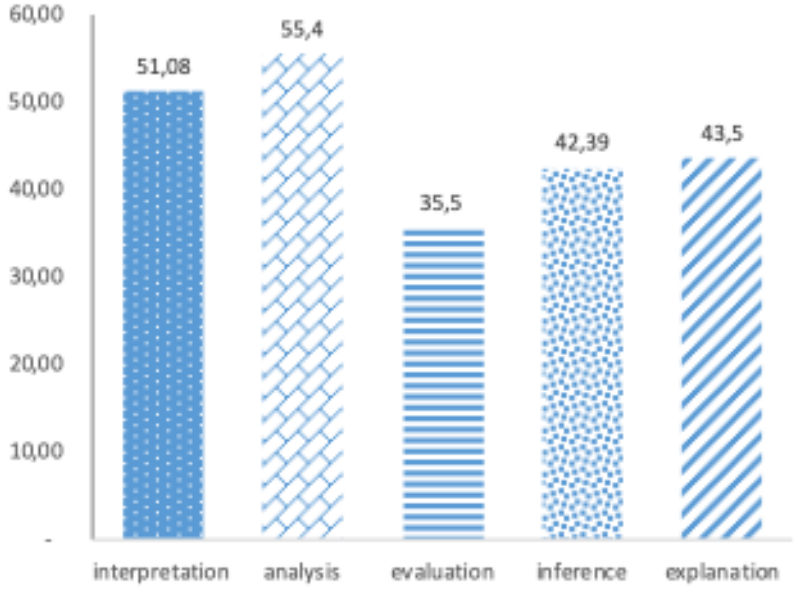

Figure 2. Level of critical thinking skill by indicator critical thinking

Based on the graph in Figure 2, students still have a level of critical thinking below the average. Especially for evaluation, inference and explanation indicators. In the evaluation indicator only 35% of students can answer, which indicates students have not been able recognizing factors that make the source of information credible and judging whether an argument is plausible or false.

3.2 IPTs' behaviour in online learning

The online learning referred to in this study is an online tutorial held by the Open University for eight meetings. One meeting lasts for one week. Activities in the tutorial consist of giving material from a tutor to a student eight times, assigning at least three tasks that must be done by the student and eight discussions that discuss the topic to be discussed.

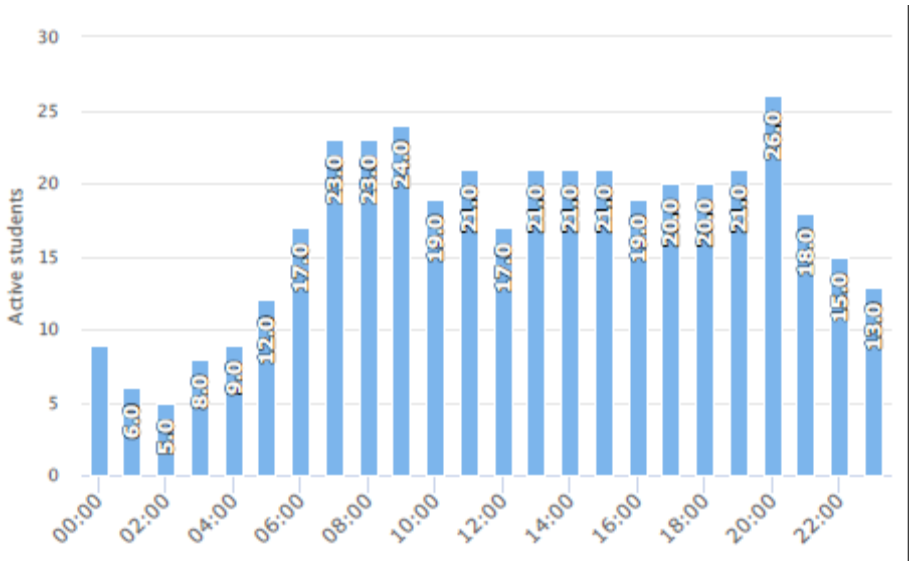

Figure 3. Active student in online learning

Based on figure 3, it can be explained that the most active students are 56.52% or 26 students in online learning before night or in the morning before doing activities because they are student teachers.

3.3. Opportunities and Challenges of Problem Based Learning in Online Learning

There are literature support how problem based learning and online learning can be combined [10, 11, 12, 13, 14], a combination often called PBL online. Promote of development problem solving, critical thinking and the ability students to use technology is argument supporting this combination; emphasizing the superiority of PBL as a process promoter, as opposed to content [15]. Initially, technology was only used by teachers for administrative purposes, or for information dissemination, but because teachers became more familiar with the technology, they sought to explore the potential of ICT in providing collaborative inquiry through online forums. Some authors report combining work-based constructivist education practices such as PBL with online learning [14]. Integrating PBL with online learning consists of combining pedagogy (in this case PBL) and providing content partially, or entirely, online via the Web. The main feature of PBL online is online collaboration that occurs as part of learning activities [15], and it focuses on the discourse of developing team-oriented knowledge, and reducing teacher-centered learning [16]. Online PBL involves students who work collaboratively in real time, or in unison, and collaboration tools such as shared whiteboards, video conferences, group searches, emails, and forum space are important for effective use of PBL online. Students can learn through the use of web-based materials such as texts, simulations, videos, and demonstrations [17]. In some cases, no printed material is provided, and students can only access material directly from the web. In other cases there is a focus on certain websites, where students are guided by the use of strategic issues, online material, and specific links to core material, instead of sending PBL only online [17]. Many practitioners, educators and researchers pay attention to whether online PBL can adversely affect the existence of face-to-face PBL, because online PBL might be considered more cost-effective [15]. One concern here is practitioners' anxiety that online PBL can conflict with PBL's intentions in general, because some forms of online PBL tend to put more emphasis

on solving clearly defined problems, which means online PBL may be less successful in encouraging students to become independent investigators. The second concern is that learning in online groups can hamper students' capacity to work through difficulties and team conflicts in the way this occurs in PBL face-to-face [15]. However, online PBL is an approach that emphasizes complementing, building on, and improving what already exists, rather than trying to replace the pedagogy of face-to-face learning [18,15], and it was reported that PBL online promotes good cognitive involvement among students [18]

D. Conclusion

Research finding level of critical thinking IPTs' in online learning mostly low score. The lowest indicator of level critical thinking in online learning is evaluation. From this research to prepare for learning in era 5.0 that very important to design online learning based problem based learning to develop IPTs' critical thinking skills.

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EMPOWERING STUDENT'S HIGHER ORDER THINKING SKILLS THROUGH PROBLEM BASED LEARNING

Neli Siti Aisah
Dadang Dahlan
Pendidikan Ekonomi
Sekolah Pasca Sarjana
Universitas Pendidikan Indonesia
nelisitiaisah@upi.edu
dadangdahlan@upi.edu

ABSTRACT

Higher Order Thinking Skills (HOTS) is a skill that must be possessed by students today. From the results of observations, it shows that students of SMAN 8 Bandung do not fully have HOTS in Economics lessons, especially for class X MIPA who choose Economics subjects as subjects of interest. One of the learning model that can train HOTS abilities is the Problem Based Learning (PBL) model. The purpose of this study is to analyze whether PBL models can improve HOTS abilities of students compared to using conventional models,in this case is the discussion model. The method used in this study is Quasi Experimental with Non Equivalent Control Group Design. Purposive sampling technique was used in the selection of samples namely Class X MIPA 6 as an experimental class which amounted to 34 people and class X MIPA 7 as a control class amounting to 36 people. The results of the post test analysis showed that HOTS value data of students were normally distributed and homogeneous so that Parametric inferential statistical tests were conducted one way ANNOVA. Hypothesis test results show that the learning method variable is obtained F value = 11.101 and p = 0.002 <0.05 means that for the first hypothesis test is accepted, that there are differences in critical thinking skills of students who use the problem based learning method with discussion methods. Based on N-Gain higher order thinking skills, it can be concluded that there are differences in higher order thinking skills of students before and after using the Problem Based Learning method in the experimental class with a high categorized increase. It can be concluded that the PBL learning model has an effect in increasing HOTS of students.

Keywords : Problem based learning (PBL), higher order thinking skills (HOTS)

A. INTRODUCTION

In recent years, higher order thinking skills (HOTS) is a topic of discussion that are popular in the world of education and learning in Indonesia (Hand, 2018). Referring to taksonomy Bloom, HOTS is described as a wedge between the top three on the dimensions of cognitive ability (to analyze, evaluate, create), and three levels on the dimensions of knowledge (conceptual, procedural, metacognitive) (Anderson & Krathwohl, 2001, Thompson, 2008). Therefore, HOTS is measured by using the assignment, includes activities to analyze, evaluate, and create conceptual

and procedural knowledge, or metacognitive. This means familiarizing students with HOTS activities important for assist students in completing the latest issue, adjust students with a new atmosphere, and make a decision on an issue. (retnawati, Djidu, Kartianom, Apino, & Anazifa, 2018).

With the demands of this HOTS, in the UN in 2018 the Indonesian government has begun to include about the concept of HOTS. The application of the model about the Higher Order Thinking Skills (HOTS) on some subjects SMA / MA perceived too hard, got a lot of response from the examinee and become viral on social media. HOTS model of policy implementation problems meant that students have the ability to think and involves a high level of reasoning, so as to hone critical thinking skills, logical, reflective, metacognitive, and creative. This implementation has become the policy of the Ministry of Education and Culture to implement questions that encourage students to do reasoning, not just understanding and application. (Bsnp-indonesia.org, 2018).

Problems with the type of HOTS train students to think in terms of levels of analysis, evaluation, and creative. In 2018 the National Examinations have been given about the type of HOTS about 10% which is 6 or 7 questions. But in fact, many students still feel difficulty in solving HOTS, as mentioned in the Antara News on the 8 May 2018 the ministry of education and culture said as many as 40% of students difficulty answering questions that require reasoning power high (HOTS) on the exam National 2018 . Whereas Kemendikbud will plan to increase the portion about the HOTS for National Examination junior and senior high school next year. (Mahmudah, 2018).

SMAN 8 Bandung is one of the schools that have implemented the curriculum in 2013 and frequently conduct trainings on HOTS, but its implementation in the classroom is limited. Economics is not only subjects taught in class majoring in social studies, but also the subjects of cross interest in majoring in science. The results show the ability HOTS observation of students majoring in science class on economic subjects are still lacking, this may be due to teachers not yet fully using model appropriate to the curriculum in 2013, one of which is a model of Problem Based Learning.

Several studies have shown that the PBL models effected HOTS of students. The purpose of this study was to measure if there is significant influence HOTS of students who are taught using a PBL models and conventional models.

B. RESEARCH METHOD

The method used in this study is quasi-experimental (Quasi-Experimental) with a pretest-posttest design using Non-Equivalent Control Group. This research was conducted by applying the learning to use the PBL in the experimental group and the control group discussion method. Learning activities performed five times at each class meeting that started by giving the pretest at the beginning of the first meeting and post-test at the end of the fifth meeting.

This study was conducted in March - April 2019 in SMA 8 Bandung. The population in this study was the students of class X MIPA 6 and X MIPA 7 which consists of 70 students. The sample in this study were two classes of class X MIPA 6 (experimental group) and class X MIPA 7 (control group) were respectively numbered 34 and 36 students. Sampling in this research using purposive sampling technique (Sugiyono, 2012: 68).

C. RESULT AND DISCUSSION

The results of the data analysis of this study consisted of normality and homogeneity analysis using SPSS computer software application with version 23 test measures normality and homogeneity of data:

Normality Test Results

Posttest data normality test results of higher order thinking skills students experimental and control classes can be seen in the table below:

table 1.1
Normality Test Results Higher-Order Thinking Skills Students Experiment Class and Class Controls

One-Sample Kolmogorov-Smirnov Test

		EXPERIMENT	CONTROL
N		34	36
Normal Parametersa, b	Mean	81.3235	72.9167
	Std. deviation	6.88750	9.51503
Most Extreme Differences	Absolute	.203	.226
	positive	.150	.117
	negative	-.203	-.226
Test Statistic		.203	.226
Asymp. Sig. (2-tailed)		.822	.283

a. Test distribution is Normal.
b. Calculated from data.

Source: SPSS Data Processing One Sample Kolmogorov-Smirnov Test

Table 1.1 above shows the significance probability value normality test experimental classes and control classes should be above 0.05 or> 0.05. Based on trial results of data posttest experimental class and control the result that both classes have a calculated value is higher than the value of 0.05 means the table above both classes in the study came from a normal distributed population,

Homogeneity Test Results

The results of the data homogeneity test posttest experimental class and control at a high level thinking skills of students can be seen in the table below:

table 1.2
Homogeneity Test Results Class Experiment and Control

Test of homogeneity of Variances

HIGH LEVEL THINKING SKILLS

Levene Statistic	DF1	DF2	Sig.
1,194	1	68	.290

Source: SPSS Homogeneity Test Results Levene

Table 1.2 above shows the significance probability value homogeneity experimental class and control must be above 0.05. Overall the study Obtained from the homogeneity test posttest in the experimental class and the control is above the 0.05 means that the data is equal to 0.290 has shown that higher order thinking skills in experimental class and control class has variance between groups is homogeneous.

Results N Gain

Once known the results of tests of normality and homogeneity, then the next measurement of the effectiveness of the influence of the use of methods *Problem Based Learning* the experimental class. Based on the calculation of the score pretest and post-test, the average value Obtained gain understanding of the concept of class experiments tabulated in Table 1.3

table 1.3
N-Gain Higher-Order Thinking Skills Learning Methods Classroom Experiment*Problem Based Learning*

Data	The average scores	Enhancement	N-Gain	N-Gain Index	Interpretation
Pretest	30 441	50 882	0726	G> 0.70	High
Post test	81 323			G 0.30 <g <0.70	moderate
				G ≤ 0.30	Low

Source: Appendix

From Table 1.3 provides information that an increase in higher order thinking skills of students before and after using the method *Problem Based Learning* the experimental class of 0.726. When compared with the index gain g <0.70 then increased understanding of the concept of high categorized. Based on the N-gain higher order thinking skills experiments it can be concluded that there are differences in higher order thinking skills of students before and after using the method *Problem Based Learning* at the experimental class increase high categorized.

D. CONCLUSION

This study proves that problem based learning models could increase higher order thinking skills. Based on the results of the first hypothesis test that has been analyzed and obtained test F =11.101 and p = 0.002 <0.05 means to test the first hypothesis is accepted that there are differences in higher order thinking skills of students using problem based learning models with the method of discussion. Higher order thinking skills is higher in the experimental class compared to the control class that uses the discussion models.

E. ACKNOWLEDGEMENT

This research and some other research has shown that problem based learning models could empowering student's higher order thinking skills. Teachers should have a capability to know and practiced problem based learning at every learning activity, with various method. Hopefully there will be any workshop or something to improve teachers skill of practicing problem based learning in order to empowering student's higher order thinking skills.

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TEACHER PEDAGOGIC COMPETENCE IN 21ST CENTURY

Nadhirotun Nadliroh[1] and Laksmi Dewi[2]
nadhirotun@upi.edu , laksmi@upi.edu
Universitas Pendidikan Indonesia

ABSTRACT

A purpose of educational sector was to provide quality education service for every student. The great transformation which has been occurred in 21st century delivered effects in social, economic, political, and cultural aspects. This development affected on educational sector especially in field of schooling. The advancement of technology and information was able to improve easier facility to acquire knowledge anytime and anywhere. The source of student learning was not merely from teacher. Consequently, the teacher must be able to create interesting and effective learning activity. This article aimed to identify teacher skills which were needed in 21st century, since the teacher must innovate creating their students to be able compete with global society. Thus, this article would discuss about skills that could be owned by the teacher in 21st century. One of skills was the teacher must be able to design educational layout and comprehensive learning in various aspects. The teacher in 21st century was not merely the teacher who could teach their students well, but the teacher must be able to be lifelong learner who always attempted to improve effectiveness of learning process by considering learning environment aspects that consisted of classroom which supported the learning process and other supporting facilities that could support student activity in their learning activity. Further, this research employed method of literature study from various sources. The pedagogic competence covered to following efforts: 1) to know student characteristics, 2) to master learning theories and educative learning principles, 3) to develop curriculum, 4) to conduct educative learning activities, 5) to develop student potential, 6) to communicate with students, and 7) to give assessment and evaluation. Due to those explanation, it was clearly that the pedagogic competence was very important for the teacher to handle the students. The teacher was not only demanded to teach, but also to develop student personality in whole.

Keywords: Pedagogic Competence, Teacher, Learning, 21st Century

A. INTRODUCTION

Development of learning approach paradigm automatically changes interaction patterns between teacher and student. The form of identification, knowledge, and interpretation from pedagogic principle are regarded as pre-requirement or basis of teacher action (Mihaela, 2014). The learning activity is not only depended on the attitude that performed by students, but also from the teacher attitude. The eduscational reformation will be useless without any efforts which aim to facilitate this teacher progress. The progress of teacher competence is an effective outcome of professional development. It not only requires to decide policies, but also to perform continuous and consistent effort within professional development and teacher perception (Fullan, 1982; Guskey & Sparks, 1996; Mezirow, 1991, 1994 in Gatt: 2009, page. 164). The professional development is a significant element in realm of reformation and improvement of curriculum and teaching (Begoray & Morin, 2002; Brown, 1995; Dilworth & Imig, 1995; Leonhard, 1999 in Gatt: 2009, page. 164). Moreover, the development of teacher professionalism becomes an effective key to the class, attitude, teacher confidence, and student learning output.

In fact, the teacher pedagogic belief underlies teacher attitude in the class. The pedagogic understanding brings change to flexible learning atmosphere and learning behavior that are appropriated to learning context and innovative teaching behavior (Mihaela: 2014, page. 1006). According to Government Regulation 74th 2008 regarding to teacher, it has been stated that the pedagogic competence refers to teacher competence in student learning management. Suyanto & Hisyam (2000: 27) has demonstrated that the mastery of pedagogic competence will affect to output which is indicated by exam or test result. Therefore, the teacher should perform well because their position in educational institution in micro level (school) is strategic and plays role in the process of education and schooling.

The era development must encourage the society to adjust and develop appropriate competence to the needed qualification in order to maintain self-defense. Anna Rosefsky Savendra & V. Darleen Opfer has proposed that the student needs seven skill to survive, as they are 1) critical thinking and problem solving, 2) collaboration and leadership, 3) activeness and adaptation ability, 4) initiative and entrepreneurship, 5) effective written and verbal communication, 6) information access and analysis, 7) curiosity and imagination. Many terms are used to describe a variety of skill that is needed in 21st century, but many of them have focus on similar kind, complex thinking, learning, and communication skill which demand to high level of thinking skill and complex communication ability (Saavendra: 2012, page. 8).

Those seven skills can be achieved through education where the teacher acts as a facilitator who must be able to discover and develop student ability to have skills as they need through a proper series of learning management to student characteristics. Furthermore, the teacher is able to design instruction in many purposes, so the student can learn from and with other people, develop their skill to work in team, and build other skills of 21st century. The student can discuss concepts either in pair or group as well as share what they have understood to all members of class (Saavendra: 2012)

B. LITERATURE STUDIES

1. HOW IS THE TEACHER PEDAGOGIC COMPETENCE IN 21st CENTURY?

Pedagogic is etymologically defined from Greek's word "paedos" which means a boy and "agogos" which means to deliver and guide. Hoogveld in Sadulloh (2010:2) has stated that pedagogic as a science of how to learn problems of children guidance to particular purposes.

This definition refers that the pedagogic competence is an essential and fundamental instructional-educative competence (teaching and educating) for teacher to perform their task in teacher profession, particularly to educate, teach, guide, train, assess, and evaluate the student (Irwantoro & Suryana: 2015, page. 3).

Pedagogic as a scientific educational theory refers to a science of education which is able to lead educating activity to general objectives and purposes for society (children) who are not mature yet. Due to the fact that there are no children who may reach to maturity over their own effort or learning (Rasyidin: 2016, page. 2). Lavenged in (Rasyidin: 2016, page 5) has asserted that pedagogic is a science which not only examine the objects, but also educational issues which useful to build social relation between the teacher and student.

Pedagogic competence is defined as teacher competence which is related to theoretical mastery and application process in order to know the object condition or essence, also to learn how to act.

The result of social, physiological, psychological science development are benefitted in pedagogic science which function to study pedagogic science theoretically as a part of pedagogic and practical science. It refers to the way to implement value and its system to children's education. Next, theoretical pedagogic is not limited to objective empirical experience, but it focuses on science of perception world in humane supervision (Rasyidin: 2016, page. 44). Pedagogic is an empirical study because it aims to examine human experience, in this context is educational situation (Rasyidin: 2016, page. 45). The variable of educational phenomenon is not empirical in objective-positivistic meaning, but it is full of human values and interest. Pedagogic not only talks about children as an individual and educated object, but also children factors in appropriate situation (Rasyidin: 2016, page. 47). It is different to adult, the newborn baby or even children in the maximum of four years old is not able to sue their right to acquire education. Thus, the education for children is human right that must not be violated, while for the adult, education is their right which needs to form of sacrifice (Rasyidin: 2016, page. 50).

On the other hand, the science of pedagogic content is referred to a study which provides teaching basis. It is regarding to teaching study and different style of implementation to solve practical problems in teaching process. Moreover, it covers to work program in several fields like

curriculum planning, assessment, reflective teaching, classroom management, children teaching, four skills teaching, and many others (Richards: 2010, page. 105).

According to pedagogy, the object of educating and educational theory are regarded as educational situation. Micro education, relation between adult and children. Besides to educate, the teacher needs to learn and develop their selves to educative communication in learning context (Janawi: 2012, page. 65). The formulation of pedagogic competence in Government Regulation 19th 2004, about National Standard of Education, specifically in article 28 paragraph 3 has expressed that the competence is a capability to manage student learning, which covers to: (1) understanding to the student, (2) learning plan design and implementation, (3) evaluation of learning output, (4) student development to be able to actualize their various potentials. Furthermore, the pedagogic competence is defined as an ability to manage student learning as these following aspects:

a) Comprehension on educational insight or base,
b) Understanding to student competence,
c) Curriculum or syllabus development,
d) Learning plan,
e) Utilization of learning technology,
f) Evaluation on learning process and output,
g) Encouragement on student to actualize their potentials.

Those competences are not acquired in sudden, but it requires to continuous and systematic learning effort, either on pre teacher profession (teacher candidate education) or during the profession, which is supported by useful teacher skill, interest, and potential from each related individual.

Here are the functions of pedagogic competence:

a. Competence to carry out learning and teaching process

To carry out the process of learning and teaching is a step of learning program that has been arranged. In this activity, it requires competence in the form of teacher activeness to create and raise student learning interest and activity due to the learning plan design. On this step, the knowledge of learning and teaching theory and knowledge about the student, the mastery or skill

of learning technique, for instance: teaching principles, teaching media utilization, teaching method implementation, and assessment skill of student learning output.

Yutmini, 1992 (in Luluk & Pudjawa, 2013) has stated that the requirements of competence which must be owned by the teacher in order to practice learning and teaching process consist of: (1) to employ learning method, learning media, and exercise material which is appropriated to teaching purpose, (2) to demonstrate subject mastery and teaching equipment, (3) to communicate with the student, (4) to demonstrate a variety of teaching method, and (5) to carry out evaluation of learning and teaching process. This research finding is similar to the research finding done by Harahap, 1982 (in Luluk & Pudjawan, 2013) which has stated that the teacher competence to carry out teaching program must cover up to the following competences: (1) to motivate student learning since the lesson opening up to closing, (2) to guide teaching goals, (3) to provide subject material with relevant methods according to teaching goals, (4) to stabilize student learning, (5) to utilize good and proper teaching media, (6) to give student counseling and guidance, (7) to improve learning and teaching program, and (8) to conduct learning assessment result.

In the implementation of learning and teaching process which is concerned to learning management, delivery of subject material must be well-planned and systematic, then the teaching goals can be mastered by the student effectively and efficiently. Those competences that must be owned by the teacher to implement learning and teaching activity are indicated from the teacher's way to identify student's initial characteristics and competence, next, the teacher should be able to diagnose, assess, and respond to every change of student behavior. The Department of National Education, 2004 (in Luluk & Pudjawan, 2013) has asserted that the competence to carry out learning and teaching process covers to: (1) to open the lesson, (2) to present subject material, (3) to utilize media and method, (4) to benefit property, (5) to apply communicative language, (6) to motivate student, (7) to organize activity, (8) to interact with student communicatively, (9) to conclude the lesson, (10) to give feedback, (11) to give assessment, and (12) to arrange time. Therefore, it can be proposed that to carry out learning and teaching process is an activity where the human relation is existed and aimed to help student development and boost student engagement to the lesson.

b. Competence to practice evaluation on learning and teaching process

The evaluation means as a process to determine how good the program or activity is applied in order to achieve predetermined goals. Commite in Wirawan (in Pudjawan, 2013: 19) has defined that the evaluation is an inseparable part from every human effort, the good evaluation will produce educational comprehension and improvement, while the wrong evaluation will harm education.

The Department of National Education, 2004 (in Lubuk & Pudjawan, 2013:19) has said that the competence of student learning evaluation must be covered to: (1) ability to select student exercise according to difficulty level, (2) ability to select student exercise according to differentiation level, (3) ability to fix invalid exercise, (4) ability to check student answer, (5) ability to classify evaluation result, (6) to process and analyze evaluation result, (7) ability to interpret tendency of evaluation result, (8) ability to determine exercise correlation based on evaluation result, (9) ability to identify variation level of evaluation result, (10) ability to conclude from evaluation result in clear and logical statement, (11) ability to arrange follow-up program based on evaluation result, (12) ability to classify student ability, (13) ability to identify follow-up needs based on evaluation result, (14) ability to carry out follow-up activity, (15) ability to evaluate follow-up result, and (16) ability to analyze evaluation result of follow-up program. Based on those explanation above, the pedagogic competence is reflected from these indicators: (1) ability to plan learning and teaching program, (2) ability to carry out interaction or manage process of learning and teaching activity, and (3) ability to conduct evaluation.

Richards: 2010, page. 115 has brought the example of good teacher's pedagogic reasoning skill that can enable them to perform these actions:

1) To analyze lesson potential and identify methods which can be used as teaching resources
2) To identify particular purposes
3) To anticipate and solve possible problems
4) To make right decision due to aspects of time, order, and grouping setting

21st century demands to form of innovation in educational field, specifically on learning. It needs to innovation which is relating to educational advancement or development strategy in an institution specifically. To facilitate this innovation, an institution must strengthen adaptation ability and be responsive to unexpected environment by integrating ability to learn (Moustaghfir & Schiuma, 2013). This innovation is directly related to the capacity of individual to innovate

and learn (Sullivan, 2011; Wang & Ellinger, 2011). As a result, the institutional leadership must find ways to develop employee or individual learning ability and behavior (Skilton & Dooley, in Reid, Dahlgren, Petocz, & Dahlgren (2008).

The skill gap which is emerged from educational field and needed in working sector causes to collaboration between educational and working sector. The learning concept and model development are required to collaborate by presenting learning facilitator as a guide where the student (either individually or collectively) is able to explore real world challenges, get engaged to the subject material, and be relevant to the real world (Longmore, 2017, page. 4).

The student needs to integrate their learning experience in class through the process of connecting, applying and synthesize information, knowledge, and skill. Moreover, the student is required to identify similarity between ideas, apply science and knowledge in various contexts and attempt to create new science innovation.

The creative teaching in medium of imaginative approaches can deliver more attractive and effective learning (Jeffrey & Craft, in Li: 2019, page. 19). This strategy is able to encourage student creativity by highlighting on role of children interaction with adult and friend of the same age. Furthermore, the creativity can be triggered by stating open question and involving student activeness. Next, it should be followed up by reflection which aims to find out learning effectiveness (Li: 2019).

The teacher in teaching process must show self-confidence to subject mastery which will be taught in class and show professionalism in front of the student. The knowledge of relevant content brings better consequence to easily determine right learning and find solution of the existing problems. Indirectly, the psychological impact will be appeared, so the student will be more engaged in the class as well as learning process will be more effective (Richards: 2010).

Technological pedagogical content knowledge (TPACK) is a kind of new knowledge which must be mastered by teacher in order to integrate the better technology in learning (Mishra & Koehler: 2006, in Rahmadi; 2019). TPACK is formed of three kinds of basic knowledge synthesis, as *Technological Knowledge (TK)*, *Pedagogical Knowledge (PK), and Content Knowledge (CK)*. The result of synthesis from those three basic knowledge deliver to four new knowledge, as they are *Pedagogical Content Knowledge (PCK), Technological Content*

Knowledge (TCK), Technological Pedagogical Knowledge (TPK), and Technological Pedagogical Content Knowledge (TPACK).

Andrews & Abawi (2016, page. 83) have introduced the concept of micro pedagogical deepening which in their opinion will be able to enrich meaning in teacher profession at school where the teacher is involved in application form of pedagogic investigation:

a) To reflect personally, maintain student ability and skill which are beneficial to learning process
b) To develop conceptual pedagogical principle of school
c) To manage individual or school strategy in learning

2. Previous Researches

Gatt (2015) has asserted that the change in class learning practice performed by the teacher will finally produce changes on student learning output. The teacher needs to find creative methods to apply knowledge in the practice in order to create a new innovation. The innovation that has been proposed by Gatt is The Piramide Project. The drama is exerted as a learning media which aims to train communication skill and other supporting skills. The result shows that there is knowledge development which relates to the subject who causes to such improvement in drama application and change in pedagogic context, then the teacher can be more confident to experiment and integrate drama with other subjects. Most of comments that are written by the teacher in last of questionnaire show that the teacher feel motivated to find and learn more about next drama for the next project. The comment from respondent indicates that this project is able to deliver positive effect on the teacher and their teaching method. Although, the questionnaire indirectly examines how the children reaction to teacher response, the comment can indicate that there is a clear relation between children response to the drama and teacher commitment to assert drama into learning activity.

Longmore (2017) has demonstrated that to overcome inequality and need, educational institution must be shifted from traditional teaching paradigm into transformative learning and learning model which functions to facilitate in-depth learning and critical reflection, build learning competence, and encourage student professionalism formation to fulfill challenges and innovation of 21st century.

The research done by Li (2010) has indicated that the teacher who has positive response to the significance of creative pedagogic will try to implement creative pedagogic in the class learning. On this practice, it needs support through policy of educational system which is used to facilitate the learning practice from teacher comprehension to the creative pedagogic, since the teacher is not the one who guard the gate for the student, but also the executor of educational innovation.

The implication from the research done by Coetzer (2014), method of case study which guided by PBL (problem based learning) is potentially and effectively in teaching as a form of anticipation from some who have employed the method of case study. Lack of case study materials shows that PBL is able to play role in constructivism approach. The feedback from student is in form of work sheet which indicates that pedagogic technique is useful in authentic evaluation.

Karakas (2015) has introduced a concept of management learning on life acceleration. The management learning on life acceleration is based on three dimensions. The first dimension is reflection, which involves the individual to find their own desire and need as well as learning motivation. The second dimension is creativity, which involves a sense of wonder and curiosity, as well as braveness to start experiment. The third dimension is collaborative learning, which involves a group of individual to work together in a general task to comprehend and find solution. This learning is performed by developing portfolio of student. The space and learning portfolio can create safe and interesting activity, authentic conversation, and deliver the students the opportunity to make dialog with their friends, which will finally enable to management learning with life acceleration.

Maskit (2011) has examined teacher attitude to the pedagogic changes on several stages of teacher professionalism development. The result finds that there is improvement of attitude to the pedagogic change on induction stage and competence formation as well as decrease on attitude.

Next, research done by Andrea-Lopez, et al (2016) has given relevant insight which leads to practical recommendation for lecturer in high educational institution, as the agent who are able to deliver direct and indirect effect on knowledge acquisition and competence development. The student perception about the role of teacher is fundamental, since, the lecturer who mostly takes

responsibility on student attitude, belief, and confidence concerning to learning purposes. Besides, the lecturer must also notice to their interpersonal contact with student, because it tends to clarify the teacher role in order to help their learning and find solution to the problems within learning process (Bernal, 2007). Even, when the module of management in university degree has been taught in wide class in particular Europe countries, the lecturer must find closer interaction with student. The oriented exercise session must be guided, along with openness to answer questions. Also, it is clear that the teaching planning and strategy are the key aspects, even the flexibility of class condition adaptation is relevant.

C. METHODS

The literature studies could be referred as a step to acquire information from previous researches that must be employ in a research, without worrying whether the research employed primary or secondary data, and also whether the research exerted filed research or laboratory or even museum.

According to M. Nazir in his book, he has stated:

"Literature study is a technique of data collection which examines books, literatures, notes, and reports in relation with particular problem" (Nazir, 1998:111).

Next, Nazir (1998: 112) has asserted that the literature study is a significant step where the researcher determines a research topic, the next step is to examine which is related to the theory of research topic. In the search of theory. The researcher will collect more information from related literatures. The literature sources are collected from books, journals, magazine, research findings (thesis and dissertation), and other related sources (as internet, newspaper, etc.). If the researcher have collected relevant literature, the next is to arrange them in well order to be used in the research. Therefore the literature study covers to general processes like to identify theory systematically, literature finding, and document analysis which contains related information to the research topic.

D. FINDINGS AND DISCUSSION

Regarding to regulation of Ministry of National education 35th 2010 about the technical guidance of teacher's functional position and credit, here are seven aspects of pedagogic competence (Irwantoro & Suryana: 2015, page. 5)

a. Knowledge of student characteristic

Every children is born with different competence, skill, and interest. The differences will definitely influence to learning style and process of children (Janawi, 2012:68). The knowledge of student characteristic is beneficial for the teacher to design learning plan which is appropriated to student capacity. The learning process will be easily practiced and help the student to train aspects of cognitive, psychomotor, affective, creativity, emotional, special skill, independent social relation, language and moral (Irwantoro & Suryana; 2015, page 8). Therefore, the teacher must understand the student specifically, so the education can suits to each student personally (Sadulloh; 2015, page. 133).

b. Mastery of learning theory and educative learning principle

The teacher is demanded to be able to decide various approaches, strategies, methods, and techniques of educative learning in creative and proportional to the standard of teacher competence. The teacher can adjust learning method as it is appropriate to student characteristic and motivate them to learn. Gunning in (Salam: 2011, page. 2) has said, "A practice without theory is insane deed, while the theory without practice is genius deed." As a teacher or educator, the teacher absolutely asked to learn educational theory to keep in tract and prevent to actions that are beyond the rules, which bring to unplanned and undirected purpose (Salam: 2011, page. 2). The knowledge of learning theory and learning principle also high motivation to apply them in learning process are very important and determine means to realize effective and optimal performance (Dirman; 2014, page. 3).

c. Curriculum development

The curriculum is not only used to formulate goals which clarify the educational direction, but also to give comprehension about learning experience that must be owned by every student (Sanjaya, 2008: 32). The development of curriculum is started by determining goals of curriculum orientation which are concerned to curriculum policy. Next, the curriculum development becomes a learning guideline which is implemented in learning process and

learning evaluation. The teacher can arrange syllabus appropriately to the goals of curriculum and use lesson plan which is properly to the learning goals and environment. In addition, the teacher is able to select, arrange, and organize the appropriate material with student need.

d. Educative learning activity

The teacher is able to arrange and make educative learning plan in complete. The teacher can also practice learning activity which fits to the student need. Next, the teacher is able to arrange and use various subject materials and learning sources in accordance with student characteristic. If it is relevant, the teacher can benefit technology of communication information for the benefit of learning interest (Irwantoro & Suryana: 2015, page. 219). The process of educative learning refers to a process which is always oriented on children potential development (Janawi: 2012, page. 86).

e. Student potential development

The development on student potential aims to encourage the student to own spiritual power, self-control, personality, noble character, and other skills. Through learning atmosphere and effective learning process which are able to increase curiosity, the student potential can be developed due to educational expectation and goals. Moreover, the teacher can analyze learning potential from each student and identify student potential development through learning program which supports the student to actualize their academic potential, personality, and creativity.

f. Communication with student

The teacher can communicate effectively, emphatically, and personally with the student and act enthusiastic and positive. The effectiveness of communication which is built between teacher and student can affect to the learning quality output. The understandable transformation of message can relieve misunderstanding that may be existed, so the learning goals will be easily achieved. Further, the teacher is able to respond completely and relevantly over comments or questions from the student without any interruption except when it is needed to clarify those questions or responses.

g. Assessment and evaluation

The teacher is able to conduct assessment on learning process and learning output sustainably. Also, the teacher can evaluate on the effectiveness of learning process and learning output and exert information of assessment result and evaluation to design remedial program and enrichment. Additionally, the teacher can use this result of assessment analysis in the learning process.

Here are nine ways to teach skills of 21st century and teaching methods which enable the skill appearance of 21st century: (Saavendra: 2012, page. 2-6)

1) To make it relevant

The effective curriculum refers to curriculum which is relevant to the student. It is started by bringing up important topics from that material. The material which is given by the teacher must be useful. Hopefully, the student can understand science, skill purpose, and its contribution to learning process.

2) To teach through the disciplines

Teaching is not only in accordance with the material, but it must have linkage with the other disciplines. The student must learn science suitability and problem solving in a variety of disciplines and learn how the scientists do their experiment. Moreover, the student is in process to achieve a conclusion, employ science that has been studied, and how to communicate with the experiment.

3) To develop thinking skills

The student must be able to develop low thinking ability in parallel with high thinking ability. For example, when the teacher trains the skill to understand relationship of an equation. On the same time, the teacher also explore what is related to the analysis, it is high level skill. The critical thinking and reasoning analysis are the skills in 21st century which are able to filter information relating to science, the student skill and ability to face the facts in internet and get used to open up their insight to new information which is impossibly presented in the class (Teo: 2019).

4) To encourage learning transfer

The student must practice skills and knowledge they have gotten in other forms of discipline and their environment. The custom instruction does not prepare the student well to transfer what they have studied, whereas explicit attention is more challenging.

The transfer in this context involves there variables below:

a. What kinds of skill, concept, attitude knowledge or strategy which may be given to other people
b. What kind of context, situation, and application that will be given to other people?
c. How does the transfer process go on?

The transfer skill covers to work competence in team and analyze cause-effect. The context can be in lesson, work space, or even society.

5) To teach students how to learn

The 21st century teaches student how to learn by their own. To realize this, the student must know how they learn and understand well about their selves (metacognitive), possibility of failure and how to settle with. Therefore, the teacher can develop student metacognitive by encouraging them explicitly to research their way of thinking. One of effective ways is to praise the effort of student. Senior in Richards (2010) has indicated that the central aspect from subject focus is to create classroom atmosphere which functions as student community.

6) To address misunderstanding directly

Misunderstanding may be occurred in the class, but the teacher can benefit this condition to improve and deepen the student comprehension.

7) To treat teamwork like an outcome

The generation of 21st century is grown in environment of internet dependency which causes to alienation and depersonalization. It comes to the term that technology can juxtapose the far one, but in vice versa it keep the close one away. This challenge is answered by designing collaborative learning activity. In this context, the teacher as a designer of learning activity will offer collaborative chance to make projects in workshop by means of role-playing, case study, video, games, and other methods (Karakas: 2015, page. 5). The ability to collaborate is an important skill and optimal learning condition. Next, the

teacher can design learning programs in many ways, so the student can learn from other and discuss concepts as well as share knowledge to the class members.

8) To exploit technology to support learning

The technology offers chance to develop 21st century skills and provide ways to develop problem solving, critical thinking ability, and communication skill by exerting video game, internet, or other kinds of technology.

In this purpose, here are forms of technology engagement: 1) ability to utilize technology, 2) technology as a material and activity to utilize the technology, and 3) teaching with technology utilization. The utilization of technology is very significant, since the most of student access information and find this instrument to manage their own learning (Richards: 2010, page. 7)

9) To foster creativity

The growth of creativity raises to attractive innovation in learning and improve student skill. The relevant learning to the student life and student's self-motivation will grow better. The encouragement helps them to improve extrinsic motivation in order to develop their creativity, then they are able to realize their creativity capacity.

The creativity is presented to improve engagement where the student can experiment with the skill through experience and project-based learning. Moreover, it is assumed that the student will commit and be inspired if they are given enough freedom to choose and create projects based on their capacity, dream, and passion. This freedom will bring more uncertainty and complexity for the student to develop on structure, but the student still need to learn how to overcome the increase of paradexity in their professional life. However, it requires to combine training session and just-in-time guidance to the student who have difficulty to explore the uncertainty and complexity (Karakas: 2015, page. 4).

E. CONCLUSIONS

The process of human thinking development was built through educational program. The education as an institution which functioned to create human resource was closely related to various changes which demanded to ability to answer current human challenges and needs. The

educational program and learning ability was necessarily designed in order to produce human resource who have skills and competiveness.

The qualified teacher was referred to the teacher who could teach because of strong commitment and passion to develop the student competence. The teacher must know the material they were going to teach and furthermore the teacher must be able to have good relationship with the students, colleagues, and student guardians. The teacher must be familiar to the student favorite and interest, then the teacher can build good communication with the students. Next, the teacher must realize the student advancement in particular fields of their interest. Last, the teacher must care to all the students in the class.

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SOCIETY ENGAGEMENT STRATEGY IN NATIONAL CURRICULUM TRAINING THROUGH ALKIN MODEL EVALUATION

Muhammad Zamrud Al Firdaus, zamrudalfirdaus@upi.edu
Laksmi Dewi, Laksmi@upi.edu

Postgraduate school, Universitas Pendidikan Indonesia, 229 Setiabudhi Street, Bandung, 40154, Indonesia.
Corresponding email address: zamrudalfirdaus@upi.edu

ABSTRACT

This paper aims to explore the national curriculum training strategy which has been implemented in teacher elementary school and to relate with a system approach evaluation of Alkin Model. National curriculum training was described into characteristic of internal system of Alkin Model; 1) input (learner, budget and facilitator); 2) mediating (learner-facilitator ratio, learning sources, curriculum); 3) output (learner output and outcome). Other characteristic also influenced and was influenced by training which called external system, system of implementation organisation, community like teacher working group, and culture, practice of society where training was carried out, is in this model. The Analysis used literature review method with the main sources is the national curriculum training guidance (2013), the evaluation theory, and the community development theory. The result is a recommendation of society engagement in national curriculum training especially in basic education level for supporting currently Indonesia government priority to develop the outstanding human resources.

Keywords: Evaluation, National curriculum training, society engagement

A. INTRODUCTION

The academic year 2019/2020 is the limit for all of Indonesian school which not implement yet national curriculum, (Regulation of MoEc, article 4, No. 160 year 2014), to use national curriculum. Almost six years national curriculum has been implemented, at the same time. It also has been trained for teacher in different education level, (MoEC & Quality Assurance Committee, 2013). The different characteristic national curriculum with the precedents curriculum encourages people have an opened-mind paradigm in accepting these changes and to be ready apply in the school. For instance, this characteristic uses scientific approach that fostering student to be active into instruction. It implies with the teacher's role become more dynamic and complex. That is not only a transmitted knowledge but also as a facilitator, a mentor, a coach, and information source when interaction happened, (Misbah, 2015). According to National Education Goals, (law of National Education System, No. 20 year 2003), national curriculum expected is to be able to create Indonesian human who is productive, creative, innovative and affective through strengthening the attitude, skills, and cognitive integrated. Therefore, it is needed a program evaluation of national curriculum training that has a hierarchical strategy since 2014, to know and understand how far the outcome of national curriculum training. This paper explores and critically analyses the national curriculum training strategy through Alkin Model evaluation, (Alkin & Wooley, 1969; Hasan, 2009), viewing as a macro system, (Hasan, 2009), which is an internal system and an external system. Alkin Model evaluation stated that society cultures and practices could influence and be influenced by internal system, (Alkin, 1969). Meanwhile, in order to achieve the goals of curriculum it is required society engagement and participating continuously. It is means that society does not only

become a “cause-effect” within macro system in national curriculum training but also as a key factor in curriculum implementation as well as teacher do

B. THEORETICAL FRAMEWORKS

2.1.National curriculum Training

National curriculum training prepares teachers to apply curriculum implementation policy in national education. The target of national curriculum training that besomes the strategy, is a principle, a teacher and a supervisor, (MoEC & Quality Assurance Committee, 2013). National curriculum (2013) relatively different with prior curriculum (KTSP) had been developed and accommodated the 21st century challenges such as knowledge-based society and also future competencies. Thus, teachers need improve knowledge, attitude, and skill through a systematic activity in order to make them effective and efficient in their work, (Backley & Caple, 2009). National curriculum training is included in the type of in-service training, (Notoatmojo, 2009 cited in Rusman, 2018), despite of training a curriculum for the teacher who teach at school, it also uses for improving teacher’s professionalism in their school or organisation because it is considered as a straight and faster way to achieve the ends, (Crowley, 2017). Moreover, teacher training must be focused on predesigned curriculum which becomes a key to determine students have got experience learning in the intended school, (Carroll et al, 2007; Keller-Margulis, 2012). The change of characteristic learning that is inquiry-oriented with a scientific approach in national curriculum turns out a basic of aims in national curriculum training on changing mind of teachers in preparing, implementing and evaluating instruction, (MoEC & Quality Assurance Committee, 2013). It was proven by research mentioning that the unable students think critically and analytically in learning process from the lack of teachers’ knowledge and experience in learning management fostering analytical thinking student, (Erwin, 1993; kammanee, 2003; Art-in, 2011). Then, teacher was very rarely managing the learning for encouraging critically thinking student, (Art-In, 2014). Teacher training and developing was crucial, (Art-in, 2014; Fullan, 1992 cited in Mitkovska, 2010), it was said a high quality teacher would always ready to learn and face the complexity task which is a key to create society could manage their life and connect with word life change.

There is four steps of national curriculum training strategy have been implemented; 1) source person refreshment; 2) national instructor training; 3) core teacher training; 4) target teacher training. This strategy used considered the number of teacher was huge and had been implemented continuously engaging the various level of government, national, province and district in application.

2.2.ALKIN Model Evaluation

This model was introduced by Marvin Alkin which is well known with sysrem approach evaluation. Alkin model is described into three main components, input, mediating and output, (Alkin, 1969 cited Hasan, 2009). Furthermore, this model reveals internal system and external system in its scheme. Three main components in internal

system as explained above connect each other directly. The external system is a variable or phenomenon which influence or be influenced internal system. Alkin Model was dominantly based on *social accountability and fiscal control*, (Christie & Alkin, 2008). It seemed like a logic model, (Hansen, Alkin, & Wallace, 2013), that distil the components of prescriptive evaluation theories (assumptions, evaluation context, evaluation activities, evaluation consequences, and external factors) and depict them in logic model form serve the purpose of clarifying how that theory could be executed in the reality. Evaluation theory was classified into use, method and value or judgment orientation, (Christie & Alkin, 2008), which Alkin model included in use orientation based on social accountability and fiscal control, (Christie & Alkin, 2008).

Generally, approach system evaluation Alkin model categorises three main components. Firstly, input provides the learner or student information, (background, characteristics, age, etc) as a entry behaviour before entering the school or training system. Budgeting, trainer also is considered in this component. Secondly, mediating is the combining input into education or training process will be implemented (learner-trainer ratio, school or program management, curriculum). Thirdly, output is to describe the result of system process. There is student output and non-student output as a result of a system. While the relation between these components internal system has a role to achieving the school or program goal, Alkin model believe there is external system which influence and was influenced internal system. Therefore, these systems stand strongly and become the Alkin model characteristic that we called macro system in school or program succeed.

2.3.Community Development

Society participation in education is stated in the law of national education system No. 20 year 2003 that school and society develop and implement curriculum and evaluation, Also the budget management is based on national education standard. The role of society consists; 1) Education implementation and quality assurance service in education; 2) as source, executor, and user in education result. These also encourage the school to be accountable what school process, despite of raising voice and suggestion of society, (Mansuri & Rao, 2011). According to community development, society have to be able to define their need and how to fill it, local society know more what they need and guide them to solve the problem in education (Ife & Tesoriero, 2008). It means that society participation in education field through Community Based Development and Decentralization. Firstly, Community based development supports efforts to bring village, urban neighbourhood, or other household groupings into the process of managing development resources without relying on formally constituted local governments, while decentralization refers to effort to create village and municipal government and strengthen them on both the demand and supply sides, (Mansuri & Rao, 2011:3). It was followed by research from Vally & Daud (2015) stated that School is a social institution that plays a crucial role in the lives of our society. Participation is the central concept and basic principle community development because it represents the ideas of human rights, (Ife & Tesoriero, 2008:295).

These are the conditions which lead the society participation; (1) society feels the issue is important; (2) society feels their action will give the impact; (3) society feel be

appreciated from others; (4) society need support from others; (5) there is no marginalisation and discrimination, (Ife & Tesoriero, 2008: 311-312).

These relates with the relevance principle of curriculum development that explains Gordon & Oliva (2005:159)

> *"School cannot, of course, solve the societal problems by themselves. Communities must turn primarily to their state legislatures for help in equalizing educational opportunities thouroughout to state. On other hand, schools can make-and cannot avoid the obligation to make-an impact of the future citizens of the community whom they are educated by making them aware of the problems and equipping them with skills and knowledge that will help them resolve some the problems"*

One of the form in society participation in the school obviously is facilitated in the school committee which have a function to improve the quality of education service. Also, they can monitor education service based on the law. (MoEC, No. 75 year 2016)

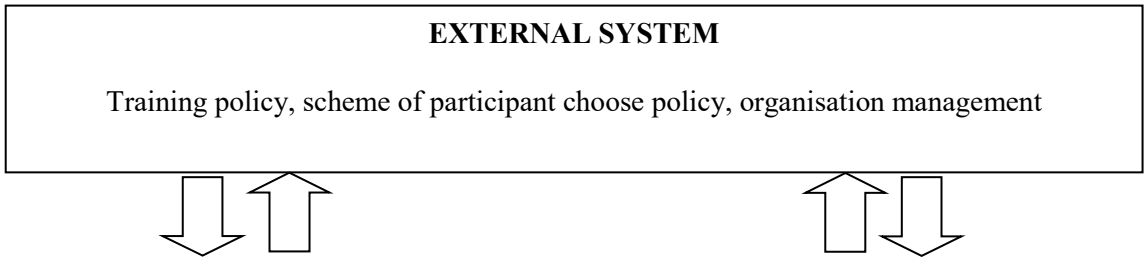
C. METHOD

This paper used literature review from several books, journals and government policies related to this theme. It provide a description from the sources which have been explored, analysed, while researching appropriate topic or phenomenon and also to demonstrate readers it is potential for researching in the wider scale.

D. RESULT AND DISCUSSION

4.1.National Curriculum Training as a system

National curriculum training is viewed as a complex system which includes several components and sub-components integrated. National curriculum training is revealed into Alkin model evaluation; input, mediating and output. Input of national curriculum training is learner or participant, trainer, budget, etc. Furthermore, mediating of national curriculum training is learner-trainer ratio, class, curriculum, learning sources, learning media. Meanwhile, output of national curriculum training is divided into two categories, student or learner output and non-student or non-learner output. It is called the internal system of national curriculum training. On the other hand, there is also external system og national curriculum training such as policy, organisation management, and teacher group working (KKG) that influence or be influenced by internal process system.



INTERNAL SYSTEM			
INPUT	***MEDIATING***	***OUTPUT***	
		STUDENT	***NON-STUDENT***
• Learner or participant • Training Instructor • Training budget	• Participant-trainer ratio • curriculum • media • learning sources • facilitation • logistic	• Change mindset in accepting and ready to apply curriculum changes • Instruction preparing national curriculum • Instruction Implementing in national curriculum • Instruction evaluating national curriculum	• Improving performance at school • Student result learning • Social acceptance in society
INTERNAL SYSTEM			

Culture and practice of society in the training environment, Teacher working group

EXTERNAL SYSTEM

Figure 1. National Curriculum Training in System Alkin Model Evaluation

4.2.Society Engagement Strategy

Education sustainability will happen and be fulfilled if engaging society in educational process. This is the right time to transform curriculum meaning, it is not only "exclusive" fo the education actor such as teacher, principle and supervisor but also it has to spread to all the elements of society such as parents. It makes them to be care to their children and empower them to engage society or parents in curriculum implementation. In order to achieve the education vision, society like school committee and village government must be chosen as an target of national curriculum training as a strategy. Once again, society does not only become "cause-effect" of education process but it would be included in the internal system (Alkin cited Hasan, 2009). Surely, the curriculum content is differentiated with teacher, principle and supervisor. The content will relate to the task for parents in their home and environment. So, this will build the learning environment for supporting children growth. Moreover, it will help teacher what curriculum do at school will in line what the parents do in the home.

Figure. 2 Strategy national curriculum training has been implemented

In figure 2, it describes strategy of national curriculum training that has a target three education actors, teacher, principle and supervisor. This might be effective strategy yet it does not engage the society to play a role. Education curriculum is viewed as a program, not a movement.

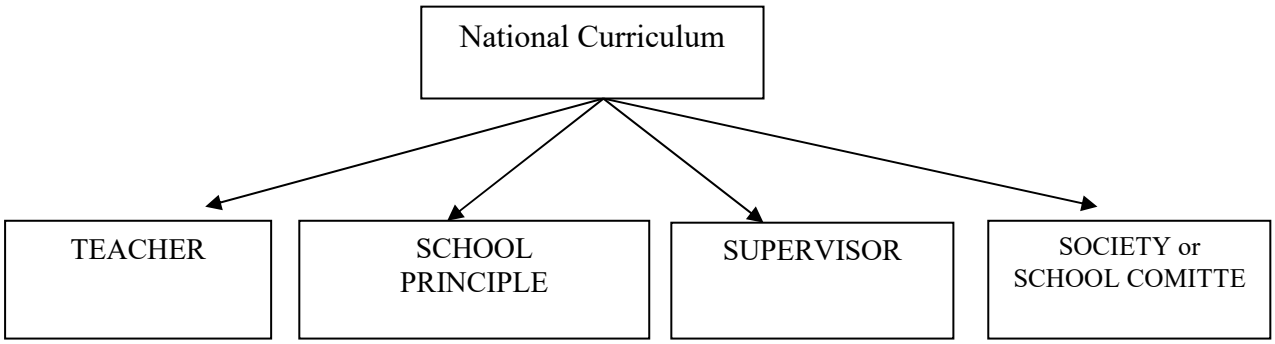


Figure. 3 Society engagement strategy in national curriculum training

Figure 3 reveals national curriculum strategy engaging society or school committee through village government. it will strengthen the curriculum implementation stage because education curriculum is viewed as a movement, not program.

Since raising the law No. 6 year 2014 about village, village government manage and use village fund (Dana Desa) from central government to build what village or society need. It includes the allocation for developing village human resources by community development allocation. It relates to educational sector which become the society need. Village government can collaborate with school to create curriculum training for parents that will be funded by village fund.

4.3.Outcome

Student succeed will be influenced from parents role and their environment. Time allocation in the home is more than in the school. It is shown how parents role give a big impact to children growth. Of course, if society get involve in national curriculum training, they will know and understand what parents do based on curriculum content to their children. For instance, parents will not ask children about the note of their subject but will ask what skills that they got in the school. Beneficially, parents will threat children properly based on teachers taught in the class. It implies that children feel more happy and high motivation to learn because the parents attention, understanding about curriculum. Therefore, student learning outcome will improve as an impact of society involved. This strategy supports the national priority to develop human resources starting from the basic education.

E. CONCLUSION

National curriculum training strategy which has been implemented needs to be evaluated comprehensively. One of the alternative evaluation models using Alkin model evaluation that categorises into macro system, internal and external system. internal systems is divided three main components, input, mediating and output, while external system is a variable or phenomenon which influence or be influenced by internal system. National curriculum training is viewed as a system using Alkin model evaluation. The strategy of national curriculum training offered is the conceptual development seeing education curriculum as a movement engaging society. It must attempt the new formula to overcome the education challenges by transforming from "exclusive curriculum" to "inclusive curriculum".

This review has a limitation to prove the society engaging strategy is proper or not, however it needs to do a research and attempt the strategy offered. It also encourages other researcher to find the best solution in national curriculum training by evaluation, design, or developing.

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THE EFFECT OF WORK DISCIPLINE, ORGANIZATIONAL COMMUNICATION TOWARD THE WORK SPIRIT OF LIBRARIANS IN STATE ISLAMIC UNIVERSITY LIBRARIES / UIN IN SUMATERA

Lecturer of Faculty of Cultural Sciences at Universitas Sumatera Utara

Eva Rabita evarabita56@gmail.com**,**
Zurni Zahara Samosir, zurnizahara56@gmail.com
Laila Hadri Nasution, nasutionlailahadri@gmail.com
Nur'aini cahayaaini45@gmail.com

ABSTRACT

This study aims to describe the factors that ***The Effect Of Work Discipline, Organizational Communication Toward The Spirit of Librarians In State Islamic University Libraries/ UIN In Sumatera*** This study aims to describe the factors that affect career development in library performance through librarian job satisfaction in private libraries Universitas Sumatera Utara. This research uses a quantitative method by applying a structural approach through path analysis. These studies use quantitative research methods. The data collection techniques used in this research are questioner, observation, interviews and library study.

This study uses a qualitative descriptive method with the aim of (1) knowing and analyzing the effect of work discipline on the work spirit of librarians at the State Islamic University / UIN Library in Sumatra, (2) find out and analyze the effect of organizational communication on the work spirit of librarians of State Islamic University /UIN libraries in Sumatra, while the population in the study are librarians / staff working at the library of State Islamic University / UIN, totaling 62 people. This study uses a purposive sampling method so that researchers can get samples that really fit the research needs.

Keywods; Work Discipline, Work Communication, Work Spirit

1. Introduction

In day's global era, international universities are becoming more of a concern among universities. The State Islamic University (UIN) is a kind of state Islamic tertiary institution in Indonesia which organizes academic education in several scientific disciplines, including science outside Islamic studies. UIN is a kind of state Islamic tertiary institution in addition to the state Islamic religion Institute (IAIN) and the state Islamic tertiary institution (STAIN). In the 21st century, several IAIN changed their name to the State Islamic University (UIN), because they had faculties and departments outside Islamic studies. IAIN Syarif Hidayatullah in Jakarta is the IAIN which first changed its name to UIN. If in 2000 there were still 14 IAIN in Indonesia, currently 11 of them have changed to UIN.

State and private universities in Indonesia as a whole are required to improve their quality through the existing educational process in tertiary institutions including education (teaching), research, and services. To be effective universities need to be supported by several related supporting activities, such as libraries. The library is a technical implementation unit which is a means of supporting the success of a domiciled university. Even the existence of libraries is often referred to as the heart of universities. Through this university, library knowledge is collected

which can be fully utilized as a valuable and highly valuable asset repository of knowledge. Related to the matter of the librarians also has a very important position in realizing an international college library. Therefore the librarians must change their mindset from information providers having the ability and expertise to information access providers. Utilization of information and communication technology as a means of improving service and operational quality has brought great changes in the library world. The development of information and communication technology can be measured by the users of library management information systems (SIM) and digital libraries.

The demand for improving the quality of performance of librarians is a logical consequence of the increasingly advanced development of science and information technology, as well as the development of demands for reform in the country, especially on the implementation of the tasks of the state apparatus, including in this case library employees. The demand for reform is the creation of a professional state apparatus in providing services, protection and community empowerment (Keban, 2004: 16). Changes in the function of human resources (HR) within the organization are strategic responsibilities outside operational and administrative activities.

To improve the quality of librarians' services, they are required to be professional by having competencies that include knowledge, skills, and attitudes. Supriyanto (2006) that the formulation of employee competencies includes at least two, namely: a. Professional competence is related to the knowledge of information sources: technology, management, training and the ability to use knowledge as a basis for library and information services. b. Individual Competency is a set of skills. One of the problems that are most often found in various institutions both government and private about employees is a matter of discipline. As seen in reality the most prominent problem is the problem of discipline. From the phenomena that occur, there are still many employees/librarians who violate discipline, whether it is not coming to work without a clear reason, not following the morning apple and leaving the office during working hours. Then the habits that have been entrenched among employees which often increase vacation time for example when Eid with various reasons for civil government including important sections that have a large role and function in the success of a government agency. According to Hasibuan (2008: 193) discipline is the awareness and willingness of a person to obey all regulations in an organization and applicable social norms.

Awareness is the attitude of someone who voluntarily obeys all the rules and is aware of their duties and responsibilities. Willingness is an attitude, the behavior of someone who is by organizational regulations both written and unwritten. The UIN library work environment refers to the things that surround and encompass the work of librarians in the UIN library, whose conditions depend and are created by the head of the library. Therefore the working condition created in the UIN library depends on the pattern created by the head of the library. The work environment in the UIN library can be in the form of task structure, job design, leadership patterns, cooperation patterns, availability of work facilities and rewards system.

As well the morale of the librarians at the UIN library is directly or indirectly influenced by the physical condition of the workplace. For the UIN library to be realized, every element of leadership in the UIN library must strive to maintain the morale of its employees, which is the responsibility of every leader from the lowest level to the highest level. High morale of librarians has an impact on the smooth implementation of their librarian duties, forming loyalty, creating a conducive atmosphere at work and library of librarians prioritizing the interests of their work units rather than their interests. Low commitment to organizational tasks, such as submitting reports of work activities that are not timely like this, is an indication of the condition of low morale. The lack of ability of employees/librarians in mastering technology makes it difficult for them to meet the credit scores achieved so that it is difficult to advance to a higher position.

Indications of low morale in staff are also evident from their low work discipline. This can be observed, for example, from compliance with working hours. The library staff was found to come and go home from work, not by predetermined working hours. Staff come late more often or leave early than they should. This has the potential to disrupt employee work rhythms. Achieving organizational goals is difficult to achieve. This is because workers with low morale provide sub-optimal performance. Workers with low morale are generally characterized by high rates of turnover, absenteeism, tardiness, indiscipline, and declining work results. With the conditions of such workers, it is clear that achieving organizational goals is more difficult to achieve (Utamajaya, et al, 2015).

Another factor, which has been empirically proven to have a relationship with morale, is organizational communication (Arifiani, 2014). Organizational communication, by definition, has two meanings. Namely, the first, functional (objective) definition. In this case, organizational communication can be interpreted as the interpretation of messages between communication units that are part of a particular organization. The second definition of organizational communication is the definition of perspective (subjective). Where in this case, organizational communication is seen as a process of creating meaning. In practice, related to organizational communication, a variety of factors are often encountered, ranging from psychological factors, regulations to the emotional state of workers, which hinder the process. As a result, the flow of information within the organization is not smooth. The condition of this communication gap can affect the perception of workers whose output will have an impact on morale (Sulistianingsih, 2010; Utamajaya, et al, 2015). In the context of the UIN Library, the condition of the information gap in question is very likely to occur, due to the more intense work procedures, as a result, the range of communication within the organization and to library users becomes distant, giving rise to an indifferent and rigid impression.

Related to the description above, this study intends to look at the influence between variables of work discipline, organizational communication, and work spirit. The object of study is specifically at the State Islamic of University libraries which includes; Islamic State University of North Sumatera Library, Islamic State University of Library Imam Bonjol Padang (UINIB), SUMBAR, and Islamic State University of Library AR-Raniry Banda Aceh Darussalam. The choice of the State Islamic University / UIN library is because the important role of the university or college is a barometer of Islamic education in that area. Therefore, by identifying the factors

that can affect the enthusiasm of work observed through the variables of work discipline, organizational communication, it is expected that the conditions of the work spirit of the librarians who work in the library of state Islam universities can be improved. That way, the performance of the librarians who work in the library of state Islamic universities as nuances of Islamic center would be better going to international universities class

2. Methods

Based on the purpose and form of the issues raised in this study, this research is descriptive and verification research. Descriptive research aims to describe the nature of something that is taking place at the time the research is conducted and examine the causes of any particular symptom. In that context, this study intends to obtain a picture of the working conditions of librarians at the State Islamic Universities library in Sumatera about the conditions of work discipline, communication of librarian organizations.

Besides from being descriptive, this research is also verification. Namely, The hypothesis that is carried out through from the data collection in the field. Where in this study will be revealed a cause and effect relationship? In its operation, will be analyzed regarding the influence between the conditions of work discipline, organizational communication on the librarian's morale, both partially and simultaneously. The population of this study was all civil servants librarians who worked at the State Islamic of Universities library in Sumatera, such as 1). North Sumatra, 2) West Sumatera, and 3) Banda Aceh Darussalam. In the process, to select the State Islamic University / UIN as a sample, this study used a purposive sampling method. Arikunto (2010) explains that purposive sampling is done by taking subjects not based on strata, random or region, but based on the existence of certain objectives. The purposive sampling method is the technique of determining the sample with certain considerations, such as the same characteristics criteria of the population. For the determination of sample size, this study uses the Slovin formula with a significance level of 5 percent significance level commonly used in social research. From the results of calculations with the Slovin formula, the number of research samples was 62 librarians of state Islamic universities / UIN libraries found in various provinces in Sumatera.

3. Results and Discussion

1. Effect of Work Discipline on Work Spirit

From the results of the first hypothesis test it was concluded that, statistically, there was a positive and significant influence of work discipline variables on the work spirit of libraries at the State Islamic University / UIN library in Sumatera. With a coefficient value of 0.312 means that each increase in works discipline by one unit will increase the librarian's morale by 0.312 units. A simpler interpretation is that the more effective the implementation of work discipline policies that are adopted by the organization, the librarians' morale will also increase.

This positive influence arises because effective and fair work discipline policies will make the atmosphere in the work environment more conducive. This is due to effective work discipline policies that can lead to good work behavior, which makes it easy for members of the organization to cooperate. In other words, the work discipline carried out by the organization provides encouragement or strength that spur every member of the organization to pay attention to the rules, provisions, and procedures that are deemed necessary to achieve a goal. Work discipline policies, on the other hand, are also able to deter members of other organizations from doing something that has the potential to undermine organizational achievement (Noe, et.al, 2005). Therefore, effective work discipline policies will tend to spur individuals to improve their performance. This condition can ultimately make the work environment more conducive (Donny, 2010).

The findings of this study, which found a positive effect of work discipline on morale, were also supported by the results of Indarti, et.al, (2013) study. Related to this, Indarti, et.al, (2013) in his study concluded that the better the application of work discipline in an organization, the level of employee morale will also increase. Furthermore, Winata (2015) emphasizes that work discipline which is applied fairly and non-discriminatively will bring high morale. The implementation of effective, fair and non-discriminatory work discipline is a keyword that needs attention to encourage employee morale. This is because the positive effect of work discipline on work morale will automatically disappear to the extent that the implementation of work discipline policies is considered unfair and discriminatory by employees. In this context, the work discipline policy implemented in an organization will have counterproductive effects because it will reduce employee morale. Knight, et.al, (2014), in this case, found that work discipline policies hurt morale. Therefore, the steps that need to be taken to restore employee morale, according to the perspective of Knight, et.al, (2014) is to train organizational leaders to change their understanding, so that they are willing to apply work discipline actions consistently to all employees.

2. The Effect of Organizational Communication on Work Spirit

From the results of the second hypothesis test it was concluded that, statistically, there was a positive and significant influence on organizational commitment variables on the works spirit of librarians in the library of the State Islamic Universities / UIN in Sumatera. With a coefficient value of 0.415, this means that each increase in organizational communication by one unit will increase the librarian's morale by 0.415 units. A simpler interpretation is that the more effective organizational communication patterns are adopted by the organization, the behavior of librarians of the State Islamic University in Sumatera will also increase.

According to Harrison, et al, (2006), organizational communication is a key variable that allows members in organizations to build relationships within one organization, as well as interact and share information. In other words, communication is a way for organizations to understand each other and coordinate their activities to maintain better relations. For this reason, good organizational communication is needed in an organization.

The positive influence of organizational communication on the librarian's morale can arise because effective organizational communication patterns enable a better flow of information within the

organization. In this case, good organizational communication patterns will facilitate the process of delivering ideas, ideas, information, and messages. Thus, the message can be more easily understood. Implementation, thus, can also be optimized. Simply put, with a good communication pattern, the information gap constraints, which often trigger suspicion and anxiety on employees, can be reduced. This makes the work environment conducive. In the end, this will encourage the increase of librarian's behavior.

The findings found in this study are supported by the results of the study of Utamajaya, et.al, (2015) who also found that there is a positive influence of organizational communication on behavior. Furthermore, Utamajaya, et.al, (2015) explained that good communication within an organization will facilitate workmanship, so this will then drive employee morale. Baker (2010), in his study, also emphasized the important role of effective organizational communication in increasing employee behavior.

4. Conclusion

In connection with the research problems raised in this study, it was found that:

1. Work discipline has a positive and significant influence on the works spirit of librarians of the State Islamic Universities library in Sumatera. This means that the policies of the more disciplined work are perceived as fair, equitable and non-discriminatory, the librarians' morale will also increase.
2. Organizational communication has a positive and significant influence on the work spirit of librarians of the State Islamic Universities library in Sumatera. This means that the more effective the communication patterns adapted in the organization, which allows the flow of information to run smoothly so that the librarians of works will also moving up.

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RELEVANSI MODEL EVALUASI RESPONSIF DALAM KURIKULUM MUATAN LOKAL

Utin Mutia, S.Pd
Dr. Cepi Riyana, M.Pd
Email : utinmutia@upi.edu , cepi@upi.edu
Universitas Pendidikan Indonesia

ABSTRACT

Kurikulum muatan lokal dimaksudkan untuk meningkatkan relevansi pembelajaran dengan konteks sosial-budaya peserta didik dan diharapkan berperan dalam melestarikan keragaman budaya lokal. Dalam aplikasinya, nilai dan budaya lokal yang menjadi isi pembelajaran di sekolah lebih menekankan angka prestasi siswa dan nilai akhir. Oleh karena itu diperlukan suatu evaluasi yang melibatkan *stakeholder* untuk memperkaya dan mengidentifikasi faktor pendukung maupun penghambat pelaksanaan muatan lokal di sekolah. Kajian ini dimaksudkan untuk membahas hubungan antara kurikulum muatan lokal dengan model evaluasi responsif sebagai pijakan dasar atau landasan kurikulum muatan lokal. Kurikulum muatan lokal dimaksudkan dapat meningkatkan pendidikan karakter. Evaluasi Responsif mencari pendapat dari sejumlah besar orang yang memiliki andil dalam keberhasilan program (*stakeholder*), menekankan kepada partisipasi stakeholders secara berkelanjutan. Evaluasi responsif juga merupakah model evaluasi yang lebih menekankan kepada proses, bukan kepada hasil. Kajian ini mencoba memahami berbagai *stakeholder* dari berbagai perspektif, serta tetap memperhatikan kepada standar atau kriteria keberhasilan dalam aspek yang dievaluasi. Hal ini menjadi sebuah pengayaan dan memungkinkan mendapat keberagaman perspektif. Hasil evaluasi yang responsif dianggap memiliki lebih banyak relevansi dengan keprihatinan dan masalah pemangku kepentingan, dan karenanya lebih mungkin untuk ditindaklanjuti. Melakukan evaluasi yang responsif terhadap kebutuhan kelompok-kelompok ini akan memastikan bahwa informasi evaluatif bermakna dan lebih mungkin digunakan untuk peningkatan dan peningkatan program. Pembahasan ini dilakukan melalui tinjauan literatur yang relevan sehingga diharapkan dapat memberi konstribusi konseptual dalam pengembangan kurikulum muatan lokal mendatang.

Kata Kunci: Evaluasi Responsif, Kurikulum, Kurikulum Muatan Lokal

A. INTRODUCTION

Dalam dunia terbuka abad global dewasa ini terdapat gelombang yang disebut arus globalisasi yang seakan-akan membuka pintu dari batas-batas kehidupan masyarakat dan negara. Tidak ada satu pun juga masyarakat atau bangsa di dunia dewasa yang dapat menutup pintu dari arus perubahan global tersebut. Namun demikian, suatu masyarakat akan tetap eksis apabila dia membuka pintu bagi perubahan-perubahan global tanpa merusak nilai-nilai abadi yang dimiliki oleh masyarakat lokal. Di dalam dunia yang terbuka adalah merupakan suatu kewajiban dari keluarga, masyarakat lokal, suku, bangsa untuk menjaga agar identitas dari bangsa tidak dibawa hanyut oleh perubahan global tanpa merusak nilai-nilai abadi yang dimiliki oleh masyarakat lokal. Di dalam dunia yang terbuka adalah merupakan suatu kewajiban dari keluarga, masyarakat lokal, suku, bangsa untuk menjaga agar supaya identitas dari bangsa tidak dibawa hanyut oleh perubahan global. Adalah tugas pendidikan formal untuk mempersiapkan di dalam perkembangan anak didik untuk tetap mempertahankan identitasnya dan sekaligus membuka pintu bagi nilai-nilai global yang positif. Bagi bangsa

Indonesia nilai-nilai positif yang dibawa oleh perubahan global akan dapat dipilih peserta didik dalam perkembangannya demikian pula seharusnya oleh negara dan oleh masyarakat dan keluarga.

Bangsa Indonesia yang telah mengenal multikulturalisme sejak abad-abad permulaan akan tetap eksis di dalam perubahan global yang dahsyat apabila bangsa Indonesia tetap mempertahankan identitasnya sebagai bangsa yang mempunyai nilai-nilai otentik. Nilai-nilai otentik itu yang telah mempertahankan eksistensi bangsa Indonesia secara kontinu. Bangsa Indonesia akan tetap *survive* jika dalam menghadapi perubahan global tersebut dengan prinsip perkembangan kebudayaan dan masyarakat Indonesia secara konsentris.

Membangun pandangan hidup dari bangsa Indonesia yang pluralisme dan multikultural merupakan tugas berat dan berkesinambungan. Di sinilah letak organisasi yang disebut negara untuk melaksanakan tugas ini. Apakah yang mengikat bangsa Indonesia sebagai satu kesatuan untuk dapat mempertahankan kebudayaan Indonesia dari pandangan hidup yang bhinneka, tetapi bertekad untuk membangun suatu bangsa. Pembangunan bangsa Indonesia merupakan suatu pembangunan yang berkelanjutan dan dengan begitu tampak di sini peranan pendidikan nasional di dalam membangun suatu pandangan hidup bagi seluruh bangsa Indonesia.

Bagaimanakah hubungan pendidikan dengan kehidupan dalam masyarakat modern? Dalam masyarakat modern dikenal pendidikan melalui keluarga, kemudian sekolah secara bertingkat-tingkat sampai pendidikan tinggi. Dalam seluruh pusat-pusat pendidikan tersebut di atas, pendidikan haruslah selalu berhubungan dengan kebudayaannya. Ada lembaga pendidikan seperti pendidikan dasar dan menengah yang bertujuan terutama untuk transmisi kebudayaan. Bagi pendidikan tinggi tujuannya adalah bukan hanya sekedar transisi, tetapi juga pengembangan kebudayaan.

Pendidikan diyakini oleh masyarakat dan pemerintah untuk meningkatkan kualitas sumber daya manusia. Berbagai program dilakukan pemerintah untuk meningkatkan kualitas pendidikan, baik melalui pemberian bantuan dana, sarana, dan prasarana, peningkatan kualitas proses pendidikan, maupun peningkatan kualitas pendidik dan tenaga kependidikan, maupun peningkatan kualitas peserta didik. Untuk mengetahui keberhasilan program pendidikan yang dilaksanakan, diperlukan suatu evaluasi, yang disebut dengan evaluasi program. Karena khusus mengevaluasi program pendidikan, maka sering disebut dengan evaluasi program pendidikan.

Evaluasi yang sering dipahami selama ini dalam dunia pendidikan adalah terbatas pada penilaian saja. Penilaian ini dilakukan secara formatif dan sumatif. Ketika sudah dilakukan

penilaian, dianggap sudah melakukan evaluasi. Pemahaman demikian tidaklah terlalu tepat. Pelaksanaan penilaian cenderung hanya melihat capaian tujuan pembelajaran saja. Pada hal, dalam proses pendidikan tersebut bukan hanya nilai yang dilihat, tetapi ada banyak faktor yang membuat berhasil atau tidaknya sebuah program. Penilaian hanya bagian kecil dari evaluasi. Evaluasi juga harus dipahami sebagai bagian dari supervisi. Evaluasi tidak hanya berurusan pada nilai yang diukur berdasarkan penyelesaian soal-soal, tetapi evaluasi pendidikan akan mengkaji banyak faktor. Dengan demikian evaluasi perlu diperkenalkan kepada seluruh pendidik, karena evaluasi sangat penting dalam pengembangan mutu pendidikan.

Evaluasi dapat diartikan sebagai suatu proses pencarian informasi, penemuan informasi dan penetapan informasi yang dipaparkan secara sistematis tentang perencanaan, nilai, tujuan, manfaat, efektifitas dan kesesuaian sesuatu dengan kriteria dan tujuan yang telah ditetapkan.

B. KAJIAN LITERATUR

Model Evaluasi Responsif

Model responsif pertama kali dikembangkan oleh Stake. Model ini merupakan pengembangan lebih lanjut dari model countenancenya, meskipun dalam beberapa hal terdapat perbedaan yang prinsipiil. Perbedaan-perbedaan yang ada menyebabkan model ini layak untuk didiskusikan.

Perbedaan pertama adalah dalam fokus. Model countenance mempunyai fokus yang lebih luas dibandingkan dengan model responsive. Model countenance memberikan perhatian terhadap kurikulum sebagai suatu rencana. Dalam model responsive, fokus yang demikian sudah ditinggalkan. Seperti yang dikatakan Stake (1983: 292) fokus model responsive adalah pada kurikulum dimensi proses. Apa yang terjadi di lapangan dalam pengembangan proses kurikulum dijadikan dasar dalam mengembangkan model ini.

Perbedaan kedua adalah dalam pendekatan pengembangan kriteria. Model countenance berdasarkan pengembangan kriteria fidelity, model responsive mengembangkn kriterianya berdsarkan pendekatan proses. Perbedaan pandangan dari orang-orang yang terlibat di lapangan dalam melaksanakan kurikulum menjadi sumber untuk mengembangkn kriteria evaluasi. Konsekuensinya, model responsive tidak berbicara tentang pemakaian instrumen standar (Stake, 1976:20). Bahkan dapat dikatakan bahwa segala sesuatu yang berbau standar dihindari model responsif. Oleh karena adalah tepat apabila Rakel (1976:35) berpendapat bahwa model responsive menjadi kurang berharga untuk diterapkan dalam mengevaluasi

kurikulum yang sangat ketat strukturnya. Pendapat Rakel tersebut disadari dan diakui oleh Stake (1976:20) sepenuhnya.

Dengan keperhatiannya yang besar terhadap pelaksana kurikulum di lapangan, model responsive memberikan perhatian terhadap interaksi antara evaluator dengan pelaksana kurikulum. Tanpa interaksi tidak ada satupun "issue" yang dapat diungkapkan.

Evaluasi responsif menekankan kepada evaluasi program yang bersifat khusus, atau program yang spesifik. Evaluasi responsif berbeda dengan evaluasi pada umumnya yang bersifat *preordinate*. Dalam evaluasi yang bersifat *preordinate* di antaranya memiliki ciri; orientasi kepada tujuan program, menggunakan tes yang bersifat objektif, dan laporan yang bersifat formal. Evaluasi responsif menekankan kepada kegiatan program, merespon informasi dari audiens, dan perspektif nilai yang dari beragam orang terlibat dalam program. Menurut Stake mendapatkan data melalui tes objektif dianggap dangkal dalam memberikan dasar untuk menjelaskan dan mempertimbangkan kekuatan dan kelemahan suatu program. Stake menganjurkan untuk menggunakan *coutenance paper.* C*outenance paper* menjembatani evaluasi yang bersifat *preordinate*, agar data yang didapat memiliki makna dan komprehensif dengan mempertimbangakan berbagai sudut pandang.

*S*take mengambarkan bahwa secara struktur evaluasi responsif terdapat dua bagian yaitu struktur subtantif dan stuktur fungsional. Struktur subtantif terdiri dari: isu-isu yang muncul, format pengumpul data dengan menggunakan *countanance paper*, orang yang mengobservasi, dan validasi. Sedangkan struktur fungsional terdiri dari 12 peristiwa atau langkah yang tergambar dalam sebuah jam. Penjelasan setiap tahapan arah jarum jam. Urutan tahapan dimulai yaitu:

1) mengidentifikasi cakupan program,
2) mempelajari aktivitas-aktivitas program,
3) mengungkap tujuan-tujuan program,
4) merumuskan isu-isu dan masalah,
5) mengidentifikasi data-data yang dibutuhkan,
6) menentukan siapa pengamat (observer), penilai dan instrumen jika ada,
7) mengobservasi *antecedents, transactions,* and *outcomes* yang telah dirancang,
8) menentukan tema, menyiapkan observasi, studi kasus,
9) memvalidasi, konfirmasi, menampung bantahan,
10) menyesuaikan format dengan audiens
11) mengumpulkan laporan-laporan format jika ada, dan
12) wawancara dengan klien, staf program, audiens.

Stake menekankan bahwa model ini memiliki fleksibilitas dalam penggunaan 12 tahapan tersebut di atas. Penggunaan tahapan disesuaikan dengan kebutuhan program, karena itu 12 tahapan yang digambarkan bukan sebagai petunjuk baku, karena itu pula Stake tidak menjelaskan gambaran contoh penggunaan ke 12 tahapan tersebut.

Evaluasi ini mencoba memahami berbagai pandangan *stakeholder* dari berbagai perspektif. Serta tetap memperhatikan kepada standar atau kriteria keberhasilan dalam aspek yang dievaluasi. Hal ini menjadi sebuah pengayaan dan memungkinkan untuk mendapatkan keberagaman nilai dan perspektif yang beragam pula.

Hal ini dapat dipahami bahwa meskipun standar telah ditetapkan namun tidak menutup kemungkinan makna atau nilai dari sesuatu menjadi beragam dalam pandangan yang berbeda. Misalnya dalam sebuah sekolah untuk menentukan kriteria sekolah yang bagus, di atas kertas bisa dilihat mealalui nilai akreditasi. Namun untuk menambah makna sesungguhnya nilai akreditasi tidak dapat dijadikan standar satu-satunya, dapat dilakukan cara lain seperti mengamati kegiatan yang berlangsung di sekolah, serta mewawancarai beragai sumber, akan makna keberhasilan sekolah. Meskipun jika mendapat hasil yang kontradiktif, tentu hal ini membingungkan, namun ini menjadi sebuah pengayaan penggambaran sebuah program.

Kurikulum Muatan Lokal

Muatan lokal merupakan kegiatan kurikuler untuk mengembangkan kompetensi yang disesuaikan dengan ciri khas dan potensi daerah, termasuk keunggulan daerah, yang materinya terlalu banyak sehingga harus menjadi mata pelajaran tersendiri. Muatan lokal merupakan mata pelajaran, sehingga satuan pendidikan harus mengembangkan standar kompetensi dan kompetensi dasar untuk setiap jenis muatan lokal yang diselenggarakan. Satuan pendidikan dapat menyelenggarakan satu mata pelajaran muatan lokal setiap semester. Sedangkan kurikulum muatan lokal ialah program pendidikan yang isi dan media penyampaiannya dikaitkan dengan lingkungan alam dan lingkungan budaya serta kebutuhan daerah dan wajib dipelajari oleh murid di daerah itu (BSNP:2006). Hal ini telah dikuatkan dengan Surat Keputusan Menteri Pendidikan dan Kebudayaan Republik Indonesia dengan Nomor 0412/U/1987 pada tanggal 11 juli 1987. Sedangkan pelaksanaannya telah dijabarkan dalam keputusan Direktur Jenderal pendidikan Dasar dan Menengah Nomor 173/-C/Kep/M/87 tertanggal 7 Oktober 1987. Kurikulum muatan lokal disusun oleh satuan pendidikan untuk memungkinkan penyesuaian program pendidikan dengan kebutuhan dan potensi yang ada di daerah. Kurikulum muatan lokal selain mengacu pada karakteristik siswa, perkembangan ilmu dan teknologi pada zamannya juga mengacu kepada kebutuhan-kebutuhan masyarakat. Muatan lokal merupakan kegiatan kurikuler untuk mengembangkan

kompetensi yang disesuaikan dengan ciri khas dan potensi daerah, termasuk keunggulan daerah, yang materinya tidak dapat dikelompokkan ke dalam mata pelajaran yang ada (BNSP: 2006). Hal ini sejalan dengan upaya peningkatan mutu pendidikan nasional sehingga keberadaan kurikulum muatan lokal mendukung dan melengkapi kurikulum nasional.

Menurut sejarah, sebelum ada sekolah formal, pendidikan yang berprogram muatan lokal telah dilaksanakan oleh para orang tua peserta didik dengan metode drill dan dengan trial and error serta berdasarkan berbagai pengalaman yang mereka hayati. Tujuan pendidikan mereka terutama agar anak-anak mereka dapat mandiri dalam kehidupan. Bahan yang diajarkan ialah bahan yang diambil dari berbagai keadaan yang ada di alam sekitar. Sedang kriteria keberhasilannya ditandai mereka telah dapat hidup mandiri.

Menurut Dirjen Kurikulum Muatan Lokal adalah kurikulum yang di perkaya dengan materi pelajaran yang ada di lingkungan setempat. Menurut Kurikulum 1994 Kurikulum Muatan Lokal adalah materi pelajaran yang diajarkan secara terpisah, menjadi kajian tersendiri. Menurut Soewardi Kurikulum Muatan Lokal adalah materi pelajaran dan pengenalan berbagai ciri khas daerah tertentu, bukan saja yang terdiri dari keterampilan, kerajinan, tetapi jaga manifestasi kebudayaan daerah legenda serta adat istiadat.

Secara umum tujuan program pendidikan muatan lokal adalah mempersiapkan murid agar mereka memiliki wawasan yang mantap tentang lingkungannya serta sikap dan perilaku bersedia melestarikan dan mengembangkan sumber daya alam ,kualitas sosial, dan kebudayaan yang mendukung pembangunan nasional maupun pembangunan setempat. Tujuan penerapan muatan lokal pada dasarnya dapat dibagi dalam dua kelompok tujuan, yaitu tujuan langsung dan tujuan tidak langsung. Tujuan langsung adalah tujuan dapat segera dicapai. Sedangkan tujuan tidak langsung merupakan tujuan yang memerlukan waktu yang relatif lama untuk mencapainya. Tujuan tidak langsung pada dasarnya merupakan dampak

dan tujuan langsung.

Tujuan langsung dari diajarkannya muatan local antara lain adalah Bahan pengajaran lebih mudah diserap oleh murid, Sumber belajar di daerah dapat lebih dimanfaatkan untuk kepentingan pendidikan, Murid dapat menerapkan pengetahuan dan keterampilan yang dipelajarinya untuk memecahkan masalah yang ditemukan di sekitarnya, Murid lebih mengenal kondisi alam, lingkungan sosial dan lingkungan budaya yang terdapat di daerahnya.

Tujuan tak langsung adanya muatan lokal antara lain Murid dapat meningkatkan pengetahuan mengenai daerahnya, Murid diharapkan dapat menolong orang tuanya dan

menolong dirinya sendiri dalam rangka memenuhi kebutuhan hidupnya, Murid menjadi akrab dengan lingkungannya dan terhindar dari keterasingan terhadap lingkungannya sendiri.

Dengan menggunakan lingkungan sebagai sumber belajar maka besar kemungkinan murid dapat mengamati, melakukan percobaan atau kegiatan belajar sendiri. Belajar mencari, mengolah, menemukan informasi sendiri dan menggunakan informasi untuk memecahkan masalah yang ada di lingkungannya merupakan pola dasar dari belajar.

RELEVANSI EVALUASI RESPONSIF DALAM KURIKULUM MUATAN LOKAL

Indonesia terkenal dengan budaya yang beraneka ragam serta memiliki berbagai suku bangsa yang menyatu dalam satu negera yaitu Negara Indonesia. Berkaitan dengan pendidikan dan kurikulum pendidikan kearifan local memegang peranan penting dalam proses pembelajaran. Sehingga sekolah memegang peranan penting bagi peserta didik dalam kontek cultural. Dalam konteks pendidikan kearifan local akan memberikan nilai tambah dalam mencetak generasi muda mendatang lebih unggul dalam penguasaan teknologi dan tanpa meninggalkan kebergaman budaya Indonesia.

Dalm praksis pendidikan, nilai dan budaya local cenderung menempati posisi peripheral. Mainstream pendidikan dinegara-negara berkembang masih kurang member ruang pada nilai budaya dan budaya local. Akibatnya, sebagai mana diungkapkan oleh para pakar, sekolah memainkan peran dalam alienasi peserta didik dari konteks sosio kulturalnya. Sehingga ketika menyelesaikan pendidikan formalnya, sebahagian besar peserta didik mengalami kesenjangan cultural, disamping kesenjangan akademik, dan akupasional. Menilik persoalan diatas perlu ada kurikulum muatan local yang mengacu kepada kearifan local pada masing-masing daerah di Indonesia.

Kesenjangan cultural yang terjadi dikalangan peserta didik tidak terlepas dari kurangnya pemahaman peserta didik terhadap budaya local yang disampaikan melalui proses pembelajaran. Kurangnya pemahaman siswa terhadap budaya local bukan semata-mata kesalahan siswa itu sendiri, namun pihak penyelenggara pendidikan tidak begitu jeli terhadap kearifan local yang ada disekitar sekolah. Peran orang tua juag sangat kurang dalam hal ini, mengingat kesibukan masyarakat sebagai orang tu asiswa disibukan dengan problem kelurga. Al hasil para peserta didik tidak lagi mengenal budayanya sendiri.

Penempatan kurikulum muatan local dalam proses pendidikan akan memeberika dampak yang positif terhadap peserta didik dan guru sendiri. Dibalik itu juga kesenjangan akademik yang terjadi dikalangan pelajar tidak terlepas dari budaya local dimana sekolah tersebut berada. Tingginya nilai akademik pada biadng studi lain tidak menjamin peserta didik baik

dalam hal yang lain. Sehingga dalam pelaksanaannya kurikulum muatan local hilang secara perlahan dalam tatanan pendidikan nasional pada saat ini.

Sehingga dapat dikatakan bahwa otonomi daerah adalah peluang emas bagi pemerintah daerah untuk membangun, mengatur pendidikan sebaik dan sesuai dengan kebutuhan yang ada didaerah. Pemerintah sebagai pengambil kebijakan umum pendidikan haruslah harus dimulai dengan adanya *politicall will* yang kuat guna menjamin kualitas pendidikan. Peran ini bisa dilakukan dengan melakukan monitoring, inovasi pemberian muatan kualitas pembelajaran termasuk didalamnya muatan lokal di daerah.

Paradigma pembangunan dan modernisasi merupakan dua tautan yang beriringan dalam sebuah konsep manajemen strategis pembangunan suatu negara atau regional tertentu. Konsepsi modernisasi lama seringkali menganggap kebudayaan lokal sebagai hambatan dalam proses pembangunan digantikan konsepsi pembangunan ala Barat. Namun, kini konsep modernisasi mengalami evolusi yang cukup besar, di mana salah satu penggerak keberlanjutan pembangunan kini semakin mengedepankan aspek kebudayaan sebagai modal dasar pembangunan.

Penilik beberapa persoalan diatas, maka dalam kurikulum pendidikan pengenalan budaya bagi peserta didik sangatlah dibutuhkan. Keberadaan kearifan local bukan hanya untuk dibanggakan kepada orang lain, namun untuk dipahami dan dikenalkan serta diajarkan kepada peserta didik. Penting kiranya kembali memberlakukan kurikulum muatan local dalam proses pendidikan dalam segala jenjang. Kurikulum muatan local juga akan berpartisipasi dalam pengembangan pendidikan karakter pada setiap jenjang pendidikan kedepan sehingga dibutuhkan evaluasi yang memadai dan melibatkan stakeholder agar implementasi kurikulum muatan lokal berjalan dengan baik, selalu mendapat perhatian dari stakeholder agar implementasi sesuai dengan tujuan di dalam perencanaan.

Menurut Musthato: 2010 beberapa unsur yang mesti dipenuhi dalam penyelenggaraan otonomi daerah dan otonomi pendidikan yaitu diantaramnya : masyarakat sebagai *stakeholder* pendidikan setempat semestinya berpartisipasi aktif dalam merumuskan kurikulum muatan lokal, yang akan membantu memberikan diagnosis kebutuhan–kebutuhan pendidikan sesuai dengan konteks lokalitas.

Relasi antara kurikulum muatan lokal dalam pembentukan karakter dan evaluasi responsif dapat diringkaskan sebagai berikut. Kurikulum muatan lokal yang menekankan pada pemeliharaan dan pengembangan nilai dan budaya lokal merupakan landasan pijak yan menentukan dalam pengembangan karakter. Karakter yang merupakan akumulasi kearifan lokal tidaklah statis. Kearifan lokal dapat diungkap melalui interaksi secara intensif dengan

stakeholders pendidikan. Pada gilirannya diperoleh model konseptual dan aplikasi pendidikan yang relevan dengan kebutuhan masyarakat. Perhatian pada partisipasi dan keterlibatan stakeholders, serta adanya ruang dimensi sosio-kultural diyakini sangat prospektif dalam meningkatkan kualitas kurikulum (Stufflebeam dalam Stufflebeam, Madaus & Kellaghan, 2002: 69). Melalui evaluasi responsif, keragaman pandangan lebih dapat diakomodasi dalam memperkaya praksis kurikulum yang berbasis pada kebutuhan stakeholders.

C. KESIMPULAN

Kurikulum muatan lokal merupakan bagian yang tidak terpisahkan dari kurikulum nasional, keberadaannya lebih diutamakan agar penyelenggaraan pendidikan di daerah lebih meningkat relevansinya dengan keadaan dan kebutuhan lingkungannya, yang ditujukan terutama agar peserta didik mencintai lingkungannya. Hal tersebut sejalan dengan upaya peningkatan mutu pendidikan nasional, oleh karena itu keberadaan kurikulum muatan lokal harus mendukung pelaksanaan kurikulum nasional. Tujuan program pengembangan kurikulum muatan lokal adalah untuk memberikan bekal pengetahuan keterampilan, pembentukan sikap dan prilaku siswa, agar mereka memiliki wawasan yang luas, dan mantap tentang keadaan lingkungan dan kebutuhan masyarakat. Sehingga nantinta siswa mampu mengembangkan serta melestarikan sumber daya alam dan kebudayaan yang mendukung nasional dan daerah. Dalam meningkatkan relevansi pendidikan dengan pembangunan dan kebutuhan masyarakat, Pemerintah mengupayakan diantaranya dengan pengembangan kurikulum muatan lokal, atau dengan kebijakannya "*Link and Match*". Melalui kebujakan ini perlu diperkuat keterkaitan antara pendidikan dan dunia usaha dalam perencanaan, pelaksanaan, penilaian dan sertifikasi pendidikan dan pelatihan yang relavan dengan kebutuhan ekonomi.

Dalam tinjauan historisnya, partisipasi stakeholders dalam evaluasi kurikulum masih kurang mendapat pehatian. Padahal, melalui evaluasi yang memenuhi kriteria ilmiah dan mempertimbangkan sisi kontekstualnya merupakan prasyarat perumusan kebijakan yang lebih baik. Kurikulum muatan lokal yang telah diimplementasikan sejak lama, dalam banyak hal masih menyisakan sejumlah persoalan. Salah satu diantaranya berkaitan relevansinya dengan perubahan sosial dan tuntutan masyarakat. Sehubungan dengan hal tersebut, evaluasi memainkan peran signifikan. Model evaluasi responsif yang menekankan keterlibatan stakeholders secara berkelanjutan, berdasarkan sejumlah penelitian terbukti memberi kontribusi signifikan dalam meningkatkan kualitas partisipasi dan kebermaknaan program atau kegiatan.

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DESIGN THINKING OF THE INCLUSIVE EDUCATION LEARNING STRATEGY IN THE 5.0 SOCIETY ERA

Sri Apiyanti and Laksmi Dewi
s.apiyanti@upi.edu, laksmi@upi.edu
Universitas Pendidikan Indonesia

ABSTRACT

The background of this research comes from development of the period in 21st century, the world of education especially, which is needed so that people have skills to design the strategic learning. One of approaches of the designing learning is using Design Thinking. Design Thinking in the process of learning is a reasoning in which it can solve problems collaboratively. Practically, the process of this design can be defined as a planning process systematically, to formulate purpose, strategies, and techniques, and media. The implementing of education in the school must be able to engage with requirements of all student's without exception, included requirements of identical (read: disability) child without discrimination, but humanism by using the spirit of religiousness and inclusive education as the orientation. Thus, it is important to stakeholder, which is having collaboration to make teachers and students, and society in general, to having skills, such as creative thinking, critical, and constructive to produce human sources which is good at contemporary technology and having good characters in the 5.0 era. People, student especially, must exploit contemporary technology formed development of the assistive technology in adaptive learning media. It is well-known as centered-human center and technology-based. This research aims to understand Design Thinking in deciding the inclusive education learning in the era of the 5.0 society. This research uses qualitative in which it is descriptive by using a way of the deepening references. The result of this research is to describe steps of Design Thinking to decide the inclusive education learning strategy in the 5.0 era.

Keywords: *Design Thinking, Learning Strategy, Inclusive Education, The 5.0 Society Era*

A. INTRODUCTION

One of forms of the implementing of education in Indonesia is that education must be able to give good services to the children of Indonesia (Education for All). That mandate mentioned in Undang-Undang Dasar 1945, Section 31, which calls that Indonesian people are rights to get education. It is also the same with Undang-Undang Dasar Republik Indonesia, 1945. It sounds that government must guarantee Indonesian people to get better education, and next it is firmed in Undang-Undang Republik Indonesia, No. 20, 2003, concerning the National Education System, and to Permendiknas No. 70, 2009, concerning the Inclusive Education for Disalibility Student, and Intellection Potence/Special Talents. Besides, there is some guarantee and various instruments of international law that have been ratified by Indonesia, such as Declaration of Human Rights (1948), World Declaration of Equality of Disability (1993), the Salamanca Statement and UNESCO'S Action Framework (1994), Laws of Disability People (1997), the Dakar's Action Framework (2002), Congress Declaration of International Child (2004), in Sunaryo (2009, pg. 1)

Then, DEPDIKNAS (Departement of National Education) published an urge law, Dirjen Dikdasmen Depdiknas, No. 380/C.C6/MN/2003, 20 January, 2003, impinging the inclusive education: implementing and developing, at least, 4 schools in every regency and city that have to contain: Kindergarten, Elementary School, Junior High School, and Senior High School.

Proofs of government's guarantee to the other inclusive education is Bandung Declaration (national), "Indonesia Towards Inclusive Education" in 8-14 August, 2004, and Bukittinggi Recommendation, 2005, about "inclusive education" commitment. Inclusive education is education which gives opportunities to identical (read: disability) children, so that they can go into regular schools: in law of the Ministry of Education, No. 70, 2009, concerning inclusive education.

Based on the law instrument which is decided above, every child is right to get education without exception, because in the recent time that inclusive education should be done and given its services to disability child to getting school in general. Acomplishment for human rights in the inclusive education can be understood as a realization to civilize people without discrimination, disability included, mental, social class, or having potence of intellection or special talents. In the implementing of this inclusive education, it is presented to give a solution of erasing discriminative action to disability children. The reason is that every child can learn together without looking any challenges or differences by giving best opportunities with skills/talents and their requirements.

In the setting of the inclusive education implementing today, Indonesia is running for even distribution of the 4.0 revolution era in all of their fields. Today it is published again with the existence of the 5.0 era. The 5.0 era society is an era created by Japanese government. It is a concept of society that has centered ways to human-centered dan techonology-based. By remembering the raising level of globalization, humans will be more active to transform big data to become skill in their daily activities to do a good life. At the end, it will raise skills and new requirements to open opportunities for humanity, for the meaning life, and giving feeling pleasure to all society. That is inclusive concept.

Designing the inclusive education learning in this 5.0 era, it is very relevant to a way well-known as Design Thinking. Those two concepts have the same point, those are in the era of 5.0 society and the inclusive education implementing. They focus on human-centered or user as the center. Thus, if it is done in classroom, student and learning which is oriented to student center. Practically, it is also something that can be viewed as a HOTS learning system. "Higher Order Thinking Skills" is an exploitation of the technology learning. It is also an exploiting of the assistive technology in adaptive media learning. It means that there is something needed to do thinking and structured and systematic approach that can be used to design a learning, collaborative, best problem solvings to make innovation in this 21st century as possible as with demand and futuristic requirements.

This Design Thinking approach is flexible to be done in various fields of courses. And the other factor which is certain to the success of process of student in their implementing, involving various sides. Factors in which able to influence activities of the learning system process, those are teachers, students, media, tools, and the others Sanjaya (2010, pg. 52). According to Harjanto (2010, pg. 32), he explained that the teaching planning in order to prepare alternatives of problem solving to fullfill requirements on education realistically to have an orientation to purpose done clearly and detaily.

B. RESEARCH METHOD

This research uses qualitative which is descriptive by using references study or the deepening references. Djam'an Satori and Aan Komariah (2014, pg. 22) explained that qualitative research is a research focusing on qualities or important things of a character good or services. Important things of a goods or services shapes events/phenomena of social indication is the meaning behind those events that can be made as meaningful course to development of theoretical concepts. Qualitative research in which it is descriptive, working steps to describe an object, phenomena, or social settings represented in a writing which is narrative. It means that data and fact collected formed words or picture than numbers. Describing something means describing what, why, and how of events happen. Practicing a writing, a qualitative research report contain quotes of data and fact revealed in the real range to give complete illustrations and to give support to what conveyed about (in Djam'an Satori and Aan Komariah, 2014, pg. 28).

According to Satori and Komariah (2014, pg. 151), qualitative research is not only concerned to empirical framework, but also to view logical framework supported by views of experts formed authoritative knowledge. In this case, it is written formed books, journals, research reports, or the other scientific works. The researcher may quot substance containing within references as material references. Document will be sorted by the researcher if those document are relevant with activities of scientific writing done.

By remembering opinion above, Sukardi (2003, pg. 33) explained that the book study is an activity which is absolute in research, academic research especially, which focuses on purpose developing theoretical aspects and worth aspect practically. By doing the book study, the researcher has the deepening widely and deepening to problems studied. The book study done by the researcher requiring and building background, theoretical framework, and deciding temporary anticipation or often called as reseach hypothesis, so that the researcher can understand, locate, organize, and then use various books in its field.

Then, Sukardi (2003, pg. 34) stated that variety of reference source are something relevant, such as journals, report on the result of research, paper, news, books, the result of seminary, scientific articles that have been not yet published, source, legal decision, etc.

C. RESULT AND DISCUSSION

a. Design Thinking

According to Tim Brown, Executive Chair of IDEO Design Thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success. Thinking like a designer can transform the way organizations develop products, services, processes, and strategy. This approach, which is known as Design Thinking, brings together what is desirable from a human point of view with what is technologically feasible and economically viable. It also allows people who aren't trained as designers to use creative tools to address a vast range of challenges. IDEO did not invent design thinking, but we have become known for practicing it

and applying it to solving problems small and large. It's fair to say that we were in the right place at the right time. When we looked back over our shoulder, we discovered that there was a revolutionary movement behind us. (In IDEO Design Thinking https://designthinking.ideo.com/). The concept of Design Thinking itself has 5 steps, those are: (1) Emphatize, Define, Ideate, Prototype, and (5) Test.

In IDEO (https://www.ideou.com/blogs/inspiration/what-is-design-thinking) Design Thinking is a process for creative problem solving. Design Thinking has a human-centered core. It encourages organizations to focus on the people they're creating for, which leads to better products, services, and internal processes. When you sit down to create a solution for a business need, the first question should always be what's the human need behind it?

In employing Design Thinking, you're pulling together what's desirable from a human point of view with what is technologically feasible and economically viable. It also allows those who aren't trained as designers to use creative tools to address a vast range of challenges. The process starts with taking action and understanding the right questions. It's about embracing simple mindset shifts and tackling problems from a new direction. IDEO itself expressed by David M. Kelley (born February 10, 1951) is an American businessman, entrepreneur, designer, engineer, and teacher. He is founder of the design firm IDEO and a professor at Stanford University. He has received several honors for his contributions to design and design education. (Wikipedia).

Cognitive scientist and Nobel Prize laureate Herbert A. Simon was the first to mention design thinking as a way of thinking in his 1969 book, The Sciences of the Artificial. He then went on to contribute many ideas throughout the 70s which are now regarded as principles of Design Thinking. From the 1970s onwards, design thinking started to combine the human, technological and strategic needs of our times and progressively developed over the decades to become the leading innovation methodology it is today. Design Thinking continues to gain ground across a wide range of industries and is still explored and enhanced by those at the forefront of the field. (Interaction Design Foundation, https://www.interaction-design.org/literature/topics/design-thinking).

All forms of professional design education can be assumed to be developing Design Thinking in students, even if only implicitly, but Design Thinking is also now explicitly taught in general as well as professional education, across all sectors of education. Design as a subject was introduced into secondary schools' educational curricula in the UK in the 1970s, gradually replacing and/or developing from some of the traditional art and craft subjects, and increasingly linked with technology studies. This development sparked related research studies in both education and design.

New courses in Design Thinking have also been introduced at the university level, especially when linked with business and innovation studies. A notable early course of this type was introduced at Stanford University in 2003, the Hasso Plattner Institute of Design, known as the d.school. In the K-12 education sector, Design Thinking is used to enhance learning and promote creative thinking, teamwork, and student responsibility for learning. A design-based approach to teaching and learning has also developed more widely throughout education. (Wikipedia, https://en.wikipedia.org/wiki/Design_thinking).

Then, according to Koh, Chai, Wong, Hong (2015, pg. 2) explained that Design Thinking is an activity that implicit in the process of design. As a concept however, Design Thinking emerged only in the later part of the twentieth century. According to Kimbell (2011), one of the earliest book-length treatments of the concept was in Peter Rowe's Design Thinking, published in 1987. The discourse on design and Design Thinking is no doubt grounded in traditional disciplines such as industrial and graphic design as well as engineering and architecture.

b. Learning Strategy

According to Rak Joni (in W. Gulö, 2012, pg. 2), he defined that learning strategy is a pattern and general phase of student-teacher's deeds in giving shape of the learning-teaching activities. Meanwhile, the strategy of learning-teaching, as stated by J.R David (in W. Gulö, 2012, pg. 2), is a Teaching Strategies for College Class Room (1976): a plan, method, or series of activities designed to achieves a particular educational goal (P3G, 1980).

The other opinions, as said by Trianto Ibnu (2011, pg. 207) who said that the learning strategy concerning the learning activities concretely in which it has to be done by student in their interactions with material courses and the learning sources to master basic competence and indicators, and this activity mentioned in opening activity, point, and closing.

Deni Darmawan (2012, pg. 6) explained that the learning strategy is specific to select, and to sort learning events or learning activities in a course. Specifically, the learning strategy interacts with the situation of studying. Situations of this study often being defined in learning models. The learning model or the learning strategy required to make it true differently. It depends on the learning situation, character material, and kind of learning needed (Joyce & Weil, 1972; Merrill, Tennyson, & Posey, 1992; Reigeluth, 1978 in Deni Darmawan, 2012, pg. 7).

c. Inclusive School

Inclusive school is unite of education implementing education to all leaner in the same school without discrimination, it should be friendly, and humanistic to optimize potence development of all learner so that it will become human being which is worth and charismatic. An implementing of education which is relevant with specific requirements for all student. It means that school needs to do various modification and adaptation, the learning system, and judging system. Inclusive means practice which educate all students, included those are who experience challenges, in regular schools in which they often always be a primary option to disability child (Omrod, 2008, in Edy Prabowo, 2017, pg. 9).

Taylor & Ringlaben (in Edy Prabowo, 2017, pg. 11) stated that the existence of the inclusive education cause new challenges to teachers: it is the problem significant change to education program preparing teachers to face all student's requirements, whatever they are normal or disability student. Taylor and Ringlaben also explained about how important of teacher's attitude towards inclusive education, those are teacher who has more positive attitude to the inclusive education in which it will be able to organize instructions and curriculum used to

disability student, and teacher who has positive attitude, so that they can have more positive approach to inclusive education.

Edy Prabowo (2017, pg. 19) explained, not all disability student's condition are able to do school education program of this inclusive education, so that some disability people can be possible: blind, illiterate, autism, slow learner, hyperactive. The inclusive educatiom is also a strategy developing quality, because it uses various learning methodology in which it can touch all child and respect to differences by using four principles as the orientation: (a) Individual Requirements Principle, (b) Meaning Principle, (c) Progressive Principle, and (d) Involving Principle.

J. David Smith (2006, pg. 45) explained a new term used to describe federating for disability people into school programs which is inclusive (from English: inclusion). For the most teachers this term is viewed as the more postive description in struggles to unite children who have obstacle by using realistic and comprehensive ways in daily activities to student. They who have obstacle is, involvement which actually comes from every child in a whole living school. Inclusive also means acception of children who have obstacle to curriculum, environment, social interaction, and self-concept (vision-mission) of the school.

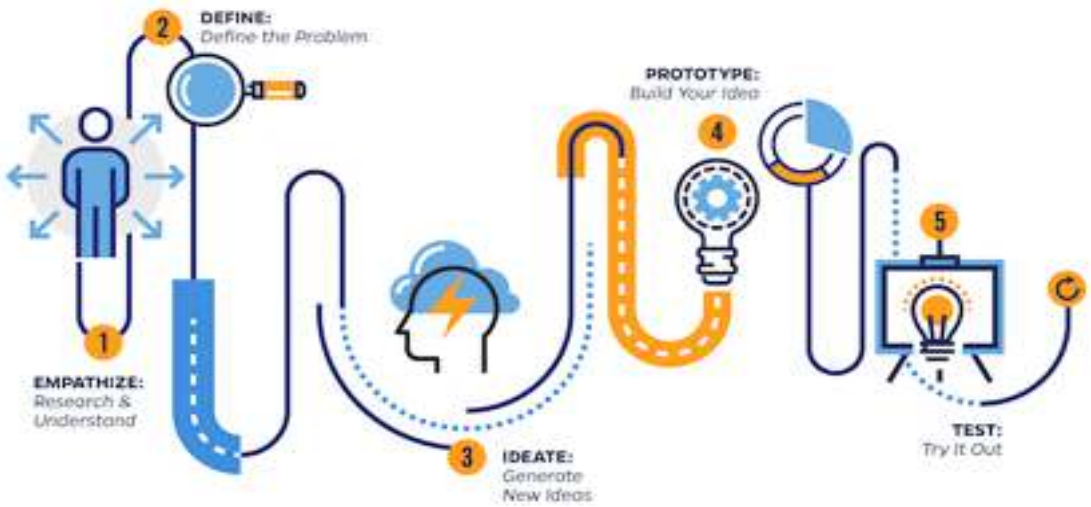
d. Era of the 5.0 Society

Mayumi Fukuyama, (2018) in *Society 5.0* pust forward by the Japanese government is a clear concept. It was drafted in the 5th Science and Technology Basic Plan by the Council for Science, Technology and Innovation, and approved by Cabinet decision in January 2016 (http://www8.cao.go.jp/cstp/english/basic/5thbasicplan.pdf).

Then, Mayumi Fukumaya, (2018) looking back on human history, stated that we can define different stages of societies. Society 1.0 is defined as groups of people hunting and gathering in harmonious coexistence with nature; Society 2.0 formed groups based on agricultural cultivation, increasing organization and nation-building; Society 3.0 is a society that promotes industrialization through industrial revolution, making mass production possible; and Society 4.0 is an information society that realizes increased added-value by connecting intangible assets as information networks. In this evolution, Society 5.0 is an information society built upon Society 4.0, aiming for a prosperous human-centered society.

While Society 5.0 is Japan's growth strategy, it is not limited to Japan, as its goals are the same as those of the SDGs. The challenges that Japan faces, such as an aging population, declining birthrate, population decrease and aging infrastructure, are challenges that many other countries will eventually face. Japan is one of the first nations to face these challenges. By the early resolution of such challenges through Society 5.0, and by sharing those solutions with the world, Japan can contribute to resolving similar challenges worldwide and the achievement of the SDGs. (In Mayumi Fukuyana, 2018 https://www.jef.or.jp/journal/pdf/220th_Special_Article_02.pdf).

Coming from above, it can be explained impinging steps of Design Thinking to decide the strategy of educational learning in the era of the 5.0 Society. There are five phase in Design Thinking, according to David M. Kelley, those following under:



Source: Socrates Empowering School

1. Empathize

In the first phase, teachers seek to know via emphatic process towards various process problems of the learning at any inclusive school and try to find the solution. In this phase, it is important to do a special approach to student. Knowing and understanding of what student really want about. In this case, a teacher can do an interview and can regard his/her self as a teacher to know things students need. Identical (disability) child: blind, deaf, slow learner, mental disorder, talented children, anomaly physical condition, those are rights to get treatment which is appropriate for them. So that, teacher may give maximal services in order to developing quality of the inclusive education. It is done so that the problems of teachers can be detected soon.

2. Define

Some kind of information collected during Empathize phase, then the next step is analyzing and synthesizing to decide about what the problem faced identical (disability) children in the learning process at classroom, about what important things. They are very helpful in solving problems of students because the determining problems are done.

3. Ideate

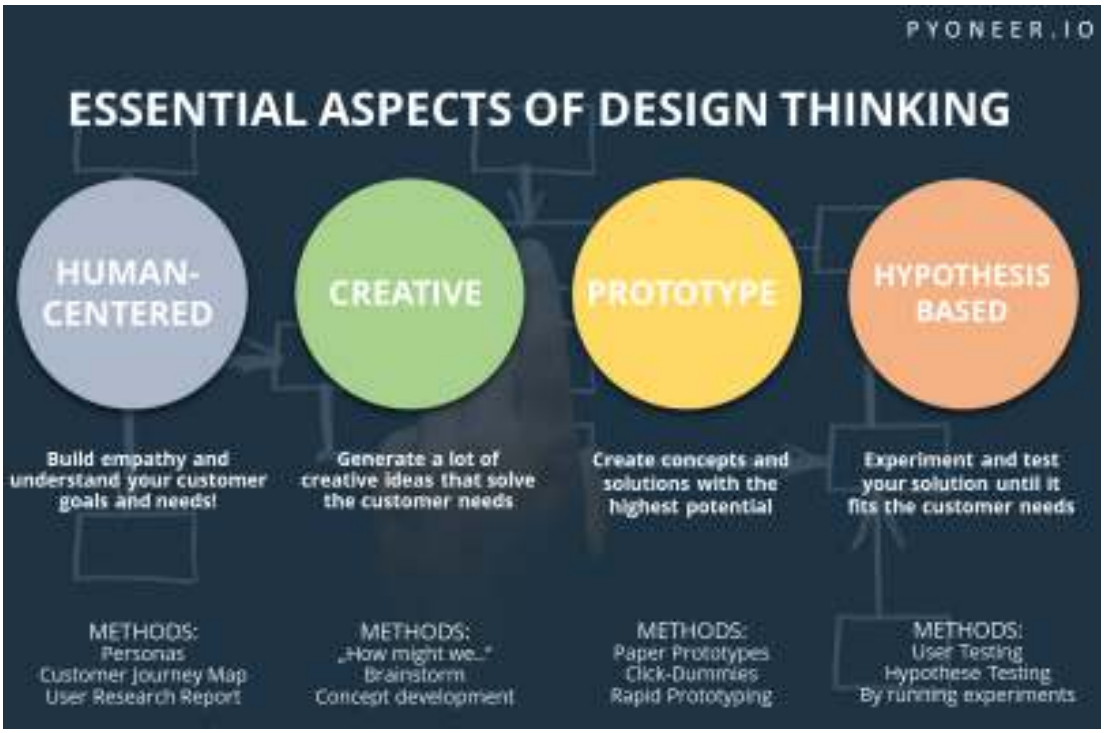
The ideate phase is to produce an idea. All ideas will be accepted and collected to solving problems determined on the last phase, that is the define. It is important to find much ideas or solution in the beginning phase. The last phase is investigation and examination of ideas before to find out the best way to solve problems or set aside some strategies needed to minimize problems will happen latter.

4. Prototype

From this phase, there will be learning solution or strategies which is effective, efficient, innovative, and soluble formed products, so that we can investigate solution of problems produced in the phase before. This prototype can be tested by doing phase of the learning simulation with teachers in which it does exploting of the learning technology to make innovation formed new ideas, so that it can make something fresh. When there is any suggestion concerning some sources of the study, Deni Darmawan (2012, pg. 3) stated that there is something covers environment, tools, procedure, concept, theories, technology, media, and procedure in solving problems itself. Because of that, we can repair this prototype, so that there will be good prototype in the case of optimizing process of learning.

5. Test

The last phase is to test and evaluate design of the learning strategy to students in classroom. Looking what results come, whether it is appropriate to be done or not. It will be done changes and completing to something designed. It will be solution of problems in which it will raise the design which is better. We also can know what students really need in making the learning which is centered-students.

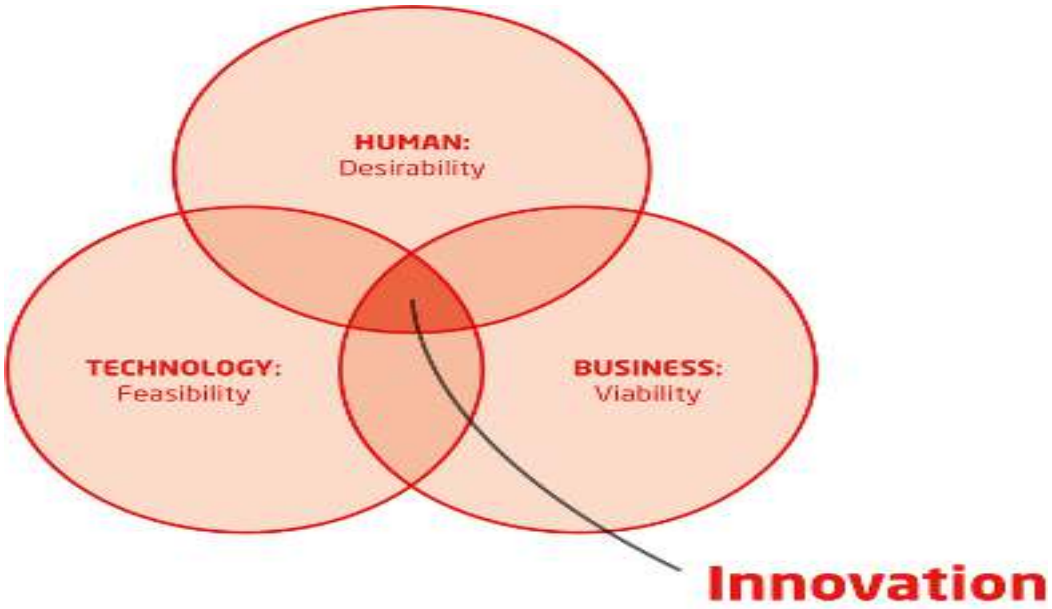


Source: Medium.com

Above all: 5 phase of Design Thinking, it can be affirmed again in (Interaction Design Foundation), that is Design Thinking is a non-linear, iterative process which seeks to understand users, challenge assumptions, redefine problems and create innovative solutions to prototype and

test. The method consists of 5 phases—Empathize, Define, Ideate, Prototype and Test and is most useful when you want to tackle problems that are ill-defined or unknown.

In (Interaction Foundation Design, https://www.interaction-design.org/literature/topics/design-thinking), the Design Thinking process has become increasingly popular over the last few decades because it was key to the success of many high-profile, global organizations—companies such as Google, Apple and Airbnb have wielded it to notable effect, for example. This outside the box thinking is now taught at leading universities across the world and is encouraged at every level of business. Design Thinking improves the world around us every day because of its ability to generate ground-breaking solutions in a disruptive and innovative way. Design thinking is more than just a process, it opens up an entirely new way to think, and offers a collection of hands-on methods to help you apply this new mindset.



Source: Hasso Plattner Institut

Innovation and effective problem-solving combine three essential components:

1. Technical Feasibility
2. Economic Viability
3. Human Desirability.

Design thinking has some important elements. Binus University School of Information System calls those:

- People centered: in this method, it is important to note that every action done is centered to what user really need.
- Highly creative: using this method, creativity can be explored freely, not only to focus on a rigid or standard regulation.
- Hands on: the design process needs a real experimentation done by designer team, it is not only making theories or drawing picture on lettes.

- Itterative: the process of design is a process by following much phase done again and again to do improvisation and producing a product or the best application.

In IDEO, Why Is Design Thinking is Important?

- It can help you or your team surface unmet needs of the people you are creating for.
- It reduces the risk associated with launching new ideas.
- It generates solutions that are revolutionary, not just incremental.
- It helps organizations learn faster.

3 Essential Pillars of Design Thinking

- Empathy - Understanding the needs of those you're designing for.
- Ideation - Generating a lot of ideas. Brainstorming is one technique, but there are many others.
- Experimentation - Testing those ideas with prototyping.

Done Right, Design Thinking...

- Captures the mindsets and needs of the people you're creating for.
- Paints a picture of the opportunities based on the needs of these people.
- Leads you to innovative new solutions starting with quick, low-fidelity experiments that provide learning and gradually increase in fidelity.

Areas Where Design Thinking Can Apply

- Product design
- Service and experience design
- Business design
- Leadership
- Organizational change

To decide the learning strategies in the inclusive school, it is important to note that it can be separated with the specific curriculum, that is a particular services. It is specific intervention based on anomaly or particular requirements of learner to solve their disability or optimizing specific potence which is needed to develop. Forms of specific services are: (1) Reading-Writing Braile, (2) Orientation of Mobility, (3) Development of Communication, Sounds Perception, and Rhythem, (4) Self-Development, (5) Occupation, (6) Developing-Kinetics, (7) Development of Self and Social, and (8) Modification of Behaviour.

The bearing between application of the inclusive educational learning and Design Thinking approach in the era of the 5.0 Society concerns to human-centered: students based on technology. It means that exploiting of technological innovation follows development of the period by using approach of technological multimedia practice. Deni Darmawan (2012) stated that educational innovation is a primary requirement of the context of application of The Learning Technology Sciences. Especially, the basic ICT. So that it is wished be able to raise quality of education in which it can spread effects on result of the better learning. Innovation in the world of education actually lies on thinking skills producing an idea as technology that design building in which it should be had by technology in the field of education and learning.

The designer of the learning should be able to formulate an instructional design which is capable to find a new discovery formed assistive technology in adaptive learning media. So that it can solve problems and make process of learning-teaching easy, especially identical (disability)

child. It is something that has to be done to make better generation and capable to face challenges of future. Some innovation that can be developed as such the multimedia learning, e-learning, mobile-learning, blended-learning, and modern-learning in the context of technology. Those are 21st century challenges in the world of education, the era of the 5.0 Society. Those are important to make friendly school for disability child, that is the Inclusive Education Indonesia for All.

D. CONCLUSION

Design Thinking Approach is a collaborative mindset in solving problems, to determine inclusive education learning strategies that are centered on the human center or user, referring to the opinion of David M. Kelley can be done with 5 stages, namely: (1) Emphatize, Define, Ideate, Prototype, and (5) Test. The implementation of inclusive education is here to provide equal opportunities to children with special needs (ABK) to improve quality education, eliminate discrimination and fulfillment of human rights as equal human beings in God Almighty and the law. Application of Design Thingking in the era of society 5.0 with human-centered and technology-based, by designing learning strategies oriented at student centers and use the use of various technological sophistication formed development of the assistive technology in adaptive learning media. It is to deliver innovations that can solve problems in dealing with demands and community needs to make life meaningful with the aim of producing generations who are ready to face new professions in the future.

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STUDENTS' PERCEPTION TOWARD DIGITAL BASED LEARNING IN WELCOMING THE ERA OF SOCIETY 5.0 AT IAIN PADANGSIDIMPUAN

Syafrilianto, syafrilianto@iain-padangsidimpuan.ac.id
Primary Teacher Education
Institut Agama Islam Negeri Padangsidimpuan, Indonesia

Maulana Arafat Lubis, maulanaarafat@iain-padangsidimpuan.ac.id
Primary Teacher Education
Institut Agama Islam Negeri Padangsidimpuan, Indonesia

M. Aries Taufiq, ariespertama@gmail.com
Language Teaching Science
Universitas Negeri Padang, Indonesia

Berry Kurnia Vilmala, berrykurniavilmala@umri.ac.id
Science Education
Universitas Muhammadiyah Riau, Indonesia

ABSTRACT

The excellence of technology in education has transported the community to the digital transformation in Society 5.0. Advanced digital technology becomes essential in creating an imaginative, innovative, productive and creative society. This condition will have implications such as the role of educators which shifts to become facilitators, students as active learners, more intensive interaction between educators and students, and increasingly diverse and easily accessible learning resources. Society era needs no feared; instead, it can be utilized as the opportunity for the education advancement in Indonesia. This study emphasized on the students' perception toward the use of digital in the learning process in the era of Society 5.0. This research applied qualitative methods. The results revealed that students presented adequately good perceptions towards the use of digital in the learning process (digital based learning). This study also obtained the aspirations and expectations from students concerning the needs for trainings or special guidance outside learning process (excluding SKS), such as workshops. Therefore, the reinforcement and supports from the LPTK is necessary to prepare the students to welcome the era of Society 5.0.

Keywords: Student's perception, Digital based learning, Society Era 5.0

A. INTRODUCTION

As a result of a rapid development of era, the information access becomes more easily obtained through various digital media like the internet. The ability to use and create technology-based content includes finding and sharing information and interacting with others. The abundant information provided on the internet needs to be utilized in order to gain benefits to enhance insights in exploring useful information. Setyawan, Rufi'I, and Fatirul assert that technology is a means of creating a learning environment in order to produce an effective learning process [1]. Moreover, technology is also an essential tool for students to finish assignments since everything can be obtained instantly, easily and quickly [2].

The development of digital technology eases the students to transfer, summarize, and store data. Besides, digital technology is able to create small and compact data storage devices, which include laptops, ultra portable computers and personal digital assistance. In addition, hotspot and wireless technology are also helpful in accessing information quickly. Portable devices equipped with internet facilities allow users to obtain information without depending on time and place. Through wifi technology, computer users can have two-ways communication through a website network [3].

Recent technology advances have changed the lifestyle and the way people obtain and utilize the information and knowledge. Then, advances in network technology or internet, which evolves along with advances in digital technology, have been able to broaden the horizons of knowledge of media and technology users. Current technology advances have altered the paradigm of learning. The old paradigm considering lecturers as the only source in the learning process is no longer valid today. As a result of these advances, lecturers not only have to act as instructors and sources of information and knowledge, but also become managers and developers of learning programs to help students to achieve the abilities targetted. The influence of technology advances affects learning activities and learning programs which result in new forms of learning, such as: electronic learning, distance learning and blended learning.

Technology becomes a crucial media in education, especially in universities to facilitate both online and offline learning process. This intended technology, known as internet, influences education advances, one of which is at higher education (universities). One indicator denoting advances at universities is the use of technology; the internet is utilized not only for the development and implementation of innovative learning strategies but also for academic activities on campus [4]. Hence, universities become one of the places for academics to encourage the advance of technology development. Higher education institutions are expected to be able to produce competent students by providing the knowledge, along with strong characters, knowledge and skills so that they can have a religious, innovative and creative spirit.

One of the impacts of the development of technology is that educational institutions start to organize digital and internet-based learning by using a web enhanced course, which refers to the use of internet as a support for improving the learning quality inside and outside the classroom. This course is known as web life course because the essence of learning activities is by having face-to-face meetings in the classroom between lecturers and students [5]. This is due to the presence of the revolutionary era called society 5.0.

Society 5.0 refers to a society in which advanced IT technology, IoT, robots, artificial intelligence, augmented reality (AR) are actively utilized in humans' life, in the industries, health cares, and other fields that are not only for progress, but also for benefits and people's comfort [6][7]. Society 5.0 is an era sparked by the Japanese government, which is defined as the concept of a human-centered and technology-based society. The era of society 5.0 has a concept which implies that humans will play a greater role by transforming big data into a new wisdom that ultimately increases human ability to create opportunities for humanity to achieve meaningful life [8].

The concept of society 5.0 is a refinement of the concepts of society 1.0, 2.0, 3.0 and 4.0. in Society 1.0 was a retarded era, the era in which humans hunted and just recognized letters. Then, society 2.0 was the era in which humans began to recognize farming. Meanwhile, society 3.0 had entered the industrial era in which people started to use tools or machines to support their daily activities. After that, society 4.0 refers to the era entering the revolution that has introduced people to technology. Finally, in society 5.0 era, all activities are performed based on technology / digital society. Nowadays, technology has become the most

important part of people's daily life, for educational, social and economic purposes [9]. The characteristics of the era of society 5.0 include digitization, optimization and customization of production, automation and adaptation, interaction between humans and machines, value added services and business, automatic data exchange and communication, and the use of information technology [10].

Higher institution needs to encourage the culture of technology literacy because technology is an important medium to assist the work and learning of LPTK and students. Technology literacy is the ability to understand the completeness following technology such as hardware, software, and ethics and etiquette in utilizing technology. Next, it is the ability to understand technology for printing, presenting, and accessing the internet. It also refers to the understanding of using computers which can turn on and turn off computers, store and manage data, and operate software programs. In line with the amount of information due to current technology developments, a good understanding is needed in managing the information needed by the community [11].

For this reason, the institutions must prepare to use the opportunities or to face challenges in the future. This demands the universities to provide digital-based learning activities. Digital learning is all forms of learning facilitated by digital technology or the learning practices that make effective and efficient use of technology. Digital learning becomes a positive influence, for example: (1) creating more interesting and enjoyable experiences for students, (2) helping students take control of the learning situation, for example by individualizing the speed at which new material is introduced, or by providing direct feedback about how well they are learning, (3) supporting collaborative learning, which provides opportunities for deep learning by motivating students to interact actively, (4) enabling students to understand concepts more quickly and completely, to connect theories and applications more proficiently, and to more easily engage in learning, (5) improving teaching approaches, enabling knowledge construction as well as facilitating the creation of innovative ways to build and share knowledge, (6) facilitating new ways of learning and creating possibilities beyond imagination, (7) developing main skills to help students become thinkers involved, students' active problem solving, skilled communicators and knowledge constructors [12].

According to Munir, digital-based learning implements a learning system that occurs at several places. As a result, there is no direct face-to-face interaction between the teacher and the students. The interaction between instructors and students can be performed in either tangible or intangible forms. The tangible interaction is performed in person or known as online meetings, real audio or real video, and chatrooms [13]. Intangible interactions can be done with mailing lists, discussion groups, newsgroups, and bulletin boards. Either tangible or intangible interactions create the interaction between teachers and learners that can replace direct interaction. This interaction is very possible to be done by using various kinds of learning media so that it is easy for the learner to reach in learning material or other information [14].

Digital media which are currently used by academics in universities are Inarxiv, Blogspot, Orcid, ResearcherID, Twitter, GitHub, LinkedIn, ImpactStory, Google Scholar,

ResearchGate, Academia, Baidu Scholar, Social Science Research Network. These digital media are utilized as the application for publications and references for academic papers (lecturers and students). In addition, there are also media that are currently popular, namely Ruang Guru. It is one of the effective, efficient and economical digital media so that it can be used started from the elementary level to college level. Prensky states that the majority of students nowadays are considered digital natives. This refers to the fact that they have been familiar with electronic devices, including the use of smart phones and the internet since they were children [15].

In addition to the digital media, there are also digital books adopted by many circles to publish and distribute works from various disciplines. Digital books are increasingly preferred because they have many advantages compared to conventional book formats. One of the advantages of digital books is that they are easy to carry and do not require large storage space. Digital books can be stored on PCs (personal computers), laptops, androids or electronic devices specifically provided for storing and reading digital books. In addition, the Ministry of Education and Culture also released e-sabak, a text book that is able to be used as a means to introduce ICTs while providing quality learning resources. The presence of this digital book format makes readers be able to read anywhere, anytime, and in any atmosphere [16].

Then, there is also an online discussion presenting a new learning space for students. The characteristics of this learning space are text-based or interactive learning which suggest that learning in this kind of arrangement is different from direct face-to-face learning. Gerbic asserts that if educational institutions want to create a student-centered learning environment, more insight is needed in terms of students' viewpoints of online discussion when they become part of learning and their ways to help or hinder learning activities. One of the topics in this online discussion is the existence of computer mediated conferencing as one of the applications of blended learning environment [17]. Blended learning is believed to be a method of collaborative learning between humans and technology; this is what is called learning towards the era of society 5.0.

A relevant study was conducted by Lestari (2017) on the Use of Youtube as an English Language Learning Media. She found that the use of YouTube in English classes really helped for the enrichment of materials for learners, so students had positive perceptions towards the integration of technology in the classroom, especially internet-based video technology. It resulted in increasing the interest and willingness to learn not only in groups but also independently [18]. Another study was conducted by Amelia (2018) on the Use of E-learning Based Learning Media on the Study of Perception and Expectations of Lecturers and Students in the Department of Economic Education, Faculty of Economics, Universitas Negeri Padang. She revealed that the level of respondents' achievement in accessing teaching materials was 76.9. This showed that e-learning based learning media really helped students in doing and completing assignments given by lecturers, as well as making the completion of existing tasks more efficiently due to the easy process of the current information exchange [19].

Hamzah (2015), on the Use of Social Media on Campus in Supporting Educational Learning, found that social media supported collaborative learning and made it more efficient by allowing students to dialogue through distances without the need to be in a specific geographical location. Therefore, using social media created more efficient interaction by increasing students' flexibility and independence. In addition, it allowed them to share knowledge, to send files to other students more easily and faster, and to build effective communication. Some examples of social media for efficient interaction in supporting educational learning were e-mail, online videos, such as: youtube and Wikipedia, and voice and video technology, such as: IM and skype [20].

Another previous study was also conducted by Ningsih (2019) about Students' Perceptions of Android-Based Mobile Learning. This study found that students of Education Technology Department at FKIP Baturaja University FKIP had positive perception towards Android-based mobile learning. It revealed that students understood the main concepts and benefits of Android-based mobile learning, and were ready to use it. Although the students had good perception, it was important to note that there were some constraints related to the internet access; sometimes, the access was limited to students [21]. Similarly, Ispandi (2019) also conducted a study about Building a Web-Based Digital Library Information System. According to him, the score of 84.8% obtained from respondents indicated to facilitate learning references and really liked the digital library [22].

The background stated above initiated the researchers to conduct a study on digital-based learning. This study aimed to describe the perceptions of students at IAIN Padangsidimpuan towards digital-based learning in welcoming the era of society 5.0.

B. RESEARCH METHODS

This study was a descriptive qualitative research. Qualitative research is research conducted naturally according to the conditions found in the field. This research used descriptive data: in the form of statements or responses from research subjects verbally. Then, this study applied phenomenological approach in which researchers collected the data of an event based on the reality that occured. The data collection was conducted by in-depth interviews with informants and direct observation. Hasbiansyah states that phenomenology seeks to express meaning about one's experience. Furthermore, Moleong states that the phenomenological approach seeks to understand the meaning of events and their relation to ordinary people in certain situations or subjective aspects of one's behavior [23][24].

This study was conducted at Madrasah Ibtidaiyah Teacher Education Study Program, the Faculty of Tarbiyah and Teacher Training, Institut Agama Islam Negeri Padangsidimpuan, North Sumatra Indonesia, from September to November 2019. The respondents were selected by using a purposive sampling technique. In addition, data in this study were collected through observation, interviews, and documentation. Observations were performed to directly observe what happened at the location of the study. The interview was conducted by interacting with informants, in which the informants were given the opportunity to present their arguments and share experiences and observations experienced.

The sampling technique in this study was purposive sampling because the samples were considered to be the most knowledgeable about what researchers expected so that it could ease the researchers to explore the social situation under the study [25]. The samples were students receiving BIDIKMISI scholarship (Poor and Outstanding Student Education Scholarships), UKT (Single Tuition), and Achievement (based on GPA per semester) at Institut Agama Islam Negeri Padangsidimpuan. There were 9 informants in this study.

The indicators for the interview with informants were about digitalization as an opportunity, digitalization as a challenge, digitalization as a medium of learning, and the role of lecturers in fostering a culture of digitalization. Meanwhile, documentation was used as a data collection technique which contained photos at the time of the interview and the location of the study.

After collecting the data, the data validity was tested by using data triangulation techniques. In this study, triangulation was carried out by comparing the data obtained through different time and settings of the instrument by comparing observational data to interview data, and comparing interview results to documentation. Then, the data were analyzed at the time of data collection and after the data collection. The data analysis was started from the field by using descriptive analytic methods, compiling by describing and interpreting the data and all things that were the focus of research.

C. RESULTS AND DISCUSSION

Table 1. Profiles of Data Sources

No.	Sources of Data (Informants)	Student Reg No.	Kinds of Scholarship
1.	Ade Wilda Sari	1820500018	BIDIKMISI
2.	Solat Riani	1820500044	BIDIKMISI
3.	Hofifah Erinsahqy Harahap	1820500066	UKT
4.	Nova Andriani Sihombing	1720500051	Achievement (IPK)
5.	Novita Yanti Siregar	1720500016	Achievement (IPK)
6.	Wildah Hayati Nasution	1720500108	Achievement (IPK)
7.	Nurjannah Holijah Harahap	1720500122	Achievement (IPK)
8.	Ammi Thoibah Nasution	1720500127	Achievement (IPK)
9.	Akhir Pauji Rambe	1620500026	UKT

Table 1 shows that there are 9 informants as the sources of data to obtain real information. This study producesd several categories: digitalization as an opportunity, digitization as a challenge, digitalization as a medium of learning, and the role of lecturers in fostering a culture of digitalization.

1. Digitalization as an Opportunity

The Minister of Education and Culture, Nadiem Makarim, delivered a speech at the event of Google for Indonesia in Jakarta on November 20, 2019, telling that "if Indonesia wants to go forward and create superior human resources, we cannot possibly do so by following the same path as other countries. We must do it by means of shortcuts, namely

through digitalization and through technology education" [26]. This statement became an encouragement for the younger generation (students) to find breakthroughs and use them in the future, in terms of digitalization. Regarding digitalization as an opportunity, researchers conducted observations while interviewing informants.

Then, in the interview session, the informant stated his perception as follows:

"Digitalization is very helpful for the demands of course assignments. Besides, it can enrich insight as well". (AWS_07102019)

This opinion was supoorted by other informants, who stated about digitalization as an opportunity, as follows

"Digitalization makes it easier for us to search for academic information, such as siakad application provided by the campus. Siakad provides information about job vacancies, as well as scholarships. This can be an opportunity for us to get a job". (WHN_18112019)

Based on the statement from the informants above, it was found that students were really not good at utilizing digitalization as an opportunity. It means that digitalization was only used for searching assignments; it was not yet utilized to seek additional allowance or working opportunities in the future. Actually, there is an application called Ruang Guru and Ruang Kerja, which can be used as an opportunity to get additional money, because students can become private teachers from the applications.

2. Digitalization as a Challenge

There are challenges accompanying every changes of an era. Sometimes, those challenges become vigilance and also a threat as well. The era of society 5.0 becomes a challenge especially for students because the era of RI 4.0 has not yet been achieved. Until now, still many students are computer illiterate. According to Tapscott, there are some new educations in the digital are, namely: (1) learning will be a lifelong challenge; (2) study no longer has to be at university; (3) educational institutions are slow to adjust; (4) it is needed an awareness to continue learning; (5) new media will change the form of education [27].

Thompson also stated that the growth of the internet is only one aspect of the digital revolution, which contributed to publishing changes. The publishing process is actually constantly changing; the internet is only one of the external forces that transform the state of book publishing. The presence of digital books becomes an alternative for changing the reading behavior. In 2005, Thompson assessed that there were five obstacles for readers to be interested in reading digital books: (1) low readability, (2) incompatible forms of e-book, (3) copyright issues, (4) expensive e-books, (5) cultures that prefer textbooks [28]. Related to digitalization as a challenge, researchers conducted observations while interviewing informants.

During the interview, the informant stated his perception as follows:

"Using applications for lectures is still too complicated to understand because there is no place to ask questions and lecturers only direct us not guide us. In addition, facilities are also a very serious obstacle and include very limited free internet networks. (AWS_11112019)

This opinion was supported by other informants who stated about the influence of digitalization as a learning medium.

"Digitalization is very important for future work competition, so far the lecturer only informs. However, what we need is guidance by doing direct practice from the lecturers because we don't just want theory to be able understand easily". (SR_14102019)

"The use of digitalization is actually a serious challenge for me because I have to study with proficient lecturers. This is because many lecturers do not guide during the learning process. The academic supervisor implements digitalization; for example: the proposal reference must be from online and must use a reference application, then check the plagiarism, even the results will have to be published online. Then, the thesis consultation is also via e-mail and WA. This is a challenge for me because I have to learn by myself. From the positive side, I think that this is a very helpful learning according to the age of technology in the future, so that I will not be behind the times. The demands of the lecturer make me think that it is important to know the application of the academic environment. " (APR_25112019)

The statement from the informants above revealed that students were always given demands in the completion of course assignments, but there was no guidance provided by the lecturers; the lecturers only gave direction. This became a challenge for students in using digitalization in the course. Therefore, there is a need for a technological literacy movement conducted by universities, so students are ready to face the challenges of digitalization in the era of society 5.0.

3. Digitalization as a Learning Media

According to McQuail, there are 4 motives for the use of media: (1) information, the encouragement in a person to find and know new things that happen in his life. Information can be in the form of news about science; (2) personal identity, the motivation to know one's self as a person and not be immersed in the role played. For this reason, it is necessary to support the media as a place that can show virtual identity and show who he is to the community; (3) social integration and interaction, motives for adjusting to the environment by staying connected with good friends in the real and virtual world and following what is happening in their environment; (4) entertainment, motives for relaxing, filling time, channeling emotions, having fun, and releasing fatigue for soul enjoyment [29]. Related to digitalization as a learning medium, the researchers made observations while interviewing informants.

During the interview, the informant stated his perception as follows:

"Digitalization is very helpful to do the assignments in each course. It is also very helpful to seek the information related to the learning material. However, the demands of digitizing-based assignments are not enforced by all lecturers; there are only a few lecturers who require them, such as management information systems courses, ulumul hadith, and basic concepts of social studies. Besides, assignment papers on ulumul hadith courses are published online on blogspot, then, courses on basic concepts of IPS are published online at inarxiv ". (AWS_18112019)

This opinion was supported by other informants who stated about digitalization as a learning medium.

"All this time, lecturers demand students to always keep abreast of the times in utilizing technology as a medium of learning. Media recommended by lecturers in obtaining information that can be used as reference articles in the form of papers published online are Google Scholar, e-boook at ipusnas ". (NHH_25112019)

"The course of thematic learning for elementary / MI requires us to publish article assignments online at inarxiv or academia edu. Then, the article is converted into a presentation video uploaded on YouTube. We often share with friends on other campuses; they also do not know the media of inarxiv. Therefore, there is a certain pride for those of us who have previously understood the media, even though they are more advanced in the campus ". (HEH_21102019)

Based on the statements above, this study found that students have been able to use digitalization-based learning media in the subjects they took, not only to use it, but also to utilize the media such as publishing scientific papers in the form of inarxiv.

4. The Role of Lecturers in Fostering the Digitalization Culture

Suryani, Setiawan, and Putria stated that the role of lecturers in facilitating students to fulfill their needs had an enormous impact on learning interests. There are campuses that have been facilitated with computer labs, projectors, and other facilities, but the lecturers' initiative to optimally utilize them needs to be improved. The Regulation of the Minister of National Education No. 16 of 2007 concerning Academic Qualification Standards and Teacher Competence explains that lecturers must utilize information and communication technology for learning purposes. Lecturers also utilize information and communication technology to communicate and develop themselves [30]. Therefore,

During the interview, the informant stated his perception as follows:

"We hope that all lecturers are proficient and able to increase our interest in learning to use digitalization because so far we have only learned as in the previous year, even though now it is sophisticated. Therefore, we hope that the IAIN Padangsidimpuan lecturers will continue to provide us with tutoring by implementing digitalization, so that we will not look old-fashioned. (NAS_ 21102019)

This opinion was reinforced by other informants, who also stated about the role of lecturers in fostering a culture of digitalization.

"The digitalization makes it easier for us to obtain learning resources because it does not determine space and time. We hope that all supporting lecturers will link the lecture material to the use of digitalization, because the role of the lecturer so far is only lecturing to 100 minutes. This is what makes us bored in learning ". (NYS_28102019)

"In my opinion, the role of lecturers in fostering a culture of digitalization on campus is not yet visible because lecturers only teach with the lecture method, if any, there are only a few lecturers who apply a digitalization culture such as when presenting using powerpoints and projectors. Therefore, we hope that the culture of digitalization is implemented on campus, so that we are not left behind the quality of our friends at other universities. In addition, we also hope that the institution will hold seminars and workshops related to the application of digitalization to support and strengthen lecture material, then, in order that students are also able to take advantage of applications in preparation for the era of society 5.0 The intended application, such as: Mandeley, Zotero, Turnitin, Google Classroom and others ". (ATN_04112019)

The statements above confirmed that the role of lecturers in fostering a culture of digitalization was very limited because many lecturers did not implement it because some of them were not proficient. Therefore, it is crucial for the institution to remind all its human resources at campus to get used to digitalization in daily work and learning. The application has been carried out, only it has not yet reached the point of civilizing the commitment. Therefore, the institutions need to be vigilant in preparing sarpras and HR to face the era of society 5.0.

D. CONCLUSION

Based on the result of this study, it can be concluded that the presence of digital technology has not been able to build technology literacy behaviors of students at IAIN Padangsidimpuan, especially at PGMI study programs. This is because the culture of digitalization do not yet implement in learning. The behavior of utilizing digitalization has not become the students' habit, which is marked by the small use of digitization as a learning medium. The presence of digital technology could be the opportunities, challenges, and learning media. Therefore, universities must have adequate facilities and infrastructure to support the learning. It also is necessary to strengthen the materials through seminars and workshops (for all students, not just certain students).

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STRATEGY FOR DEVELOPING VOCATIONAL HIGHER EDUCATION CURRICULUM AT IPDN IN DISRUPTIVE ERA

Dr. Layla Kurniawati, M.Pd
IPDN Lecturer
laylakurniawati@ipdn.ac.id
laylakurniawati@yahoo.co.id

ABSTRACT

The existence of IPDN as higher education under the Ministry of Home Affairs has several issues related to the development of higher education curriculum. This was compounded by the existence of the Industrial Revolution Era 4.0 which had a very disruptive impact on all aspects of life. Constraints and problems will become a boomerang for IPDN institutions and also for Ministry of Home Affairs if it was not taken seriously. In this regard, researcher conducted research to find ways of developing and solving government vocational education problems at IPDN in disruptive era. A qualitative descriptive approach through observation, interviews and documents becomes a step in data collection. The results showed that: 1) Team teaching through TPS can be a used for solving problems of educational development at IPDN; 2). The need for an annual curriculum evaluation and 3). The commitment and support of leaders in developing and overseeing team teaching programs as part of curriculum development at IPDN.
Keywords: Team Teaching, IR 4.0, Vocational Education

A. INTRODUCTION

The Public Administration Institute of Home Affairs is a higher education under the Ministry of the Home Affairs. This Institution has the main tasks and functions of preparing candidates for the cadre of the leaders of civil servants. The existence of IPDN as a higher education institution will refer into two large-level ministries both at the Ministry of Home Affairs related to structure and organization. Another is the Ministry of Research - Technology and Higher Education. With the existence of these two major institutions, IPDN must be able to adapt quickly to changes its education that are often rolled out by the Ministry of Research and Technology. The lately responds to the applied rules and regulations will be a problem for IPDN.

While Law number 12 of 2012 was prepared in response to the industrial revolution 4.0. So higher education is sought to be able to adapt to the changing conditions of the era. According to Klaus Schwab states that there is RI 4.0 put forward the hypothesis that currently billions of people have been connected to mobile devices, the discovery of processing speed by byte of internet data, which has increased the capacity of human knowledge beyond conventional systems. The industrial revolution 4.0 is inevitable and must be faced, because the impact of the industrial revolution 4.0 will change the era into a new era and a new way of life. The era is characterized by various characteristics such as: a). Cyber Physical System b). The Internet of things c). Cloud computing; d). Cognitive computing (Aziz: 2018). While Schwab mentions the characteristics of era 4.0 in the form of: 1). Autonomous robots; 2). Simulation; 3). System integration; 4). Internet of things; 5). Cybersecurity; 6). Cloud computing; 7). Additive manufacturing; 8). Augment reality and 9). Big data (schwab, 2016).

In relation with the above explanation, in the reality there were found to be a number of problems related to the implementation of applicable rules and regulations stipulated in the Law and the Minister of Higher Education's research and technology which have not been actively responded by IPDN which has had a fatal effect. For example, the provisions of Law Number 12

of 2012 on higher education has not been responded fully by IPDN from 2012 to 2018. Based on the findings, the form of IPDN curriculum documents 2013 should have been based on the provisions as stated in the Act, but in the reality the form related to curriculum documents is far from what was stated by Law number 12 of 2012. For example, in the provisions of the higher education Act should adjust their curriculum in accordance with the provisions contained in the Act. The provisions also suggested that 2 years after the issuance of these provisions, all universities under the Ministry of National Education had to adjust their rules and conditions in accordance with the Act.

Based on observations and studies of IPDN curriculum documents were published in 2013, they should have referred to these provisions, but from the source documents found in the field until 2018 these documents have not developed and changed yet. In this regard, researchers are interested in researching to find steps to solve the problems that are found in the field with the formulating problem as follows:

1. How is curriculum development at IPDN?
2. What is the Strategy for developing IPDN ?
3. Vocational Curriculum in the 21st Century?

B. RESEARCH METHOD

The study used qualitative descriptive approach, where researchers conducted this research by observing the implementation of the curriculum at IPDN. It has various aspects of the field and especially in the classroom. Researcher is also used the documents and through the documents, she studied and observed the documents related to the curriculum and conducting interviews with policy makers at IPDN. The IPDN policy makers included both the officials related to the academic field, the lectures who implemented the curriculum in the class, students and also the stakeholders of IPDN alumni). Based on the results of data collection, researcher grouped all the data and analyzed them according to existing theories.

C. RESULT AND DISCUSSION

In the step of formulating the problems, the researcher observed the facts of IPDN curriculum implementation phenomenon. It can be observed from the following findings, such as:

Based on data at curriculum document which based on the provisions of IPDN Rector Regulation Number. 423-5-764 of 2013 concerns about IPDN Curriculum for Diploma IV and Bachelor Program (S1). It appears that the IPDN curriculum tends to be the subject center. It only limited to a group of subjects and a brief description related to the number of faculties and study programs. This can be seen from the IPDN curriculum document data Number. 423-5-764 in 2013, which contains:

1. The information related to the number of IPDN faculties, namely the Faculty of Government Politics and the Faculty of Government Management. Each faculty has a curriculum for teaching, training and nurturing both for D4 and S1 programs which are often referred to the Center of a Single three Approach in the form of teaching, training and nurturing curriculum programs.
2. The document contains the information about the number of programs study in each faculty with a credit load for more than 148 credits. All the credits are required to be

taken at eight (8) semesters. Therefore the details regarding to the Faculty and Study Program:

	Name of The Faculty	Name of Study Programs	
1	Fakulty of Governemen Politics	1. Study Program Political Government for Diploma IV with credit loads for more than 150 credits and study's periods for eight semester.	
		2. Study Program for Development and Empowerment for Diploma IV with credit loads for more than 149 credits and study's periods for eight semester.	
		3. Study Program for Government Policy (S1) for Bachelor Degree with credit loads for more than 154 credits and study's periods for eight semester.	
2	Fakulty of Government Management	1. Study program for Administration of Demography and citizenship for Diploma IV with credit loads for more than 150 credits and study's periods for eight semester.	
		2. Study Program for Local Finance for Diploma IV with credit loads for more than 148 credits and study's periods for eight semester.	
		3. Study Program for Aparatur Resource Management for Diploma IV with credit loads for more than 148 credits and study's periods for eight semester.	
		4. Study Program for Government Management for Bachelor Degree with credit loads for more than 154 credits and study's periods for eight semester.	
		5. Study Program for Develompemt Management for Bachelor Degree with credit loads for more than 154 credits and study's periods for eight semester.	
		6. Study Program for Human Resource Management for Bachelor Degree with credit loads for more than 154 credits and study's periods for eight semester.	
		7. Study Program for Finance Management for Bachelor Degree with credit loads for more than 157 credits and study's periods for eight semester.	
*	Training Program for both two Faculties have credit loads for 28 credits and study's periods for eight semester.		

The curriculum document also contains lists of courses for each study program for eight semesters and the distribution of training courses were provided in eight semesters for all study programs at IPDN. In the provisions of 2013 curriculum also explained the details of activities

related to the training curriculum which tends to be cognitive rather than psychomotor in its implementation.

This tendency of existing document data at IPDN curriculum tends to refer to the subject-centered curriculum. Ralph Tyler argues that subject-centered curriculum has characteristics that are based on general philosophy of pragmatism. This curriculum development approach is based on the interests and talents of students, which includes human problems with various background problems, activities, and project projects. Individual interactions with the environment always change based on experience & scientific matters. While from the aspect of philosophy of education is based on lecturers guiding students to solve problems scientifically and through the process of searching (to promote democratic living - offering democratic life)

The above characteristics, the role and function of the lecturer for guiding students to be one of the aspects for supporting the success of the subject centered curriculum. Meanwhile, if the lecturer is not able to implement it, it will have less impact on the implementation of the curriculum in the field. Guiding does not mean as the only source of the materials in the class, but guiding has a meaning of various roles and functions that lecturers are able to act in accordance with the conditions and circumstances of the learning process both inside and outside the classroom in order to realize the implementation of the curriculum so that it can be applied in the field.

In line with the characteristics of 2013 IPDN curriculum's data document show that there is a tendency for becoming the academic subject curriculum concept model which is the oldest model. This model is based on classical education (perenialism and essentialism) that oriented to the past. From the existing curriculum document data, curriculum concepts have not been adjusted to the current conditions and phenomena. The courses in the old curriculum documents are provided without doing through the analysis study for choosing and giving the appropriate courses to the students. So the courses given are not based on the results of evaluating of the implementation of the previous curriculum as well as through the needs analysis step.

This is in line with what was stated by Sukmadinata (2008: 81) that all science and values have been discovered by thinkers of the past. The function and role of education is only limited to the spirit of preserving and preserving the heritage of cultural works in the past. The curriculum is more focused on the content of education, where learning activities are interpreted as limited efforts to master as much knowledge as is given and prepared by the teaching staff. So there is a tendency with the subject centered curriculum the role of teaching staff as a source.

While the times have changed. The Industrial Revolution Era 4.0 should have been watched out and anticipated with various preparatory steps to deal with it. This has not been seen yet at IPDN efforts to face the Industrial revolution era. It can be seen from the curriculum data evident from 2013 to 2018 has not referred to the provisions of Law number 12 of 2012. In this law, the authority for developing curriculum is submitted to each university by referring to this existing Law.

The 2013 IPDN curriculum document should have at least contained various standards that have been set, both the standards of education, research and community service. This curriculum should contain all nine standards that is included in the document. The document must contain the competency qualifications of alumni that reflected through their learning achievements. Considering this is a prerequisite as stated in the Act (KKNI / Indonesian National Qualification Framework) and SNPT (National Standard of Higher Education). But in the reality, all of the IPDN curriculum documents in 2013 have not been found yet these prerequisite.

The government, in this case through Law Number 12 of 2012 concerning higher education, has prepared the readiness of all universities in Indonesia through its regulations to anticipate and face the R.I era. 4.0. Likewise, Presidential Regulation number 8 of 2012 concerning KKNI (Indonesian National Qualification Framework) was also issued to support the rules and provisions of the law. Likewise, the application of the IQF is regulated through Minister of Education and Culture regulation number 73 of 2013 concerning the application of the IQF for Higher Education. Meanwhile, the standard setting in the provision is supported by other rule from Regulation of the Minister of Research and Technology Directorate of Higher Education National Standards of Higher Education number. 44 of 2015 concerning the National Higher Education Standards.

Likewise, the results of observations also show that the 2013 IPDN curriculum document also had not developed yet from 2013-2018. IPDN has never developed a curriculum concept in the form of documents. So it can be said that IPDN did not do curriculum evaluation since 2013. Meanwhile according to Sukmadinata (2008: 172) curriculum evaluation plays an important role both in determining educational policy in general, and in decision making in the curriculum. The results of the curriculum evaluation can be used by education policy holders and curriculum developers in selecting and determining policies for developing the education system and developing curriculum models that will be used by the institution.

The curriculum development at IPDN is carried out after IPDN has faced various kinds of problems regarding non-compliance with applicable laws and regulations for higher education. The problems in the forms: 1). Complaints from alumni who will continue their education at postgraduate program, they cannot continue their study because their data base of their bachelor program did not record at Dikti database. Their data are not listed; 2). Extension of study program licenses is also constrained, IPDN has not prepared yet both lecturers and students database which are required as stipulated in Law Number 12 of 2012; 3). So do the accreditations for some study programs at IPDN, in the accreditations have to fulfill the seven standards that must be listed in IPDN curriculum but it has not. There are also other problems found at IPDN. This will not happen and can be detected immediately if the curriculum evaluation has been carried out at the end of 2013. Therefore, the implementation problems of the 2013 IPDN curriculum can already be detected and anticipated in that year. But this condition did not happen because officials whose these academic development authorities lacked understanding of the essence of the curriculum. This evident is from the various policies that were born in curriculum development which were only interpreted as revising GBPP / SAP improvements annually, from 2013 to 2018.

The misunderstanding has an impact on the implementation of policies related to the existing curriculum. It is similar with Oliva statement (1992: 6). That…

….in the foregoing definition you can see that curriculum can be arranged in a narrow way (as subjects taught) or in a wide scopes (as all the experiences of learners, both in school and out, directed by the school). It will implicate for the school to be described from the differing conceptions of curriculum can vary considerably.

Based on Oliva's statement, it can be found in the field, where IPDN policy makers of curriculum development interpreted the development that is only limited to the improvement and revision of GBPP and SAP. In directly the implementation of curriculum development is only in the course of documents not to the other important aspects of curriculum development. For example the aspects of lecturers who will be support the success of the implementation of

curriculum. They should be given some knowledge, coach and training in implementing the curriculum, because they will implement curriculum directly. The success of curriculum implementation depend on the lecturers too. Therefore they must be invited to give the input for implementing and evaluating curriculum. Based on the observation in the class and the document, the percentage for upgrading the lecturers skills and knowledge is still limit and it can not cover for all the IPDN lecturers. So does the teaching material. It also has similar case with lecturer's factors, there has not been yet evaluation for teaching materials. Since 2013 the evaluation of learning material is only in the form of lesson outline, it has not cross check the appropriate of learning materials in this era. Based on the document data and interview with stake holders at MOHA, some lesson at citizenship study program have been out of mode. They should be change with other appropriate materials. It has happened since 2013, so the essence of curriculum development is only limited to the collection of GBPP / SAP evaluations each year. In other words how someone interpreting the curriculum will have an impact on how that person implements the meaning of the curriculum in their reality. Although this is possible, the impact of understanding its policy with a limitation scope will not benefit to the achievement of its organizational goals.

The concept of the right man on the right place becomes an appropriate term in the placement of human resources, in other word the lack mastery of the concepts and essence of the curriculum will have impact on the inaccurate policies in the academic field. As a higher education institution should use the policies that is appropriate for higher education to direct and guide the educational management in their institutions.

Based on the above various findings, the efforts can be done by IPDN (which stands under MOHA and also under the Ministry of Research, Technology and Higher Education should be able to do its position wisely. As higher education IPDN should follow all the rules of higher education which is ruled by Ministry of Research, Technology and Higher Education. Meanwhile its administration and its organization structure, IPDN can follow all the rules belong to MOHA. Based on the above data, the various problems and obstacles currently being faced at this time, IPDN can try to turn on the power of human resources from within IPDN itself through the tightness of the education staff incorporated in the TPK (Expert Teaching Team) / TPS (Subject Teaching Team). This power can be built bottom up (grass-root) as IPDN has various types of human resources. This potency can be support to participate in solving the problems belong to IPDN. This strengths of human resources at IPDN can be managed, because the spirit belonging IPDN will be the strength for solving this difficult problems at IPDN. Each human resources can be participated in doing and evaluating their program, they can collaborate with other bureau. As solving the IPDN problems can not be done by one single man but it must be solved by all members of IPDN. The Taba concepts can be offered. Taba has seven main steps in the Grassroots model, where the teacher will have the main role (input). These steps include:

1. Diagnosis of the needs, namely the lecturer as designer of curriculum will start the process of curriculum development by identifying student needs, which are the objects of curriculum planning.
2. Formulation of Objectives that is done after the teacher has identifieds the needs, he sets the goals to be achieved.
3. Selection of Content is an established goal and made to support curriculum content. Not only are the objectives and complementary contents, but also the validity and significance of the content needs chosen to be determined.

4. Organization of content means the teacher not only selects the content but also have to organize its according to the sequence, by concerning the aspects of students maturity (their academic abilities and interests).
5. Selection of Learning Experience, namely content presented to students, and it is hoped that students can explore content. In this section the teaching methods of lecturers must cover aspects of students and content.
6. Organization of Learning Activities is not only arranging and organizing the content, but also learning activities. It often the series of learning activities that is determined by the contents. In this occasion, the lecturer should understand who the students are.
7. Evaluation and means of Evaluation namely as a curriculum planner must set what goals will be achieved. It also includes with evaluation procedures that is needed to be considered with teachers and students (Hunkisns, 1993: 279).

According to the data findings, the researcher see that the teacher and other IPDN educational officials who will implement the curriculum directly should be prepared for doing and interpreting the curriculum itself. The power of IPDN educational officials must be developed and up graded, as most of them do not graduate from educational faculty, so they must be given the knowledge of teaching and other aspects for developing the teaching concepts. Teaching is not only transfer the material to the students but teaching is a lecturer efforts for developing the students competency based on the students competency. The teacher must know the learning style of the students and must be able to manage the class well. It can be developed by making and developing teachers collaborative learning. This concept will be a step before developing taba's concepts in developing curriculum. In Taba's concept the teacher will be the focus in developing and implementing the curriculum.

By reviving the curriculum development with Taba approach, at least TPK / TPS can be used as a means for overcoming various problems encountered in the education and learning process at IPDN. Both in terms of teaching staff, educational policy makers or the other issues related to how to prepare materials and developing the teaching materials, learning evaluation, etc. It can be revived by reviving TPK / TPS as an internal strength for IPDN.

The learning collaboration is developed through TPK / TPS will become a means of collaboration through team teaching. For example with the technological advances, groups of IPDN educational staffs can use the Whassaps group as media for communicating among the lecturers for developing cultural academic. This Whassaps can share some strategies for developing learning materials or developing lecturer's teaching skills. They can be developed at each TPK and TPS. WAG can be used to be a group discussion group related to a developed subject. In addition, also through group discussions with face to face to discuss various materials related to the latest data updates of teaching materials.

Including some efforts for doing joint research that are related to the courses. This strength in the form of TPK (Expert Teaching Team) / TPS (Subject Teaching) collaboration will become a force that does not really need a lot of funds. It always has been complained when IPDN faces problems. The TPK (Expert Teaching Team) / TPS (Subject Teaching) policy should really become a policy to overcome the backwardness that experienced by IPDN because of the impact of the implementation Law number 12 of 2012 on higher education since 2013. As a policy, the TPK (Expert Teaching Team) / TPS (Subject Teaching) should also needs to be supported by the strong leadership commitment

D. CONCLUSION

From the previous and above description and discussion, the researcher concludes that the root of various problems related to IPDN curriculum development is the lack of understanding of policy makers towards the curriculum concept itself. It has an impact on curriculum implementation that has not been maximized due to disobedience to the rules and regulations that apply to higher education. So that the various problems that arise should be solved by a strength approach from all elements of the teaching staff within IPDN itself which can be done using: 1) Team teaching through TPS can be used for solving problems of educational development at IPDN; 2). The need for an annual curriculum evaluation and 3). The commitment and support of leaders in developing and overseeing team teaching programs as part of curriculum development at IPDN.

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AN ANALYSIS OF THE EFFECTIVENESS OF IMPROVING STUDENTS ABILITY IN JAPANESE GRAMMAR BY EXAMPLE AND NON EXAMPLE METHODS IN CURRICULUM 2013 OF SMAN 90 JAKARTA

Azifah Rizqi
Program Studi Pengembangan Kurikulum
Universitas Pendidikan Indonesia
azifahrizqi@yahoo.com

ABSTRACT

Speaking and writing in Japanese is the important things in Japanese language, therefore we should learn grammar. I did quantitative research to SMAN 90 Jakarta. The purpose of this research is to know of the effectiveness of improving students ability in Japanese grammar by example and non example methods in curriculum 2013 of SMAN 90 Jakarta. The method that I used is experimental research methods. The instrument of this research isusing a questionnaire and a test sample of 30 people. The results of the research before treatment was 52.17 and the results after treatment was 78.1. There is an increase in 25.93.The t Significant test is0.95 the t is 9 and the statistical hypotheses, Hi is highly effective. Explaining the t test to an analysis of the effectiveness of improving students' ability in Japanese grammar by example and non example methods in curriculum 2013 based on questionnaire of students that improving students' ability in Japanese's grammar by example and non example methods is very good and they are really like Japanese. The conclusion is the example and non example methods in curriculum 2013 of SMAN 90 Jakarta is effective.

Keywords : Effectiveness, Methods, Curriculum 2013

A. PENDAHULUAN

Dalam kehidupan manusia bahasa sebagai alat komunikasi memiliki peranan yang sangat penting. Bahasa adalah salah satu ciri khas manusiawi yang membedakannya dari makhluk-makhluk yang lain. Selain itu, bahasa mempunyai fungsi sosial, baik sebagai alat komunikasi maupun sebagai cara mengidentifikasi kelompok sosial (Suyatno, 2012:54). Ketika kita menyampaikan ide, pikiran, hasrat dan keinginan kepada seseorang baik secara lisan maupun secara tertulis, orang tersebut bisa menangkap apa yang kita maksud, tiada lain karena ia memahami *makna* (*imi*) yang dituangkan melalui bahasa tersebut (Sutedi, 2008:2).

Fungsi bahasa sebagai sarana berkomunikasi berarti bahasa memiliki kaitan dengan masyarakat, kebudayaan, dan pikiran penuturnya, bahkan dengan dunia secara umum maka timbul adanya keterkaitan antara bahasa, masyarakat, budaya, pikiran manusia (penuturnya) (Suyatno, 2012:56). Berdasarkan penjelasan mengenai fungsi bahasa diatas, dapat disepakati

bahwa bahasa memiliki peranan penting dalam masyarakat. Dalam setiap negara memiliki bahasanya masing-masing. Banyak masyarakat Indonesia yang ingin mempelajari lebih dalam mengenai bahasa. Dalam kehidupan saat ini, banyak masyarakat Indonesia yang ingin mempelajari bahasa lain selain bahasa Indonesia. Salah satu bahasa yang dipelajari oleh masyarakat di Indonesia, yaitu bahasa Jepang.

Di negara Indonesia, bahasa Jepang sudah di ajarkan sejak tingkat Sekolah Menengah Atas. Pengajaran bahasa Jepang sudah dijadikan salah satu mata pelajaran dalam kegiatan belajar mengajar tersebut. Dalam pembelajaran bahasa Jepang tingkat Sekolah Menengah Atas terdapat beberapa hal yang harus dipelajari seperti huruf, kosakata dan pola kalimat. Dalam bahasa Jepang terdapat berbagai macam huruf yaitu huruf Hiragana, huruf Katakana, huruf Kanji dan huruf Romaji. Huruf hiragana dan katakana sering disebut dengan huruf *kana.* Hiragana digunakan untuk menulis kosakata bahasa Jepang asli, apakah secara utuh atau digabungkan dengan huruf kanji. Huruf katakana digunakan untuk menulis kata serapan dari bahasa asing (selain bahasa Cina), dalam telegram, atau ketika ingin menegaskan suatu kata dalam kalimat (Sutedi, 2008:7) Huruf *Kanji* yaitu huruf yang merupakan lambang, ada yang berdiri sendiri, ada juga yang harus digabung dengan huruf Kanji yang lainnya atau diikuti dengan huruf Hiragana ketika digunakan untuk menunjukkan suatu kata (Sutedi, 2008:8). Terakhir, yaitu huruf romaji atau huruf alfabet atau latin. Huruf ini pun (termasuk angka) digunakan dalam bahasa Jepang, terutama dalam buku-buku pelajaran bahasa Jepang tingkat dasar yang diperuntukkan bagi pembelajar yang ingin mempelajari percakapan tanpa baca tulis (Sutedi, 2008:9). Selain huruf dalam bahasa Jepang, kosakata dan gramatika juga memiliki peranan penting dalam pembelajaran tingkat Sekolah Menengah Atas. Dalam pembelajaran bahasa jepang, pengajaran kosakata dan gramatika sangat berkaitan.

Goi merupakan salah satu aspek kebahasaan yang harus diperhatikan dan dipelajari guna menunjang kelancaran berkomunikasi dengan bahasa Jepang baik dalam ragam lisan maupun ragam tulisan, (Sudjianto, 2009:97). Oleh karena itu, dalam mempelajari bahasa Jepang agar dapat menguasai gramatikanya maka diperlukan pula pemahaman mengenai kosakata bahasa Jepang. Berdasarkan gramatikanya, bahasa Jepang memiliki ciri-ciri yang berkaitan dengan struktur kalimatnya. Menurut Sudjianto (2009:16), menyatakan bahwa : ciri-ciri bahasa Jepang sehubungan dengan gramatikanya adalah struktur kalimatnya yang berpola 'subjek-objek-verba'. Jadi kalimat bahasa Indonesia '*Ali membeli rokok'* dinyatakan dalam kalimat bahasa Jepang '*Arisan wa tabako o kau'* dengan menempatkan verba *kau* '*membeli*' pada posisi sebagai predikat diakhir kalimat sebelum objek *tabako* 'rokok'. Begitu juga struktur katanya yang berpola 'menerangkan-diterangkan' sehingga kata '*topi mera*

' dalam bahasa Indonesia menjadi '*akai boushi*' dalam bahasa Jepang. Hal lain yang merupakan ciri-ciri gramatika bahasa Jepang adalah bahwa bahasa Jepang memiliki bentuk-bentuk perubahan (konjugasi atau deklinasi) pada kelas kata verba, ajektiva-i, ajektiva-na, dan verba bantu ke dalam berbagai bentuk. Berdasarkan penjelasan ciri-ciri bahasa Jepang tersebut dapat dipahami bahwa terdapat perbedaan antara struktur kalimat bahasa Jepang

dengan struktur kalimat bahasa Indonesia. Dalam pengajaran bahasa Jepang di tingkat Sekolah Menengah Atas, siswa sering mengalami kesulitan dalam pembuatan pola kalimat. Oleh karena itu, diperlukan suatu pembelajaran kooperatif yang dapat mempermudah siswa dalam mempelajari pola kalimat sesuai dengan materi yang sedang diajarkan. Selain itu, dibutuhkan juga metode yang menarik sehingga siswa dapat berperan aktif dalam proses belajar mengajar. Hal inilah yang melatarbelakangi penulis untuk melakukan penelitian dengan menggunakan sebuah metode yang diharapkan dapat memudahkan pelajar dalam mempelajari pola kalimat, metode yang digunakan penulis yaitu metode yang bernama *examples non examples* pada kurikulum 2013. Metode *Examples non Examples* menggunakan media gambar dalam penyampaian materi pembelajaran yang bertujuan mendorong siswa untuk belajar berfikir kritis dengan jalan memecahkan permasalahan-permasalahan yang terkandung dalam contoh-contoh gambar yang disajikan. Strategi yang diterapkan dalam metode ini menggunakan 2 hal yang terdiri dari *example* dan *non-example*. *Example* memberikan gambaran akan sesuatu yang menjadi contoh akan suatu materi yang sedang dibahas, sedangkan *nonexample* memberikan gambaran akan sesuatu yang bukanlah contoh dari suatu materi yang sedang dibahas.

Metode *examples non examples* diharapkan dapat meningkatkan kemampuan siswa dalam mempelajari pola kalimat pada kurikulum 2013. Selain itu, dengan menggunakan metode ini diharapkan dapat membuat siswa lebih termotivasi lagi dalam mempelajari pola kalimat, sehingga kesulitan yang dialami pelajar dalam mempelajari pola kalimat dapat berkurang dengan metode *examples non examples* tersebut. Serta dapat membuat siswa menjadi lebih aktif dan kreatif dalam proses pembelajaran.

Dengan alasan-alasan di atas, penulis mengangkat metode *examples non examples* sebagai objek penelitian dengan tema **"Efektivitas Metode *Examples Non Examples* terhadap Peningkatan Kemampuan Pola Kalimat Bahasa Jepang pada kurikulum 2013 SMAN 90 Jakarta".**

B. METODE

Metode ilmiah adalah prosedur, tata cara, dan langkah sistematis yang diambil guna memperoleh pengetahuan yang didasarkan atas persepsi inderawi dan melibatkan uji coba hipotesis serta teori secara terkendali, (Komara dalam Musfiqon, 2012:5). Tujuan dari semua usaha ilmiah adalah untuk menjelaskan, memprediksikan, dan mengontrol fenomena, (Emzir, 2012:3). Metode digunakan agar memudahkan peneliti dalam mencari jawaban atas suatu

masalah. Berdasarkan pengertian serta penjelasan tujuan diatas maka sebagai kegiatan ilmiah, penelitian tidak bisa dilepaskan dari metodologi. Metodologi adalah ilmu yang mempelajari tentang bagaimana ilmu didapatkan, (Musfiqon, 2012:2). Metodologi (filsafat ilmu) bermaksud menerangkan proses pengembangan ilmu pengetahuan, (Zuriah, 2006:6). Penjelasan mengenai metode ilmiah dan metodologi dapat digunakan untuk memahami metode penelitian. Metode penelitian adalah cara atau strategi meyeluruh untuk menemukan atau memperoleh data yang diperlukan, (Soehartono dalam M.Hikmat, 2011:30).

Metodologi penelitian lebih dapat diartikan sebagai ilmu tentang cara melakukan pengamatan dengan pemikiran yang tepat dan dilakukan secara ilmiah, melalui kegiatan mencari, menyusun, menganalisis, dan menyimpulkan, (Musfiqon, 2012:14). Metode penelitian merupakan cara ilmiah yang digunakan untuk mendapatkan data dengan tujuan tertentu, (Sugiyono dalam M.Hikmat, 2011:30). Dari beberapa definisi yang telah dikemukakan, penulis mengambil kesimpulan bahwa metode penelitian adalah suatu strategi yang dilakukan dengan menganalisis untuk memperoleh data dengan tujuan yang telah ditentukan.

Pada penelitian ini peneliti menggunakan metode penelitian eksperimen semu (*quasi experiment)*. Peneliti menggunakan metode penelitian ini karena dalam penelitian ini peneliti tidak menemukan adanya kelas pembanding. Peneliti akan memberikan tes awal (*pre-test*), perlakuan (*treatment*), dan tes akhir (*posttest*) pada satu kelompok kelas yang ingin diteliti. Selain itu, peneliti ingin menguji efektivitas metode *examples non examples* pada kurikulum 2013 SMAN 90 Jakarta.

C. HASIL DISKUSI

3.1 Laporan Penelitian

Pada pembahasan ini penulis akan membahas mengenai uraian dan analisis data yang diperoleh dari instrumen penelitian mengenai efektivitas metode *examples non examples* terhadap pembelajar pola kalimat pada kurikulum 2013 siswa SMAN 90 Jakarta. Instrumen yang digunakan dalam penelitian adalah tes dan angket.

3.2 Deskripsi Data

Penelitian ini dilakukan terhadap siswa SMAN 90 Jakarta. Dalam penelitian ini peneliti menggunakan metode eksperimen semu. Data yang sudah diperoleh diolah dengan

menggunakan data deskriptif seperti rata-rata (Mean), titik tengah (Median), skor yang paling banyak muncul (Modus), chi kuadrat, simpangan baku (S), uji homogenitas dan uji t.

3.3 Data Responden

Penelitian ini dilakukan pada siswa SMAN 90 Jakarta yang respondennya berjumlah 30 orang.

3.4 Proses Belajar Mengajar

Dalam penelitian ini, peneliti melakuan empat kali pertemuan dalam proses belajar mengajar pola kalimat mengunakan metode *examples non examples*. Materi yang disampaikan pada siswa diambil dari buku bahasa Jepang yang mempelajari tentang pola kalimat, sehingga pengetahuan siswa dalam mempelajari pola kalimat akan bertambah.

1. *Treatment* Pertama

Treatment pertama dilaksanakan dengan jumlah siswa sebanyak 30 orang selama 45 menit. Pemberian materi mengenai "アユさんのかぞく" dengan menggunakan metode *examples non examples*, sesuai dengan RPP. Dengan menggunakan metode *examples non examples*, siswa memulai mengerjakan pola kalimat kemudian mendiskusikannya secara bersama-sama.

2. *Treatment* Kedua

Treatment Kedua dilaksanakan dengan jumlah siswa sebanyak 30 orang selama 45 menit. Pemberian materi mengenai "ちちはきょうしです" dengan menggunakan metode *examples non examples*, sesuai dengan RPP. Dengan menggunakan metode *exmples non examples*, siswa memulai mengerjakan pola kalimat kemudian mendiskusikannya secara bersama-sama.

3. *Treatment* Ketiga

Treatment Ketiga dilaksanakan dengan jumlah siswa sebanyak 30 orang selama 45 menit. Pemberian materi mengenai " どんなひとですか" dengan menggunakan metode *examples non examples*, sesuai dengan RPP. Dengan menggunakan metode *exmples non examples*, siswa memulai mengerjakan pola kalimat kemudian mendiskusikannya secara bersama-sama.

4. *Treatment* Keempat

Treatment Keempat dilaksanakan dengan jumlah siswa sebanyak 30 orang selama 45 menit. Pemberian materi mengenai "どんなふくをきていますか" dengan menggunakan metode *examples non examples*, sesuai dengan RPP. Dengan menggunakan metode *exmples non*

examples, siswa memulai mengerjakan pola kalimat kemudian mendiskusikannya secara bersama-sama.

3.5 Hasil Penelitian

3.5.1 Uji Normalitas

Uji normalitas dilakukan untuk menguji kenormalan distribusi data pada kelas sampel.

Hipotesis :

Ho: sampel berdistribusi normal

H1 : sampel tidak berdistribusi normal

Hipotesis Statistik :

Ho: X^2h < X^2t

H1 : X^2h > X^2t

3.5.2 Uji Homogenitas

Nilai Bartlett (B)

B = (Σdb) (Log S_G^2) = 49,829

X^2h = (In 10) {B – (Σdb log S_i^2)}

= 0,52

Untuk α = 0.05 dan db = k – 1 = 4 – 1 = 3

X^2t = (0,95,3) = 7.81

X^2h = 0,52 < X^2t = 7,81

Karena X^2h = 0,20 < X^2t = 7,81, maka Ho diterima, berarti data berasal dari populasi yang homogen.

3.5.3 Nilai Efektivitas Pembelajaran

Untuk menentukan tingkat keefektifan pembelajaran pada penelitian ini dapat digunakan rumus sebagai berikut :

$$\Sigma(g) = \frac{T_2 - T_1}{S_{m-T_1}} = 12{,}25$$

Σ(g) : n = 13,05 : 30 = 0,41

Berdasarkan hasil analisis data tes, dapat dilihat bahwa nilai rata-rata *pretest* adalah 52,17, sedangkan nilai rata-rata *posttest* adalah 78,1. Maka diperoleh peningkatan dengan selisih 25,93. Setelah nilai g diketahui, maka diperoleh hasil 0,41. Dengan demikian penggunaan metode *examples non examples* terhadap peningkatan kemampuan pola kalimat pada kurikulum 2013 efektif .

3.6 Interprestasi Data

Untuk menguji apakah hipotesis null (H_0) dan hipotesis penelitian (H_k) di tolak atau diterima maka peneliti melihat tabel distribusi t dengan taraf signifikan 0,05 (peluang 0,95) dan rumus derajat kebebasan (dk) adalah dk = n – 2 = 30 – 2 = 28, t tabel memberi nilai kritis 1,70, sedangkan t hitung 9.

Apabila thitung lebih kecil atau sama dengan ttabel ($t_{hitung} \leq t_{tabel}$) maka H_0 diterima dan H_k ditolak, dengan kata lain tidak ada pengaruh yang signifikan antara variabel X dan variabel Y. dan apabila thitung lebih besar dari nilai ttabel ($t_{hitung} \geq t_{tabel}$) maka H_0 ditolak dan H_k diterima, dengan kata lain terdapat perbedaan yang cukup signifikan antara variabel X dan variabel Y. Dengan demikian, hipotesis null (H_0) ditolak, dan hipotesis penelitian (H_k) diterima.

3.7 Analisis Uji Hipotesis

Tabel

Analisis Uji Hipotesis

T hitung	T tabel	Keterangan
9	**1,70**	H_k diterima

Berdasarkan hasil dari data di atas dapat disimpulkan bahwa terdapat perbedaan yang signifikan terhadap penggunaan metode *examples non examples* pada kurikulum 2013 SMAN 90 Jakarta yang artinya efektif digunakan dalam pengajaran pelajaran bahasa Jepang.

3.8 Pengolahan Data Angket

Pengumpulan data angket dilakukan setelah sampel selesai memberikan soal posttest, pengumpulan data angket diberikan pada akhir penelitian yang dilakukan agar mengetahui respon siswa terhadap treatment yang diberikan terutama setelah melaksanakan pembelajaran

dengan menggunakan metode *examples non examples* pada kurikulum 2013. Rumus yang digunakan dalam pengolahan data angket ini adalah sebagai berikut :

$$P = \frac{f}{n} x\ 100\%$$

D. KESIMPULAN

Hasil kesimpulan penulis setelah melakukan penelitian tentang Efektivitas Metode *Examples Non* Examples Terhadap Peningkatan Pola Kalimat Bahasa Jepang pada Kurikulum 2013 SMAN 90 adalah sebagai berikut :

1. Hasil pembelajaran pola kalimat sebelum menggunakan metode *examples non examples* yaitu jumlah nilai pretest = 1565 dengan nilai rata-rata 52,17.
2. Hasil pembelajaran pola kalimat sesudah menggunakan metode *examples non examples* yaitu jumlah nilai posttest = 2343 dengan nilai rata-rata 78,1.
3. Pengajaran pola kalimat dengan menggunakan metode *examples non examples* pada kurikulum 2013 lebih efektif dibandingkan sebelum menggunakan metode *examples non examples.* Karena keefektivannya dapat dilihat dari hasil uji t yaitu t hitung = 9 lalu t tabel = 1,70. Karena thitung lebih besar dari nilai ttabel (thitung ≥ ttabel) maka H0 ditolak dan Hk diterima.
4. Metode *examples non examples* pada kurikulum 2013 dapat meningkatkan motivasi dan hasil pembelajaran pola kalimat siswa yang dapat dilihat dari kesimpulan angket dan hasil nilai setelah diberikan pengajaran dengan metode *examples non examples.*

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APPLICATION OF KANO'S MODEL FOR MEASURING MARKET ORIENTATION OF HIGHER EDUCATION IN INDONESIA BASED ON STUDENT'S PERSPECTIVE

Moh Farid Najib
Business Administration Department, *Bandung State Polytechnic,* Bandung, Indonesia
mohfaridnajib@polban.ac.id

ABSTRACT

This paper aims to understand what are the requirement of market orientation attributes as well as categorize the necessary requirements of higher education in Indonesia based on the student's perspective. Kano's model was used to identify the attributes that it makes better service to improve customer satisfaction levels. In quality management and product innovation, there are many uses of the Kano Model. The research ware used Kano's model with 200 respondents from the student of higher education. The results of this study found that the market orientation of higher education service attributes can be identified into three categories. They are one-dimension attributes and indifferent attribute requirements. This model illustrated through a case study of Indonesian higher education.

Keywords: Kano's model, Market Orientation, Higher Education

A. INTRODUCTION

The ASEAN Community 2015 has an influence on the education sector in Indonesia, especially for universities in Indonesia. The idea of competition that occurs as a result of the free market or the ASEAN single market requires universities to be ready to face it. Competition in universities is no longer only among universities in Indonesia but also has included universities in the ASEAN region. Therefore, the higher education sector faces changes quickly and in a variety of ways such as; international markets, regulations, technology, and international student demands (Hemsly-Brown and Oplatka, 2010).

Unfortunately, according to QS World University Rankings 2013/2014, the Indonesian higher education institutions ranking actually declined. Moreover, private universities, even the Organization for Economic Cooperation and Development (OECD) considered, this is because of the Indonesian university graduates failed to keep up with market demands. One effort to deal with the challenges and opportunities of this phenomenon, universities in Indonesia must implement the market orientation concept. The contribution of this concept has been proven empirically to improve university performance (Qureshi 1989, 1993; Caruana, Ramaseshan & Ewing 1998). Thus, the development of market orientation in an organization will be significant

resources for competitive advantage. Thus, a market-oriented organization chooses a wiser target market.

The literature on higher education management has focused on several questions relating to student behavior (Mazzarol and Soutar, 2002; Shah and Laino, 2006; Paswan and Audhesh, 2009; Vauterin, Linnanen and Marttila, 2011). Thus, higher education must be able to react and adapt to change, through market orientation strategies as the best orientation (Narver and Slater, 1990; Caruana, et al., 1998; Wasmer and Bruner, 2000; Hammon, Webster and Harmon, 2006; Flavian and Lozano, 2006). This concept has been broadly defined and operationalized in the managerial literature (Kohli and Jaworsk, 1990; Matzler and Hinterhuber, 1998; Jaworski, et al., 2000). Therefore, the measurement of market orientation in Indonesia universities needs to be developed and become a significant resource to maintain a competitive advantage. Thus, a market-oriented organization chooses a wiser target market. KANO's Model approach to measuring the market orientation of universities in Indonesia.

The Kano model is one of the tools of an effective model in categorizing needs and understanding the nature of customers (Edgett and Parkinson, 1993). The purpose of this paper is to determine the attributes of the market orientation in higher education, determining the strengths and weaknesses of the attributes of market orientation in the higher education, and categorizing the strengths and weaknesses of the attributes of market orientation in the higher education too.

B. LITERATURE REVIEW

Market Orientation Concept

Some of the concepts of market orientation in the literature were first put forward by Narver and Slater (1990) and Jaworski and Kohli (1990). According to Kohli & Jaworski (1990), states that the market orientation will generate organizational comprehensive market intelligence pertaining to customer needs today and tomorrow, disseminating intelligence across departments, and society together that responds broadly ".

Furthermore, Morgan, et al, (2009) market orientation consists of three intelligence, namely; market generation, market spread and responsiveness to the market. Siddique (2014) adopted the dimensions developed by Jaworski and Kohli (1990), namely intelligence generation, intelligence dissemination, and responsiveness. While others adopt a conceptual dimension of

Narvar and Slater (1990) which consists of customer orientation, competitor orientation, and inter-functional coordination. Alhakimi & Baharun (2010) adds a dimension orientation profit, Micheels, and Gow (2012) adds the same dimension of learning organization, innovation and focus on costs, while Njeu et al (2014) and Kang (2015) adopted three dimensions without adding new dimensions. Based on this perspective, we have presented three components of market orientation, Including customer orientation, competitor orientation, and intra-functional coordination.

Market Orientation on Higher Education

The literature on marketing at educational institutions initially emerged in the 1980s in the US and UK by adopting this model from the business organizations (Oplatka and Brown, 2007). This topic was able to attract the attention of researchers in the 1990s, studies on the marketing implementation in the universities were rampant (Gronroos, 1990; Gummesson, 1991; Hannagan, 1992; Edgett and Parkinson, 1993). In connection with the application of marketing concepts, especially market orientation in educational institutions. In the era of competitive markets, they must apply market orientation to win the competition (Hemsly-Brown and Oplatka, 2010). However, the application of this concept in educational institutions was still debated. Driscoll and Wicks (1998) criticized that a customer-driven approach which is another term for market orientation is not suitable for the world of education. Both of these researchers are concerned that this concept can be misinterpreted as an opportunity for students (as one of the customers) to negotiate the curriculum and assessment system based on what they want. Thus, this approach is considered to lead to a decline in the quality of education.

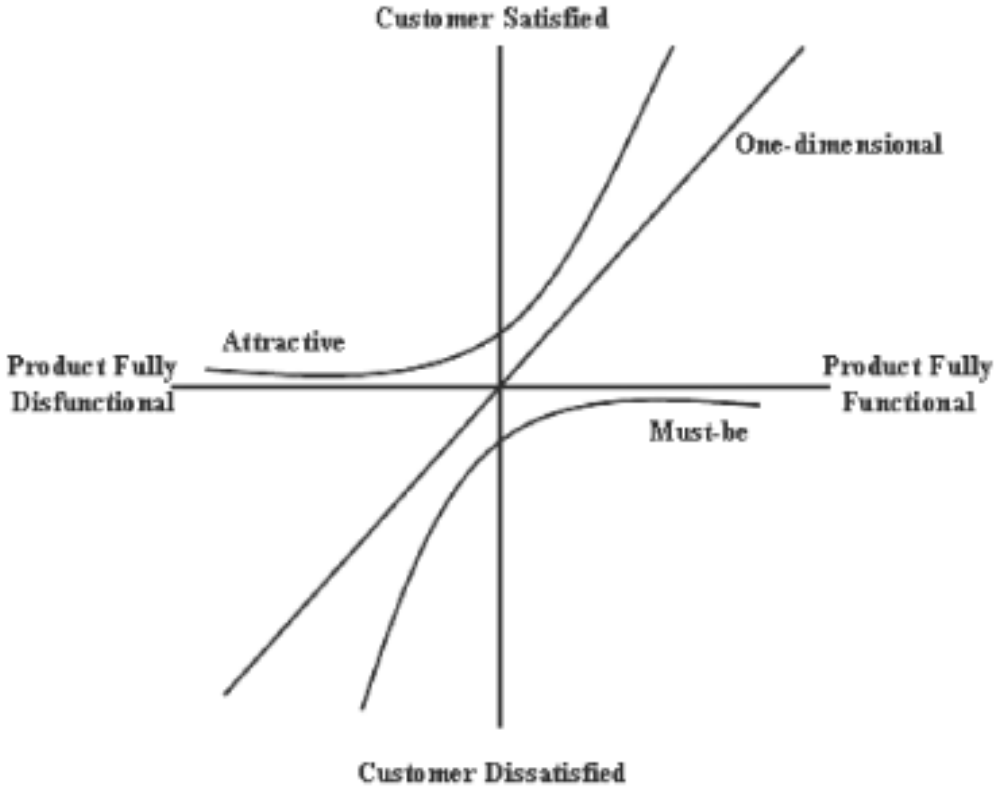
On the other hand, one of the reasons underlying the universities adopting the concept of market orientation is the change in government policies that occur in various countries. The policy is a reduction in government subsidies for universities. This requires institutions to work hard to find sources of non-government finance. Higher education that is market-oriented is relatively easy to get non-government funding (Caruana, Ramaseshan, and Ewing, 1998). This finding can be used as a basis for universities in Indonesia to implement this concept. Another factor that can be a driving force for universities to adopt a market orientation is the globalization. The free-market era has led to the emergence of foreign higher education institutions that are ready to compete with domestic universities. According to the marketing

concept, institutions that can survive and win a competition in the global market are institutions that are able to offer more value and in accordance with customer desires (Kotler, 2003). This shows that in today's free competition, universities should design market-oriented activities (Maydeu-Olivares and Lado, 2003).

Kano's Model

How every change in customer satisfaction resulting from customer requirements is tried to be explained by this Kano Model. The Kano model is based on social psychology and which is part of the "Motivator-Hygiene Theory" by Frederick Hertzberg's (Berger et al., 1993; Witell and Lofgren, 2007; Chen and Su, 2006). However, many previous definitions of the quality, including Hertzberg, state that customer satisfaction is linear and one-dimensional. Therefore, Huiskonen and Pirttila (1998) state that the linear term of customer satisfaction should increase or decrease, more or less linearly when the service level is whatever the attribute if the satisfaction improves or weakens.

Kano et al. (1984) contradict the traditional view to proposing a non-linear and two-dimensional (the level of service carried out to the extent that customers are satisfied), by suggesting that it can sometimes show non-linear service attributes and because of non-linearity. Perceived service quality attributes may not always make what is expected to cause satisfaction or dissatisfaction. This means that the performance of service quality and customer satisfaction in two-dimensional enables the definition of quality in a more sophisticated way. Thus, there are three types of service requirements, that affect customer satisfaction in different ways, namely; (1) must-be requirements, (2) one-dimensional requirements, and (3) attractive requirements. This relationship is shown in Figure 1.



Source: Berger et.al (1993)

Figure 1; The Relationship between Customer Satisfaction and Customer Requirement

Must-be requirements can be defined as the basic attributes of service quality in terms of customer satisfaction. As a result, if these requirements do not meet correctly, customers will be very satisfied. So, fulfilling must-be requirements will only make things to be dissatisfied (Matzler and Hinterhuber, 1998). In other words, they are needed but these conditions are not enough for customer satisfaction (Busacca and Padula, 2005).

One-dimensional requirements can create current customer satisfaction or dissatisfaction when there is none (Redfern and Davey, 2003). These requirements can increase customer satisfaction because it becomes more functional. The one-dimensional requirements can also possible to say that, the higher the perceived service quality is becoming the higher the customer satisfaction and vice versa. Both of these are necessary and sufficient for customer satisfaction (Busacca and Padula, 2005).

Requirements are very important in creating a competitive advantage by creating and knowing among customers (Witell and Lofgren, 2007). Attractive requirements can be defined as service attributes that satisfy customers when they exist but do not cause dissatisfaction when they are not there (Berger et al., 1993). Therefore, these service attributes have the greatest influence on customer satisfaction with a certain level of service (Matzler et al., 1996). There is any hope for this by the customer, but when properly delivered to them will result in satisfaction. Thus, they are sufficient, but not an absolute requirement for satisfaction (Busacca and Padula, 2005). Attractive requirements can be used as an element of an aggressive marketing strategy to attract competing customers.

C. Methodology

The purpose of this study is to determine the attributes of the market orientation in higher education, also to determine and categorize the strengths and weaknesses of the attributes of higher education market orientation. Data was collected from students of higher education in West Java, Indonesia. A five-point Likert scale is designed for the development of a questionnaire after a literature review, therefore the survey instrument was adopted by Hemsly et al., (2010); Helena et al., (2012); and Akonskwa (2013). In this context, the questionnaire consisted of two questions, the first was functional and the other was dysfunctional. Examples of canoe model questions can be seen in table 1.

Table 1: An Example of Kano's Questionnaire

Question	Like	Must be	Neutral	Live with	Dislike
How do you feel if the university measures students' satisfaction every academic year?					
How do you not feel if the university measures students' satisfaction every academic year?					

Source: Sireet al (2013)

The result of customer requirements was measured by the total number of questions with the Kano Model. The attribute grouped into six categories as Kano et al. (1984) states: "must be" (M), "one-dimensional" (O), "attractive" (A), "indifferent" (I), "questionable" (Q) or "reversal" (R). The following evaluation in table 2 explains how service attributes have been primarily classified. Each answer to both functional and dysfunctional questions will be compared for each

respondent and each attribute so that each attribute will fill into one of the six service categories as shown in Table 2.

Table 2: Analysis of Kano's questionnaire

		Response to dysfunctional question				
		1. like	2. Must be	3. Neutral	4. Live with	5. Dislike
Response to functional question	1. Like	Q	A	A	A	O
	2. Must be	R	I	I	I	M
	3. Neutral	R	I	I	I	M
	4. Live with	R	I	I	I	M
	5. Dislike	R	R	R	O	Q

Source: Berger et al. (1993)

Result and Discussion

Respondents profile

Profile of respondents for students consisted of; gender; type of education, and level of education from a survey of 200 respondents, where male sex 42.5% (85) and female sex 57.5% (115), state institutions is 34.5% (69) and private institution is 65.5% (131), and education level Diploma III 40% (80) Diploma IV / S1 90 (45%) and Masters and Doctoral 15% (30).

Kono's Model Analysis

The first stage of data grouping with KANO Analysis is done by classifying KANO attributes/categories for each respondent. KANO attribute group determination uses a classification table between functional and dysfunctional attributes. Table 3 shows the results of the dysfunctional and functional attribute matrix against 32 higher education market orientation attributes.

Table 3 Matrix Attributes of Dysfunctional and Functional into KANO's Attributes

Item	KC	Result						Total
		A	I	M	O	Q	R	
Student (Customer) Orientation Item								
1. University measures students' satisfaction every academic year	I	5	125	1	69	0	2	200
2. University cares about students' well being	O	9	68	19	100	0	4	200
3. University understands the needs of students	O	6	72	9	111	0	2	200
4. Complaints by students are dealt with quickly	I	10	116	10	64	0	0	200
5. The complaints procedure is easy for student to access	O	6	75	8	111	0	0	200
6. The complaints procedure is easy for students to understand	I	3	113	12	70	1	1	200
7. Student are given information that helps them to understand what to expect from this university	I	37	102	38	19	2	2	200
8. Staff in the university are eager to support students and go beyond their role definition	I	12	141	8	39	0	0	200
9. Students' feedback on their experiences influence the teaching and learning process	I	8	135	12	44	0	1	200
10. Staff are attentive to students' concerns	I	11	146	8	33	0	2	200
11. We encourage students to offer constructive positive comments	I	13	129	10	48	0	0	200
12. Staff are regularly provided with information about students' views and experiences	I	15	130	9	45	0	1	200
13. The university understands what kind of teaching and learning the students value most	I	18	131	12	38	0	1	200
14. We encourage students to offer constructive negative feedback	I	18	120	10	47	0	5	200
15. Responding to students' needs is my major task	I	16	112	16	55	0	1	200
16. A good teacher is one whose students are happy as satisfied	O	29	62	10	98	0	1	200
17. The university meets and goes beyond the promises it makes to students	I	16	117	13	53	0	1	200
18. Senior staff promote the spirit of customer orientation and focus	I	16	127	10	44	0	3	200
Competition Orientation								
1. This university compares favorably with another university in meeting students' needs	I	16	121	7	53	0	3	200
2. Information about what my colleagues in other universities are doing helps me in my role	I	13	138	14	30	0	5	200
3. Senior managers often refer to the actions of other universities	I	16	151	11	21	0	1	200
4. The majority of staff take an interest in what's going on in other universities	I	18	152	8	19	0	3	200
5. The university usually responds positively to other universities' new initiatives and developments	I	15	142	11	28	0	4	200
6. The university understands the needs of students better than other universities	I	16	131	11	32	2	8	200
Intra functional Orientation								
1. In meetings we discuss information about students' concerns in order to make improvements	I	13	124	14	48	0	1	200
2. Academics help to attract prospective students	O	29	73	19	78	0	1	200
3. Academic staff cooperate to promote the university's image	I	14	111	20	53	1	1	200
4. Administrative staff cooperate to promote the university's image	I	17	119	13	45	1	5	200
5. All faculties and departments contribute to the marketing of the university	I	21	113	16	46	0	4	200
6. The guiding light in curriculum development or new initiatives is the demand of the students	I	26	120	11	35	0	5	200
7. Marketing information is discussed and shared with academic staff	I	23	135	7	34	0	1	200
8. Current students are always central to decision-making in the university	I	23	133	8	33	1	2	200

Notes: KC KANO's Categories

Table 3 shows the results of the values of each attribute in the KANO category for all respondents, it can be seen that there are 4 attributes in the "O" one-dimensional category and 28 attributes in the "I" indifferent category. However, it is also important to measure how much the customer satisfaction coefficient is. The purpose of measuring the customer satisfaction coefficient is to know the comparison between the coefficient of needs for each attribute in order to analyze customer needs. Therefore, it is necessary to know the level of satisfaction and the level of dissatisfaction, which is then used to formulate the customer satisfaction coefficient, using the following formula:

For the extent of satisfaction the formula is used as follows:

$$\frac{A+O}{A+O+I+M}$$

Meanwhile, to calculate the extent of dissatisfaction the following formula is used:

$$\frac{O+M}{(-1)^{*}(A+O+I+M)}$$

Then the level of satisfaction and level of dissatisfaction ware summed to find out the final value, to the response of the most dominant customer expectations, to determine the amount used the following formula:

$$:\frac{A+O}{(A \mid O \mid I \mid M)}+\frac{O+M}{(-1)^{*}(A+O+I+M)}$$

$$=\frac{A-M}{(A+O+I+M)}$$

For more details, the results of the extent of satisfaction (EoS) and extent of dissatisfaction (EoD) and the final results as shown in Table 4.

Table 4 Level of Satisfaction

Item	KC	EoS	EoD	Most Frequent Response
Student (Customer) Orientation Item				
1. University measures students' satisfaction every academic year	I (123)	0.3737	(0.5426)	(0.1689)[b]
2. University cares about students' well being	O (100)	0.5561	(1.2596)	(0.6835)b
3. University understands the needs of students	O (111)	0.5909	(1.3793)	(0.7884)b
4. Complaints by students are dealt with quickly	I (116)	0.3700	(0.5441)	(0.1741)b
5. The complaints procedure is easy for student to access	O (111)	0.5850	(1.3371)	(0.7521)b
6. The complaints procedure is easy for students to understand	I (115)	0.3687	(0.6406)	(0.2719)b
7. Student are given information that helps them to understand what to expect from this university	I (102)	0.2857	(0.3220)	(0.0363)b
8. Staff in the university are eager to support students and go beyond their role definition	I (141)	0.2550	(0.2919)	(0.0369)b
1. Students' feedback on their experiences influence the teaching and learning process	I (135)	0.2613	(0.3613)	(0.1000)b
10. Staff are attentive to students' concerns	I (146)	0.2222	(0.2485)	(0.0263)b
11. We encourage students to offer constructive positive comments	I (129)	0.3050	(0.3816)	(0.0766)b
12. Staff are regularly provided with information about students' views and experiences	I (130)	0.3015	(0.3506)	(0.0491)b
13. The university understands what kind of teaching and learning the students value most	I (131)	0.2814	(0.3106)	(0.0292)b
14. We encourage students to offer constructive negative feedback	I (120)	0.3333	(0.2851)	(0.0518)b
15. Responding to students' needs is my major task	I (112)	0.3568	(0.4931)	(0.1363)b
16. A good teacher is one whose students are happy as satisfied	O (98)	0.6282	(1.0693)	(0.4311)b
17. The university meets and goes beyond the promises it makes to students	I (117)	0.3167	(0.4521)	(0.1053)b
18. Senior staff promote the spirit of customer orientation and focus	I (127)	0.3046	(0.3529)	(0.0484)b
Competition Orientation				
1. This university compares favorably with other universities in meeting students' needs	I (121)	0.3503	(0.4167)	(0.0664)b
2. Information about what my colleagues in other universities are doing helps me in my role	I (138)	0.2205	(0.2667)	(0.0462)b
3. Senior managers often refer to the actions of other university	I (151)	0.1859	(0.1798)	0.0062a
4. The majority of staff take an interest in what's going on in other universities	I (152)	0.1878	(0.1517)	0.0361a
5. The university usually responds positively to other universities' new initiatives and developments	I (142)	0.2194	(0.2321)	(0.0128)b
6. The university understands the needs of students better than other universities	I (131)	0.2526	(0.2722)	(0.0195)b
Intra-functional Orientation				
1. In meetings we discuss information about students' concerns in order to make improvements	I (124)	0.3065	(0.4106)	(0.1041)b
2. Academics help to attract prospective students	O (78)	0.5577	(0.8017)	(0.2440)b
3. Academic staff cooperate to promote the university's image	I (111)	0.3381	(0.5031)	(0.1651)b
4. Administrative staff cooperate to promote the university's image	I (119)	0.3196	(0.3893)	(0.0697)b
5. All faculties and departments contribute to the marketing of the university	I (113)	0.3418	(0.4133)	(0.0715)b
6. The guiding light in curriculum development or new initiatives is the demand of the students	I (120)	0.3128	(0.3069)	0.0066a
7. Marketing information is discussed and shared with academic staff	I (135)	0.2864	(0.2485)	0.0379a
8. Current students are always central to decision-making in the university	I (135)	0.2843	(0.2500)	0.0343a

Notes: KC KANO's Categories; EoS: Extend of Satisfaction; EoD: Extend of Dissatisfaction; MFS: Most Frequent Response

[a] attractive

[b] *must-be*

Based on Table 4, it shows that the one-dimension attributes of the Kano Model have a comparison of customer satisfaction coefficient between the extent of satisfaction with the extent of dissatisfaction showing positive results. While for the indifference and reverse attributes both show a comparison of customer satisfaction coefficient between the extent of satisfaction with the extent of dissatisfaction showing negative results.

Thus, it means that the extent of satisfaction with the extent of dissatisfaction will show the customer satisfaction coefficient. Berger et.al., (1993) states that a customer satisfaction coefficient is a form of whether customer satisfaction can be improved by meeting the service attribute requirements or by meeting the service attribute requirements only to prevent customers from dissatisfaction. The same thing was also stated by Matzer and Hinterhuber (1998) which stated that the customer satisfaction coefficient would indicate how strongly the service attribute requirements could affect satisfaction or dissatisfaction.

This condition shows that because most of the requirements found are one dimension. If the total of customer satisfaction coefficients is positive, then these requirements can be said to be closer to attractive characteristics. Conversely, if the total of the customer satisfaction coefficient coefficients is negative, then this requirement looks closer to the must-be characteristic. Thus, the higher the total level of satisfaction with the level of dissatisfaction, it becomes the higher of the characteristics of this attribute will be. Furthermore, the attributes with attractive characteristics are the customer's dream, so they are not revealed. Therefore, in the absence of attributes that do not cause dissatisfaction because the customer is not aware of this need. The result, if these needs are met, then the product/service and really to satisfy the customer. An interest in satisfying customer needs will provide a competitive advantage for organizations and organizations will find opportunities to differentiate themselves from competitors

Meanwhile, attributes with must-be characteristics, so if the needs of the service attributes are so basic that those attributes are not disclosed by the customer, but those attributes must be identified because these attributes are very important attributes for customers. This feature is thought to be in service. If the service delivered does not meet this need, the customer becomes very dissatisfied. Attributes with must-be characteristics can be learned from customer complaints.

One-dimensional Requirement Categories.

From the results of the analysis. Higher education market orientation attributes, which are attribute categories of one-dimensional requirements, namely; universities must care about student welfare; understand the needs of students; there are complaints procedures that are easily accessible to students; good lecturers are lecturers whose students are happy and satisfied; and; Academic staff help attract prospective students.

The one-dimensional requirement is a requirement if the requirements of these attribute requirements can provide satisfaction with improvements in performance, customer satisfaction will increase, better performance, and it becomes more satisfying to the customer. This type of requirement is generally stated by the customer. Thus the one-dimensional requirement attributes are intended that the presence or absence of certain attributes proportionally affects the level of customer satisfaction.

One-dimensional requirements, it is possible to say that, the higher of perceived service quality, the highest level of customer satisfaction and vice versa. Redfern and Davey, (2003) say, one-dimensional requirement attributes will create customer satisfaction now and dissatisfaction when it does not exist. This is in line with the opinion of Busacca and Padula (2005) which states that it is necessary and sufficient to provide satisfaction to customers. Meanwhile, Witell and Lofgren (2007) mentioned that this requirement is very important in creating a competitive advantage by creating and being spoken among customers (Witell and Lofgren, 2007). Thus, it can be said that one-dimensional requirement attributes become very important in relation to increasing the competitiveness of higher education in Indonesia.

Indifferent Categories

From the results of the analysis of market orientation attributes of higher education which are indifferent categories, namely; measurement of student satisfaction is done every academic year; student complaints are dealt with quickly; complaints procedures that are easily understood by students; students are given information that can help them understand what is expected of the college; staff in university are very supportive of students and go beyond their role; student feedback about the experience of the teaching and learning process; academic staff pay attention to problems faced by students; encourage students to provide constructive positive comments; academic staff are regularly given information about students' views and experiences; the

university understands what teaching and learning are most valued by students; encourage students to provide constructive negative feedback; responding to student needs is a major task; promises made by universities for students to meet and exceed; senior staff promotes the spirit of orientation and customer focus; universities can be juxtaposed with other universities in meeting the needs of students; information about what academic staff do in other universities can help in the role of existing academic staff; senior managers often refer to the actions of other universities; most academic staff are interested in what is happening at other tertiary institutions; universities usually respond positively to new university initiatives and developments; universities understand students' needs better than other universities; in each meeting information was discussed about students' concerns for making improvements; academic staff work together to promote the image of the college; academic staff work together to promote the image of the university; all faculties and departments contribute to the marketing of university; curriculum development or new initiatives are the demands of students; marketing information is discussed and shared with academic staff; and; Students are always at the centre of decision making at university

Indifferent categories mean that customers do not care about the service attributes and it is not very interesting whether the service attributes exist or not. Thus indifferent quality attributes are the presence or absence of certain attributes that will not affect customer satisfaction at all. The attributes in question are usually complementary attributes that are not considered by the customer.

D. CONCLUSION

Kano Model categorization shows that out of 32 college market orientation attributes, 5 attributes are one-dimensional requirements categories which include; university care about students' wellbeing; the University should understand what are the students needed; the easy complaints procedure for students are happy as satisfied; and; academic staff should be helpful to attract the students perspective. Because these attributes can increase satisfaction. Thus market-oriented tertiary institutions will be able to provide good services and have an impact on satisfaction, and are expected to be able to compete with the development of competition, both from universities in the country and from abroad.

Meanwhile, most of the others indicated that the orientation of the higher education market with indifferent categories includes; measurement of student satisfaction must be done every academic year; fast response to student complaints; complaints procedures that are easily understood by students; students are given information that helps in understanding what is expected of the university; academic staff at universities are eager to support students and go beyond their role definition; student feedback about experiences influencing the learning process; academic staff pay attention to student problems; encourage students to provide constructive positive comments; academic staff regularly seek information about student views and experiences; the university understands what teaching and learning are most valued by students; encourage students to offer constructive negative feedback; responding to student needs is the main task of academic staff and lecturers; the university meets and goes beyond the promises made to students; academic staff promote a spirit of orientation and customer focus; this university is comparable to other universities in meeting the needs of students; information about what academic staff do at other universities helps in the role of the academic staff; academic staff often refer to the actions of other universities; the majority of staff are interested in what is happening at other universities; universities usually respond positively to new university initiatives and developments; the university understands the needs of students better than other universities; information about students' problems for improvement is always discussed at each meeting; academic staff work together to promote the image of the university; academic staff work together to promote the image of the university; all faculties and departments contribute to university marketing; curriculum development or new initiatives are the demands of students; marketing information is discussed and shared with academic staff; and; current students are always the center of decision making at universities.

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THE INDONESIAN PROVERB OF PEACE: EDUCATIONAL SEMIOTICS ANALYSIS FOR CULTURAL CITIZENSHIP LITERACY

Solihin Ichas Hamid, Tuti Istianti, Fauzi Abdillah, Feri Hidayatullah Firmansyah
Universitas Pendidikan Indonesia
Universitas Negeri Jakarta

ABSTRAK

This article aims to identify, analyze, and classify verbal expressions in the Indonesian cultural environment consisting of Sundanese, Minangkabau, Dayak, and Sasak ethnicities. Furthermore, these results will become the terms of reference for the Citizenship Education learning model that is implemented thematically in elementary schools. The theme of peace is carried out through instrumentation and conceptualization of the contents of the local wisdom message which becomes a medium of articulation of the achievement of learning outcomes which is manifested from the tendency of values, social behavior of students in class and school tentatively and longitudinally. The research methodology used is the ethnopedagogic approach through semiotic analysis of textual and field data sources. The source of the textual data is through the process of classification, codification, verification and semantic analysis to obtain verbal expression descriptions that describe the cultural life artifacts of ethnic units that will be subject and object of field trials and analysis. The results of the preliminary study in this form are the classification of expressions, which then become the basis for constructing models of citizenship education learning in schools, which are then designed to achieve the literacy skills of citizenship culture and the ethos of peace in students.

A. INTRODUCTIONS

Development of Cultural Citizenship Literacy is intended, so that the future generations that we prepare according to the demands of their times meet the literacy standards which are the basis regarding numeracy, science, financial, and digital languages including cultural literacy and citizenship, namely good habits and attitudes as family members and citizens society informally until its relation with the state formally. (Docherty, Goodlad & Paddison; 2001; Miller, 2002; Lee, 2013; Hlepas, 2013; Permata, 2015) Therefore, the development of Citizenship Cultural Literacy becomes an important part of developing basic and strategic literacy in bringing the next generation to face its complex world challenges in the future. (Hamid & Istianti, 2012; Hamid, 2015; Duncker, 2015; Hamid, 2016)

Pancasila and Citizenship Education (PPKn) curriculum implementation related to the development of thematic programs in primary schools in particular, has given way to a number of achievements of knowledge attitudes and skills of learners to master a number of basic literacy according to the stage of development and learning needs.(Hamid & istianti, 2018) PPKn as a subject itself, at the level of schooling has a general framework of thematic characters so that it can frame other units of subjects in an integrated manner, and can play a role in articulating the achievement of cultural knowledge learning content in addition to being an opening and resonant media (resonance) pleasant atmosphere of learning activities from the existence of praxis approaches to art in it.

B. METHODS

This study uses descriptive qualitative analytical methods, which reveal a number of phenomenal concepts and realities in the field regarding teaching materials, media, choice of

methods and approaches to assessments related to the development of Citizenship Cultural Literacy in Elementary Schools. Cultural Literacy Approach Citizenship on the one hand and material disclosure sourced from local traditions become a strategic choice in maximizing the achievement of konekted-integrated thematic learning outcomes. Based on that, the content of moral values that exist in the introduction of art and culture gained resonance and increased intensity of meaning in addition to the function of the media for the achievement of the objectives of other subjects, especially PPKn. Thus PPKn with its strategic and central objectives has the role of being a media of articulation of content that contains innumerable values of local wisdom as the ethnic wealth of the archipelago.

For this reason, technically, organizing into the classification and codification of the contents of the Moral Citizenship Value (NMK) conducted by Hamid (2014) can be referred to as a filtering tool in reducing moral behavior written or spoken to the artifacts of cultural life in the mother tongue where the local cultural system was built. (Abdillah, Hamid & Istianti, 2017) Thus, based on the footsteps of previous studies regarding the collection of data on expression values that have been classified based on conformity with the substance of PPKn material, and codification until verification meets the construction of achieving the expected goals of citizen behavior standards, this study is conducted at the beginning of the screening of teaching materials into the design of learning models , up to the measurement of learning outcomes that are visible to students, which are generically done after the learning takes place.

C. FINDING AND DISCUSSIONS

The concept of Local Wisdom becomes the Message and Media of Thematic Learning Literacy Culture and Citizenship in Primary Schools

Local genius is a set of ways of life, or habits and views of the local community in an area that can differ from one another, but are seen to have advantages in the strict sense use in overcoming life problems and their lives. As far as the cultural richness of the community, local wisdom shows the prototype in terms of diversity and the similarity of meaning in one area that is bound by the origin of ethnicity or with other ethnicities from different places though. Therefore, the development of the concept of local wisdom in the context of learning related to the achievement of moral values and norms as promoted by PPKn subjects in primary schools in particular, becomes very important and strategic, because as far as the uniqueness inherent in ethnic entities and places can be a media as well as a message content itself (*medium is massage)* in the midst of multi-cultural life that has become a local, national and global life that cannot be denied.

A number of expressions (*verbal*) that describe the form of local wisdom in the artifacts of the cultural life of the sampling community of this study, are verified in 7

indicators of the Moral Value of Citizenship, namely: NMK-1: Character and attitude of humility, self-knowledge; NMK-2: Character and attitude: patient, sincere, big-hearted, honest, open; NMK-4: Attitude and character: respect, obey the law, be prepared (alert); NMK-3: Character and attitude: friendly, compatriots; NMK-5: Nature and attitude: brave, officer; NMK-6: Character and attitude: resilient, steady, hard-working, tough (Reliable) and NMK-7: Nature and attitude: fair, wise, wisdom *(Leadership*) can be entered in the following tabulation.

Tabel 1.
NMK-1: Traits and attitudes: Humility, self-knowledge

No	Sampling	Idiom	Makna (Isi)
1	Sunda	*Amis budi*	Credibility, good temperament
		Ati putih badan bodas	*Ikhlas*
		Ngukur ka kujur nimbang ka awak	Self-measure
2	Minang	*Dima bumi dipijak, disinan langik dijunjuang*	Adjustment to an environment
		Hiduik batungkek batang bodi, mati bapuntiang ditanah sirah. Jikok pandai bamain budi, dalam aia badan indak basah.	where the priority has the discretion to bring benefits in the association
		Ombak barayun manuju pantai, riak nyato manuju tapi. Indak guno jadi rang pandai, kalau baulemu indak babudi	There is no means to have intelligence if not courteous
		Pucuak pauah sadang tajelo, panjuluak buah ligundi, nak jauah silang sangketo, pahaluih baso jo basi	courtesy and manners to avoid later conflicts
		Panjang namuah dikarek senteng namuah dibilai, singkek namuah diuleh, kurang namuah ditukuak	willing to accept advice and admitted the lack of
3	Dayak	*Puang nimbuk gunung umbu puang manyahi segara masin (DNg)*	humility
		Rehatan dipabencengan barat disahatn (DK)	go hand in hand
		Tueh ambung tueh ayau tueh kulat ngandrei watang (DNg)	Humility
4	Sasak	*Baluan nganak keceq*	Feelings of responsibility
		Endaq gitaq pager dengan, pager mesaq gitaq juluq	Do not easily overlook others' mistakes, look to yourself first
		Sikut tangkong leq awak mesaq	Measure yourself

Tabel 2.
NMK-2 : Attitudes: Patience, Sincerity, Carefulness, Honesty, Openness

No	Sampling	Idiom	Makna (Isi)
1	Sunda	*Ambek sadu santa budi*	Self-control

		Caang bulan opat welas, jalan gede sasapuan	Shining brightness and open-
		Clik putih clak herang	heartedness
		Pada rubak gede samping	hearted
		Teu aya geumeuk, teu maleukmeuk	Clean
2	Minang	*Nak elok lapangkan hati, nak haluih baso jo basi.*	Be patient always, and be courteous to people
		Nak luruih rantangkan tali, luruih bana dipacik sungguah	Be upright and sincere in your association, upholding the truth of honesty.
		Nanang saribu aka, haniang ulu bicaro, pikia palito hati, dek saba bana mandatang.	Peace of mind, good aspirations, and patience bring truth.
		Nan elok dek awak katuju dek urang, sakik dek awak sakik dek urang.	Do it and be nice to the people.
		Sabanta sakalang hulu, salapiak sakatiduran	Friendships
		Satali pambali kumayan, sakupang pambali katayo, sakali lancuang kaujian, salamo hiduik urang indak picayo	Never cheat forever People will never trust
		Syarak banamo lazim, adat nan banamo kewi, habih tahun baganti musim, buatan nan usah diubahi.	Decisions together no matter how difficult and bitter they accept
3	Dayak	*Goroh-goroh ina' dituhakng (DK)*	Likes to help, willing to sacrifice
		Manunggu bua payang manyatu (DNg)	Patience in waiting for success
		Sae luka' koa badarah (DK)	Be honest and responsible
		Maddau culi papen mabbabua samalappa	Be patient because good heart
		*Watang Kale Itu Rupami, Ampe-ampe Panesai Tau (*Bugis)	Don't just wrap up, do things straight
4	Sasak	*Lolon kayuq pasti terbabar isiq angin*	Do not easily complain
		Sampi betali isiq pepit, menusa betali isiq raos	Humans are boundspeech

Tabel 3.
NMK-3 : The nature and attitude: be friendly, faithful friend

No	Sampling	Idiom	Meaning
1	Sunda	*Bisa ka bula ka bale*	Flexible,
		Rempug jukung sauyunan: Sareundeuk saigel sabobot sapihanean, Sabata sarimbagan sapapait samamanis, sauyunan: Layeut	shoulder to shoulder to help other
		Ulah cara ka kembang malati, kudu cara ka picung	faithful in love

2	Minang	*Ka mudiak sa antak galah, ka hilia sarangkuah dayuang. Sasuai lahie jo bathin, sasuai muluik jo hati"*	friendship
		Lamak dek Aawak, Katuju dek Urang	Tolerance
		Nan barek samo dipikua, nan ringan samo dijinjiang.	is doing good work always in
		Olak olai rang basiang, sorak sorai rang karimbo.	full cooperation fun excitement alleviatework
		Padanggantiang baranah-ranah, kahilia jalan kapianggu, sasimpang jalan kasikabu Duduak samo randah tagak samo tinggi dalam adat Minangkabau	human dignity distinguish notunless indigenous corresponds deeds
		Partamo banamo Minang, Minangkabau namo kaduo, nan kayo mandi baranang, nan bansaik bandi batimbo	Teamwork and the spirit of sacrifice in keeping with the ability of each other Good
		Sabanta sakalang hulu, salapiak sakatiduran	Friendship
		Saumpamo aua jo tabiang, umpamo ikan jo aia.	help one another and strengthen, and need one another.
		Senteang bilai mambilai, panjang karek mangarek	give help to a friend who is in need, and give advice when needed
		Tatungkuik samo makan tanah, tatilantang samo minum ambun, tarapuang samo hanyuik, tarandam samo basah.	Good cooperation in the community, one heart and one mind Good
		Titiak buliah ditampuang, maleleh buliah dibaliak.	work to enjoy with the people.
3	Dayak	*Mambee' imbaowanan, manyarak pon tikoon ulis-ulis balinan (DT)*	cooperation
		Mira tanjung pikayeman ukur baya rantau pirumpakan bayu (DNg)	friendship
		Saancak sabaroknng, sasuku saparanggo (DK)	The spirit ofthat united not divided among yourselves
		Saso itungganin alo'ana sikurunkanki' malatoo' kadumanan baliangan una'anan (DT)	cooperate
		Tegak seluang mudik (DKu)	friendship
4	Sasak	*Adeq ta tao jauq aiq*	Canbe air
		Bareng anyong jari sejukung	camaraderie
		Maraq manuk bekesena	Maintaining unity and
		Maraq pancing dait ampen	cooperation,compact
		Sorong jukung leq segara, bareng onyaq bareng lenge	The same fate

Tabel 4.
NMK-4 : Dispositions and respectful, law-abiding, alert, vigilant (Devotion)

No	Sampling	Idiom	Makna (Isi)
1	Sunda	*Caringcing pageuh kancing, saringset pageuh iket*	Alert
		Geura mageuhan cangcut tali wanda	Ready-standby
		Nete taraje nincak hambalan	Procedural
		Sacangreud pageuh sagolek pangkek	alert
		teu gedag bulu salambar	Teguh
		teu ngijing sila bengkok sinembah	Setia
		tungkul ka jukut tanggah ka sadapan	Put yourself
2	Minang	*Maminteh sabalun anyuik Malantai sabalun lapuak Ingek-ingek sabalun kanai*	Be careful and vigilant
		Naiaklah dari janjang, turunlah dari tanggo.	always done according to the rules, according to custom, religion and state law.
		Nak jan jauah panggang dari api, latakkan sasuatu ditampeknyo	Professionalism
		Raso aia kapamatang, raso minyak kakuali, nan bakabek rasan tali, nan babungkuih rasan daun	Zealously defends the family's honor The
		Sandi banamo alua adat, tonggak banamo kasandaran	custom of the home of the common good, the strong rule of customary law
		Suri tagantuang ditanuni, luak taganang kito sauak	which is the absolute principle of practice, without deliberation.
		Siang manjadi tungkek, malam manjadi kalang	Hold fast to the rule of
		Tak ujuang pangka mangganai, saragi baliak batimba.	One who has complete knowledge and tools, which is versatile.
2	Dayak	*Bapelek jela tanda kalah, Bapelek karis tanda matei (DNg)*	Caution The
		Jela-jela asu handak mansukap karak (DNg)	ability to control yourself A
		Keleh badamah bara badahu (DNg)	little but achieved
		Kale' balamak kalimantan paoh ditele' samak dijalatnni jauh (DNg)	Not to trivial
		Siala rimbang lawe rimbang awe maman siala aling tuan, aling tuan badaan. (DT)	mentionConsequences of cautionaware ofcareful
		Tanteluh manangkelang batu (DNg)	Be aware of challenges
4	Sasak	*Embe aning jarum, ito aning benang*	Compliance with rules

		Elaq molong korok	not to cut off your tongue
		Endaq ampahang simbur paleng	Do not underestimate, but always beware
		Maraq dengan ompoq benang genteng	Caution

Tabel 5.
NMK-5 : Dispositions and attitudes: brave, patriotic

No	Sampling	Idiom	Makna (isi)
1	Sunda	*Moal ditarajean*	Ready to fight
		Moal mundur satunjang beas	Abstinence slightest retreat
		Nete akar ngeumbing jangkar	Ready to face the challenges
		Nyekel sabuk milang tatu	Readyface any possible
2	**Minang**	*Nan mudo pambimbiang dunia, nan capek kaki ringan tangan, acang-acang dalam nagari.*	youthhope of the nation in the hands of youth is the future of the nation's progress.
		Pikia palito hati, tanang hulu bicaro	Conscious thoughts are the antidote to the light, and calmness produces useful speech
		Partamo cupak usali, kaduo cupak buatan. Kalau dulu disasali manjadi tuah pandapatan.	Regret first income, regret then useless.
3	Dayak	*Jangan sanggup menyembeleh manok malam, amun andik cakap membuang tuangau garaunya (DNg)*	Must be the consequent
		Mando' yang isapo'on, isapo' dara' bari siakan (DT)	Courage. Tendency as a tiger
		Pikiran dia sinde lembut , Kira-kira dia sinde dumah (DNg)	Do not hesitate
		Sungan tumbang layaran arue panyunyungin (DT)	Courage in defending / Protecting rights
4	Sasak	*Keduk lindung bani kaok*	Must be bold in risking
		Tiwas karang jari apuh, manah tan keneng obah	in sacrificing goals

Tabel 6.
NMK-6 : Dispositions and attitudes: Craft, Steadfast, Hard-working, Durable

No	Sampling	Idiom	Makna (isi)
1	Sunda	*Batok bulu eusi madu*	PoorPoor to have a
		Dug hulu pet nyawa, dug tinetek	spirit of hard work,
		Henteu unggut kalinduan henteu gedag kaanginan	not easily tempted
		Herang caina beunang laukna	Enhanced
		Ka hareup ngala sajeujeuh, katukang	Value-wise, efficient

		ngala sajeungkal	
		Legok tapak genteng kadek	Experienced
		Leuleus kejo poena	Excellent
		Mangkok emas eusi madu	Good exterior and contents
		Ngembang jaat, jalingeur	Sufficiency
2	Minang	*Duduak marauik ranjau tagak maninjau jarak*	Do not waste your time
		Pandai karano batanyo, tahu karano baguru.	diperdapat Knowledge for learning, education and many ask the people who know.
		Sadang baguru kapalang aja, lai bak bungo kambang tak jadi. Kunun kok dapek dek mandangga, tidak didalam dihalusi.	Every person who demands knowledge should not give up in the middle of the road withtruly
		Sadang manyalam minum aia, sadang badiang nasi masak	somethingwork that can be done in the past, and not diminish the work that is being done.
		Satitiak jadikan lauik, sakapa jadikan gunuang	Work on the existing knowledge base to continue to achieve higher knowledge
		Ombak ditantang manuju pulau, laia dikambang manantang angin	To achieve a goal and ambition constantly undergoing trials and obstacles
		Tabujua lalu tabalintang patah.	To maintain the truth must be with great earnestness.
3	Dayak	*Bakahing Atei (DNg)*	Determination
		Jatun atan tanduk bajang amun ie dia tau haragun (DNg)	There is no success without the ability to overcome adversity
		Kate basiina niin barasa sumangatnun, kate basiina niin atarama atenun (DNg)	spirit as hard and sharp as a machete
		Kukui witang ada witus surung jawu jangan pagat (DNg)	Morale do not cease to
		Mait karewau dahulu ukui (DNg)	do silly
		Marara sambo dua, sambo kalin ambiitan, sambi uangan batu, uangan baro ranin,(DT)	spirit of hard work
		Maloo' Ulu-ando mampo tabang alat (DT); Punti ngalahatn tanjukng (DK)	going to work hard
		Nutuk tapukng ka' dalapm lasukng (DK)	Working to rule
		Puang mangsul baji, puang muhak tumbuk (DNg)	strong stance
		Talasu-lasu poang dongoan (DT)	earned fame thanks to the hard work
		Meddu weka siseng tettong weka dua	Undaunted
4	Sasak	*Beleq kayuq beleq papan na*	spirit of hard work to achieve

			maximum results
		Endaq girang ngalu aiq	Never give upalone,
		Mesang ima nnaen ta, bawaq lanjaq batur	Diligent work provision must be
		Nyuit isiq jaum	Diligentsought, bringing the
		Sai tao jari agung	Eagerly looking for scienceso clever
		Ulah mandi isiq bisana	because science Securities

Tabel 7.
NMK-7 : Dispositions and attitudes :Just, Wise, guardian *(Leadership*)

No	Sampling	Idiom	Makna (isi)
1	Sunda	*Bobot pangayon timbang taraju*	wise
		Hade gogog hade tagog	Talk and handsome
		Lalaki langit lalanang jagat	guy superior
		Weruh sadurung winarah	Know before going
		Teu pilih kasih	Not in favor
		Landung kandungan laer aisan	of a
2	Minang	*Nansakik iyolah kato, nan padiah iyolah rundiang. Dek tajam nampak nan luko, dek kato hati taguntiang*	word That hurts more harm than a sharp knife.
		Pado pai suruik nan labiah, samuik tapijak indak mati, alu tataruang patah tigo	Become the youth of the nation's hope: calm, resolute, agile, high-minded and wise
		Sakalam kalam hari sabuah bintang bacahayo juo.	Exceptions are always There is
		Satuntuang tabu dek ulek, satuntuang sajo kito buang	something wrong with all families being hated.
		Tagak indak tasundak, malenggang indak tapampeh.	A leader with full authority and authority.
		Ingek di rantiang ka mancucuak, Tahu didahan ka maimpok	wise
		Maukua samo panjang, mambilai samo laweh	Adil
		Nansakik iyolah kato, nan padiah iyolah rundiang. Dek tajam nampak nan luko, dek kato hati taguntiang	Saidcaution.
		Pado pai suruik nan labiah, samuik tapijak indak mati, alu tataruang patah tigo	Be youths craving, calm, resolute, intelligent, agile wise virtuous
		Sakalam kalam hari sabuah bintang bacahayo juo.	Not all of the people out of the line of truth, at least one person there who enforce
3	Dayak	*Ina' jantu' ka' tanah kata nyu (DK)*	said right
		Ka' darat ina' bakarasak ka' ai'ina bakicarok (DK)	Clever resolve the problem without causing problems
		Ninyak ka' jagu' tale, ninyak ka'	Being and occurred just in

		padakng ina' talantur.(DK)	troubleshooting
		Palabiang bulang maam, bulang maam tulaalo (DT)	Praise for good people Discipline
		Sebagai ingger antara dua mata (DT)	Teach not to take sides, be fair in deciding the
		Turi bambalanin jejer dua lapan (DT)	perfection of a person is unmatched,
4	Sasak	*Besual cara anak kemidi*	Disagree not take revenge
		Endaq berakal mareaq akal songkok	Do not be selfish
		Maraq nyiur seke toaq, seke bawaq	Addition of age should be the wiser of the
		Ngales maraq penjalin cacing	Opportunities in the Opportunity of
		Pancing udang lain dait pancing tuna	reasoning

D. CONCLUSIONS

The meaning behind the description of the tentative achievements, reinforces the importance of introducing local culture to the next generation of young people. the nation is given both intra / co-curricularly and others amid a tidal wave between the positive and negative impacts of globalization that is unstoppable. The Indonesian nation with the reality of the diversity of the sub-culture that becomes its self-image, factually has the potential to articulate the strength of social and cultural resources in contributing to global progress and not just 'passengers' especially becoming' drunk passengers' because of the weakness of the endurance 'mental body spiritual'. For this reason, the effort to develop basic literacy including citizenship literacy based on strengthening local culture becomes a strategic choice, and therefore it is important to do it from small scale to local scale.

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ENTREPRENEURSHIP EDUCATION CURRICULUM IMPLEMENTATION AS A FACILITATION TO BUILD STUDENTS CHARACTERS IN 21ST CENTURY EDUCATION

Rachmy Aryati Nurdin
Post Graduate student of Curriculum Development Department
Indonesia University of Education
rachmy.aryati@upi.edu

Dr. Rusman Hasan, M.Pd.
Lecture of Curriculum Development Department
Indonesia University of Education
rusman821971@gmail.com

ABSTRACT

The decreasing of character built-up that is happening in students has been very worrying, considering that students are the next generation of the nation who must have the character and noble values to make this nation to be more advanced. One aspect that is highlighted in 21st century education is the development of the students' character. The effort to build students' character is by applying a entrepreneurship education program where students not only get academic learning. In the entrepreneurship education program, participants are educated for various activities supported by schools such as entrepreneur zone, cooking class, outbond entrepreneur, pesantren entrepreneur, industri visited and others. This paper aims to find out the implementation of entrepreneurship education curriculum programs in elementary school level to build students' character. Literature review is the method used in this paper. The implementation of a good entrepreneurship education curriculum will make a good contribution for the students' character building.
Keywords: 21st century learning, curriculum implementation, entrepreneurship education curriculum, student character

A. INTRODUCTION

According to UU No. 20 of 2003 education is a conscious and planned effort to create an atmosphere of learning and learning so that students actively develop their potential to have spiritual spiritual strength, self-control, personality, intelligence, morals starting, and the skills needed by themselves, society, nation, and country. Thus, education holds great hopes to be able to give birth to a new generation for the better future of the Indonesian nation.

Education is obliged to prepare a new generation that is able to face the challenges of the age to come. Future societies with the characteristics of globalization, advances in science and technology, and opportunities to receive the flow of information make people understand technology and think critically or "globally but act locally". These demands make reforms in education necessary.

But ironically the implementation of education in Indonesia still views education as merely a transfer of knowledge, that is, knowledge from teachers in the form of theories, memorization and formulas given to students to answer exam questions, but often students are unable to translate them into reality problems. around him. Abdul Kadir (2012: 4) said that education is actually carried out to meet the needs of human resources who are at least able to face the local

problems that surround them. So that the resulting education output is able to solve problems in the surrounding environment with the provisions obtained by students in school.

Various alternative solutions are provided by the government in realizing better Indonesian education. Some alternative solutions are equitable education in all regions of Indonesia, improving the quality of teaching staff, increasing the completeness of learning facilities, BOS funding programs, increasing reading books, making it easier to get scholarships, spearheading new research and discoveries, creating educational curricula that are in accordance with the needs of the workforce, and so. In addition, according to Nurseto (2010: 9) said education is demanded to enliven educational programs that have an entrepreneurial spirit. Entrepreneurship education must be included in children's education where parents must be able to prepare mentally, knowledge, and adequate skills at certain ages of their children.

According to Lutma in Arif (2015: 2) entrepreneurship education in schools has not received serious attention from the government. Many policies and instructions have not yet led to the implementation of entrepreneurship education in schools. Yogyakarta is an education city but entrepreneurship education has not been widely applied in Yogyakarta because of the limited knowledge of educators related to entrepreneurship. In addition, the limitations of school facilities and infrastructure are not yet sufficient for the implementation of entrepreneurship education. One of the schools that has implemented entrepreneurship education in Yogyakarta is the Aisiyah Bantul Flagship Primary School. But according to the Ministry of National Education (2010: 46) the implementation of entrepreneurship education does not have to be independent or autonomous by creating a new curriculum, but entrepreneurship education can be integrated in an existing curriculum, practically in learning in every subject. Entrepreneurship education at the primary or school level aims to form a holistic human being, that is, in addition to people who have the understanding and skills as an entrepreneur. By noting the importance of entrepreneurship education, Alif-A Yogyakarta Enterpreneur Elementary School was present as a pioneer of the Elementary School with Muslim entrepreneur character. The character of this school education program is the leadership student method, empiric learning system, enjoy learning programs, daily product programs and entrepreneurship-oriented education with orientation to the example of the Prophet Muhammad when he was a child to adulthood. However, the school curriculum and entrepreneurship education learning tools that are integrated with Islamic values and entrepreneurs have not yet been completely made by the school. That is not a barrier to stop implementing entrepreneurship education in schools.

Based on an interview on Monday, 31 October 2016 with the Principal of Muslim Entrepreneur Alif-A Yogyakarta (2016) obtained data that with the implementation of entrepreneurship education since young, the inculcation of entrepreneurship values will be optimal so that it can be implemented in daily life and when they are adults children will affect the surrounding environment. According to Afandi (2013: 3) this is in line with research conducted by Free Entreprise students from Pittsburg State University which shows that the development of entrepreneurial spirit is most effective when it starts in preschool education.

In other words, the provision of entrepreneurship education must be carried out as early as possible. Entrepreneurship education is carried out from an early age because Islam views humans as khalifah fil-ard, who support the prosperity of the earth by trying and working. Prompts to try and work in the letter Ar-Ra'd: 11 which shows God will not change man, as long as man does not change the causes of his decline. Through entrepreneurship education at the Alif-A Yogyakarta Muslim Entrepreneurs Elementary School, it is hoped that they will respect Muslim entrepreneurs.

Muslim entrepreneurs make religion a consideration in taking plans. Thus, Muslim Alif-A Yogyakarta Elementary School Entrepreneurs see that children will have an independent spirit early on through entrepreneurship education. From the description above, the researcher is interested in taking the title of the research "Implementation of Entrepreneurship Education in Alif-A Yogyakarta Muslim Entrepreneur Elementary School". This research is expected to be a material of information and a positive contribution to schools that can enable entrepreneurship education in schools. Through education, entrepreneurship, children will be able to be relied on to overcome challenges and be ready to find solutions and overcome those problems.

B. RESEACH METHOD

This research is a qualitative descriptive study. Data can come from interview scripts, field notes, photos, personal documents, official documents, and others. According Sukmadinata (2011: 73) Qualitative descriptive research aimed at describing and describing the phenomena that exist, both natural and human engineering, which further shows the characteristics, quality, interrelationships between activities. In addition, qualitative descriptive research does not provide treatment, manipulation and alteration of the variable under study, but rather describes an as-is condition. Researchers used descriptive qualitative research methods because they revealed the facts comprehensively about the implementation of entrepreneurship education including planning, implementation, and evaluation at the Alif-A Muslim Enterpreneur

Elementary School in Yogyakarta. This research was conducted at the Alif-A Muslim Entrepreneur School in Yogyakarta. The time of the study was conducted in March to May 2017. The research subjects were principals and teachers of Alif-A Muslim Entrepreneur Elementary School Yogyakarta. While the object of this research is Alif-A Yogyakarta Muslim Entrepreneur School. The research instrument is the researcher himself. Data collection techniques using interviews. observation, and documentation. Interviews are conducted in depth by using interview guidelines, determining the resource persons, and preparing a recording device. The observations made were participatory observations because the researchers participated in entrepreneurship education activities at the Alif-A Muslim Entrepreneur Elementary School Yogyakarta. While documentation is obtained from photographs, interviews, and files relating to entrepreneurship education. The data analysis technique used is interactive model. According to Sugiyono (2016: 338) there are three things to do, namely data reduction, data presentation, and drawing conclusions.

C. RESULT AND DISCUSSION

Alif-A Yogyakarta Muslim Entrepreneur Elementary School is a school that implements entrepreneurship education starting at the age of elementary school. Entrepreneurship education is carried out early because at the age of elementary school students will get experiences that are not easily forgotten by students. The experience gained through entrepreneurship education will influence the character of students and create Muslim entrepreneurs that are beneficial to the Indonesian Nation. The planning stage of the entrepreneurship education program is prepared by the basic education office, school principals, foundation leaders, teachers, student guardians, and school residents. Entrepreneurship education program planning includes the formulation of program objectives, vision and mission of the entrepreneurship education program. The person responsible for formulating the goals, vision, and mission of the entrepreneurship education program is the principal of Alif-A Muslim Entrepreneur Elementary School Yogyakarta. After it has been agreed and evaluated together with the entrepreneurship education planning, then all the steak holders are assigned as executors of the entrepreneurship education program.

The organizational structure of the entrepreneurship education program in the Alif-A Muslim Entrepreneur Elementary School Yogyakarta is the responsibility of the Principal. All teachers work as executors of entrepreneurship education. The teacher is in charge of planning learning, educating, and assessing students.

According to Machali (2012: 41) the implementation of entrepreneurship education aims to prepare students and graduates who have character and can develop their entrepreneurship potential. The characters developed are entrepreneurial values such as independence, courage, creative, risk-taking, action-oriented, leadership, and hard work. This is in accordance with the opinion of Imam Machali (2012: 41) the goal of entrepreneurship education is to make the nation creative, brave, have an entrepreneurial mentality, so that the employment problem is gradually resolved and

prepare students to have life skills, interact with the social environment based on their growth and environment. The implementation of entrepreneurship education at the Alif-A Yogyakarta Muslim Entrepreneur Primary School was carried out by the school community. Learning activities and school culture developed by Alif-A Muslim Entrepreneur Elementary School Yogyakarta is an atmosphere that can develop entrepreneurship values. Steakholder plays an important role in implementing entrepreneurship education in Alif-A Muslim Entrepreneur Elementary School Yogyakarta. The implementation of entrepreneurship education in each class is different. Class 1 is the preparatory phase in which the minimum students are able to carry out activities and prepare their needs independently. Class 2 is the preparation phase, at least the students are able to see the situation and conditions around them. Class 3 is also included in the preparation phase, at a minimum students are able to take the initiative to solve the problems encountered. The preparation phase places more emphasis on planting and applying the character of entrepreneurship education.

Next is the advanced phase or the applicative phase of class 4, class 5, and class 6. Class 4 at least students can already have an offline business. While grade 5 and grade 6 students already have a business that is marketed online. The advanced phase or the applicative phase emphasizes students to create works or products that have a sale value so they can be marketed online and offline.

Entrepreneurship education at Alif-A Yogyakarta Muslim Entrepreneur Primary School is integrated through subjects. The teacher planning stage integrates entrepreneurship education through subjects starting from selecting subject matter then entering the values of entrepreneurship education that will be developed in the lesson plan (lesson plan). Learning Implementation Plan (RPP) includes subject identity, Competency Standards (SK), Basic Competition (KD), teaching materials, methods, time allocation, learning activities, learning assessment, and learning resources. This is in accordance with the opinion of Endang Mulyani, et al (2010: 59) internalizing the value of entrepreneurship into subjects can be done through

methods, materials, and learning assessments. The subjects to be integrated are added to the material related to entrepreneurship. The method chosen by the teacher also supports learning activities so that students can be active in learning. Students are directed to be able to solve problems, be creative, be skilled, and innovate. Material integrated into entrepreneurship education and aimed at increasing creativity is SBK. In addition to SBK, subjects integrated in entrepreneurship education are Mathematics, Natural Sciences, and Social Sciences. Implementation of the integration of students is directed to create a work that can have a sale value. In addition, teachers also provide motivation related to entrepreneurship such as tips on becoming a successful entrepreneur. The atmosphere created in learning activities that are integrated with entrepreneurship education is an atmosphere that can develop entrepreneurial values. Students are directed to be creative and innovate and are expected to become successful Muslim entrepreneurs.

The material integrated in different subjects is adjusted to the level of development and needs of students. Each cognitive, motor, and psychosocial development of students is different. Activities created in integrating entrepreneurship education through subjects are activities that are in accordance with the needs of students such as grouped students, learning by playing, and direct practice. This is in accordance with the opinion of Sugiyanto (2016: 5) the needs of elementary school children are children who love to play, children like to move, children like to work in groups, and children like to feel or do something directly. These activities can support the achievement of entrepreneurship education goals.

The method used in integrating entrepreneurship education through subjects is the method of observation, direct practice, and games. This is in line with the opinion of Endang Mulyani, et al (2010: 34) stating that entrepreneurship learning methods in primary schools emphasize active and fun learning. These activities make students active in learning and fun so that students have experience that can be used in the lives of students. Entrepreneurship education at Alif-A Yogyakarta Muslim Entrepreneur School through self-development. The integration of entrepreneurship education through self-development is carried out with entrepreneur zone activities, pesantren entrepreneurs, outbound entrepreneurs, industry visits and cooking classes.

1) Entrepreneur zone

The entrepreneur zone activity at Alif-A Yogyakarta Muslim Entrepreneur Elementary School is an example of entrepreneurial activities at school involving school residents. The entrepreneur zone activity teaches students to create work or products and instill the values of

entrepreneurship. Work made by students in the form of work that has a sale value or at least the work is useful for students in everyday life. Cultivating entrepreneurship values for students such as independence, creativity, courage, leadership, dare to take risks, and work hard. Cultivation of entrepreneurship values is done through habituation so that students have superior character.

The entrepreneur zone assessment is carried out by the teacher by taking notes to assess students' development and abilities. After the assessment is carried out, the results of the entrepreneur zone assessment will be included in the student learning outcomes report. Assessment uses quantitative and qualitative values. Quantitative assessment in the form of numerical values by using the minimum criteria for completeness of students. While the qualitative assessment in the form of a description of the development and ability of students in learning and advice to improve the ability of students.

2) Pesantren entrepreneur

Entrepreneurial boarding schools are joint learning activities with entrepreneurship carried out in schools under the guidance of teachers and stay at school for several days. The activity requires that independent students prepare all the needs needed during the pesantren entrepreneur. Some things students must prepare are cooking food and building the Tahajud Prayer independently during the pesantren entrepreneurship. In addition to sunnah prayer activities and memorization of letters, entrepreneurship materials and values are also emphasized in pesantren entrepreneur.

The pesantren entrepreneur is held once a year in odd semester. Entrepreneurship boarding school activities teach students how to be independent when they are separated from parents. In addition, students are independent in worshiping God because students are aware and feel need with God. The teacher as a facilitator in instilling the values of entrepreneurship character to students. Emphasis on monotheism, motivation, and direction to students is done so that someday students can become superior Muslim entrepreneurs and beneficial to society.

3) Outbound entrepreneurs

Outbound entrepreneur is a form of learning activities carried out in the open (outdoor) with a form of play that can improve the character of entrepreneurship individually or in groups. Outbound entrepreneurs are held once a semester. The place chosen for outbound entrepreneurs is a place that is still beautiful so that students can unite with nature. One example of an outbound entrepreneur activity is the river alignment. River Ride is a game passing along the river with various obstacles that are adapted to the ability of elementary school children.

Outbound entrepreneur activities emphasize students can solve various obstacles or problems encountered. Students not only play, but the values of entrepreneurship contained in the game can make students have superior character. Outbound entrepreneur activities in accordance with the character of elementary school children who like play activities. 4) Industry visits

Industrial visit is an effort in providing knowledge and experience to students. Students and teachers visit various industrial sites. Students can see directly and can practice making works directly so they have the provision of skills that can be developed. Through industry visits, students are expected to be inspired to become entrepreneurs who take advantage of the potential of the surrounding area.

5) Cooking class

Cooking class is one of the fun learning activities that can improve the abilities and skills of students. Ability and skills that will increase not only in cooking but also in improving Mathematics 'numeracy skills and increasing students' confidence. Students are taught in managing the needs needed in cooking a food dish. After that, students are taught to sell dishes that have been made. Calculations of capital, profits, and losses are also taught by the teacher. Through these activities, it can inspire students to become great cooks.

The implementation of entrepreneurship education in the Alif-A Yogyakarta Muslim Entrepreneur Primary School through school culture is carried out through various activities. This is in line with the opinion of Endang Mulyani, et al (2010: 64) stating that entrepreneurial values can be carried out in school culture. School culture is a collection of values, norms, beliefs and traditions held by school members as a binder of togetherness and school identity.

Alif-A Yogyakarta Entrepreneur Muslim Primary School is an Islamic school. The form of implementing entrepreneurship education activities through school culture is that students are accustomed to independently carry out Dhuha Prayer themselves and congregate, perform Zuhr Prayers in Mushola around the school, and are responsible for arranging chairs for the guardians of students. Through these activities, students are inculcated to fear God and realize that Dhuha Prayer is the key to the success of the world and the hereafter. School culture is physically carried out with posters and slogans placed in the classroom and outside the classroom. In addition, the work produced by students is placed in the classroom so that it can increase student confidence. Various forms of these activities, students are expected to increase the motivation of students in applying the values of entrepreneurship in daily life.

Alif-A Yogyakarta Muslim Entrepreneur Elementary School measures the success of students in the learning process of entrepreneurship education carried out integrated with other subjects. The teacher makes notes based on the development of students in implementing entrepreneurship learning. After being assessed, the value of entrepreneurship education in the learning outcomes report is entered into the spirit of monotheism, entrepreneurship, and general knowledge.

The results of the implementation of entrepreneurship education in the Alif-A Yogyakarta Muslim Entrepreneur Primary School on the character of entrepreneurship cannot be measured with certainty. That's because measuring a person's character takes quite a long time. But through habituating the values of entrepreneurship that are carried out at school and outside the home, students look more independent, creative, confident, dare to take risks, and responsible.

The implementation of entrepreneurship education at the Alif-A Muslim Entrepreneur School in Yogyakarta has many obstacles. Constraints faced are limited facilities, infrastructure, and entrepreneurship education media. Limited facilities and infrastructure make learning activities carried out in the classroom and outside the classroom. Alif-A Yogyakarta Muslim Entrepreneur School requires an entrepreneurship laboratory so that it can facilitate entrepreneurship activities. Media that can support entrepreneurship activities is also lacking. In addition to constraints in the form of facilities, infrastructure, and media, another obstacle faced is the school operational permit. Efforts in overcoming various obstacles in implementing entrepreneurship education are educators and guardians of students to remain consistent in running entrepreneurship education and to keep the spirit of running entrepreneurship education. Student guardians are expected to provide input and support in developing entrepreneurship education.

The teacher also improves the ability to integrate entrepreneurship education into all activities in the School. In addition, Alif-A Muslim Entrepreneur Elementary School educators hope that more people will realize the importance of entrepreneurship education early on.

D. Conclusion

Entrepreneurship education program planning is planned through an entrepreneurship education program discussion meeting held at the beginning of the school learning year. Furthermore, all steakholders involved in the discussion meeting on the entrepreneurship education program evaluate the policies that have been made. After evaluating and withdrawing the policy, the entrepreneurship education program is included in the draft curriculum. However, the drafting of an entrepreneurship education program curriculum at the

Alif-A Yogyakarta Muslim Entrepreneur Primary School has not yet been completed. The teacher keeps making and describing entrepreneurship education into the RPP so that entrepreneurship education can run well.

The implementation of entrepreneurship education is carried out through the integration of entrepreneurship education through subjects, self-development, and school culture. The integration of entrepreneurship education through subjects is done through teachers identifying subject matter then choosing the value of entrepreneurship that will be developed in the subject matter. The integration of entrepreneurship education through self-development includes the entrepreneur zone, pesantren entrepreneur, industry visits, outbound entrepreneurs and cooking classes. The implementation of entrepreneurship education through self-development is not carried out every day. However, there is already a schedule set by the school. The integration of entrepreneurship education through school culture is carried out through students accustomed to independently carry out the Dhuha Prayer themselves as a congregation, perform Zuhr Prayers in the Mushola around the school, and are responsible for arranging chairs for the student's guardians. In addition, physical culture in the Alif-A Yogyakarta Muslim Entrepreneur Elementary School is a poster and slogan placed at school and outside the school Evaluation and assessment process of entrepreneurship education at Alif-A Yogyakarta Muslim Entrepreneur Elementary School measures the success of students in the learning process of entrepreneurship education made taking notes based on the development of students in implementing entrepreneurship learning. Then, assessment is integrated with other subjects because entrepreneurship education is not included in the subjects. After being assessed, the value of entrepreneurship education in the learning outcomes report is entered into the spirit of monotheism, entrepreneurship, and general knowledge. Meanwhile, the implementation of entrepreneurship education on the character of entrepreneurship cannot be measured with certainty. That's because measuring a person's character takes quite a long time. But through habituating the values of entrepreneurship that are carried out at school and outside the home, students look more independent, creative, confident, dare to take risks, and responsible.

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THE PATTERN OF CURRICULUM PONDOK PESANTREN MODERN IN DISRUPTIVE ERA (DESCRIPTIVE STUDY IN PONDOK PESANTREN MODERN TARBIYATUL MUBTADIIN KABUPATEN BEKASI)

Rizal Kailani dan Dinn Wahyudin
kailanirizale@upi.edu , dinn_wahyudin@upi.edu
Pengembangan Kurikulum - Universitas Pendidikan Indonesia

ABSTRACT

Pondok Pesantren is an Islamic Education Institution in Indonesia which has its own characteristics. Pondok Pesantren are currently doing a lot of innovation so that its existence is increasingly known. Even more recently, the government has made laws on Islamic boarding schools that make their existence more recognized. The purpose of this study is to find out of how the pattern of curriculum in contemporary Pondok Pesantren and to know of how the obstacles. This study used descriptive qualitative method. The author uses the data source: *First*, it is the informant by interviewing the leaders of Islamic Boarding Schools and administrators and several times directly involved in activities in the Institution. *Second*, use documents to strengthen research results. The result of this study showed Pondok Pesantren have expanded a cooperative network with other elements. It can be proven when facing contemporary challenges and obstacles, Pondok Pesantren have taken an action of diversifying their curriculum in which there were only two patterns of curriculum; *salafy* and *khalafy*. Now the Pondok Pesantren have used various curriculums, such as the *tahfidz* curriculum, and the *kuliyatul mu'alimin al-Islamiyah* (KMI) curriculum which is adopted from Gontor. The obstacles and challenges being faced by the Pondok Pesantren are the lack of a societal solidarity arounds the pondok pesantren in supporting the pondok pesantren curriculum and there are still a number of students who can not take part in learning which is caused by a lack of Arabic skill as a supporting language.

Keyword: *Pondok Pesantren, Curriculum Pattern, Disruptive Era*

A. INTRODUCTION

Pondok Pesantren is an original institution of education which comes from Indonesia. It has been a central education and learning, the missionary endeavor as well, that takes an important role because it is an older model of education than the modern education introduced by Netherland at the time of colonialism (Prasetyo, 2018, Pg. 298). As an original institution of education which comes from Indonesia, Pondok Pesantren has shown good attainments in maintaining self-identity since the Era of Proclamation till the Era of Reformation, so that it makes Pondok Pesantren more recognized since laws of Pesantren in Indonesia are officially validated (Saifuddin, 2015, Pg. 207).

During a period goes, Pondok Pesantren keeps developing to be an institution of education which is not traditional anymore, but there are also much products of the Modern Pondok Pesantren with various patterns in which they have a purpose to develop in solving challenges of this time (Subekhan, 2017, Pg. 107). The Islamic education, Pesantren included, has much problems, such as a relation of the power, an orientation of the Islamic education, and the problems of curriculum have to be faced (Sofwan, 2016, Pg. 272).

In a development of the world of education, curriculum has always changed and expanded. It is because a real progress and change of the needs in societies. It is important to note that societal things are input of an institution of education which take the process seriously and a better output. In the process of learning, the problem is not only how to make students clever, but learning and education should be relevant, too, for the needs of societies in the recent times (Zaini, 2018, Pg. 2).

The question is, how to size the expanding of curriculum? It can be based on an innovation in particular fields. For instance, the discovery of new learning theories and changed demands of society to education. The mission is, curriculum is aimed to be capable of realizing a particular development, as a result of progress represented by science and technology, information, and globalization, demands of the past, the difference of student's background, philosophical values within society, religion or identical communities, and the demand of the specific cultural ethic (Hamalik, 2008, Pg. 46).

Historically, education in Pesantren has no curriculum which is not written officially. Pesantren caretakers, Kyai especially, become prime figures in Pesantren curriculum development and make Kitab Kuning as material courses. Curriculum in Pesantren can be said as relevant as with Kyai's personal life as the highest leader in Pesantren. Impingin how much demands and needs in this 21th century, Pesantren always tidies up and develops other aspects, the patterns of curriculum included. It is the rebuilding of the Pesantren education curriculum towards 21th century (Ma'arif and Rofiq, 2018, Pg. 3).

Based on that problem, the researcher try to find out how the expanding/developing pattern of Pondok Pesantren Tarbiyatul Mubtadiin's curriculum in Bekasi and how the factors and challenges have to be faced by Pondok Pesantren in facing 21th century in a process of education and teaching.

Theoretical Framework

1. Pondok Pesantren

Pondok Pesantren is the oldest traditional education in Indonesia. Mastuhu said that Pesantren is an Islamic traditional education institution which is aimed to study, to understand, to deepen, to comprehend, and to practice Islamic values by emphasizing how very important of morality as the first orientation to daily lives (1994, Pg. 55). In the other functions, Pesantren,

with all its own elements, has taken a role in the societal lives. In the other chances, it was told that Pondok Pesantren is a religious social institution which is a media of education to Islamic people who want to deepen Islamic esoteric knowledge. Pondok Pesantren is by religious terminology an Islamic institution. It is also true that Pondok Pesantren has the social icon having a specific social regulation in society. It is because Pondok Pesantren has the characteristic social modality; firstly, a character of Kyai, secondly, santri (Islamic students), thirdly, independent and autonomous, lastly, a strong social network among Pondok Pesantren's alumnus/alumna (Maksum, 2015).

Laws No. 18/2019/Chapter III, in the First Part; Section 5-Verse 1 said that Pondok Pesantren has three forms by itself; (a) Pesantren implementing education in a form of the deepening Kitab Kuning; (b) Pesantren implementing education in a form of Dirasah Islamiah with the Muallimin Education Pattern; (c) Pesantren implementing education in the other integrated forms with education generally.

Pondok Pesantren ia an institution of education in which its own teaching system is traditional called *sorogan* (in forward rotation one by one), *wetonan* (activities practiced at particular times), and *bandungan* (listening). These methods are the learning system in the realm of Pesantren in which Kyai takes a special role in them (Hasan, 2016, Pg. 97). The purpose of Pesantren education is to shape people having a high consciousness concerning three very important points of Islamic values; The God, human and nature after absolute dichotomy between God (*khaliq*) and the creatures, forms of the correlation among these three elements included--they are comprehensive (Faturrochman, 2017, Pg. 86).

Material courses given in learning activities in Pondok Pesantren involve Islamic questions such as, *fiqh* (Islamic laws), *aqidah* (the very foundation of Islamic beliefs), *mustalah Hadith*, the study of tafsir (the realm of Islamic interpretation), Arabic language with all its own way devices like *Nahwu* (grammar), *Sharf* (morphology), *balaghah* (stylistics). They are given in traditional ways such as Kitab Kuning (Rizal, 2011, Pg. 99).

Factually, there are some types of Pondok Pesantren in which grown up in society; (a) Traditional Pondok Pesantren increased is religious material courses which is its sources come from classical books, non-classical, a teaching using halaqoh system, santri's capability and

cognitive are judged based on books they study, (b) Modern Pondok Pesantren is a combination of the traditional and modern education system.

2. Pesantren Curriculum

Curriculum has definitions and explanations based on three concepts; firstly, curriculum as a system and a part of the school system, education, for even society, secondly, curriculum as a substance which is viewed a plan of daily activities and as a set of mission must be reached out, thirdly, as a field study, or as a material of experts in curriculum and education to study (Ahid, 2006, Pg. 27). Nana Syaodih Sukmadinata (1997, Pg. 27) outlined that curriculum is a set of equipment in learning purposes which is organized. By those explanations above, it can be concluded that curriculum is a concept consists of three elements; curriculum as a system, as a substance, as a field of the study.

Meanwhile, Graff and Lovat (in Wibowo dkk, 2014, Pg. 59) stated that curriculum is an aim representing the needs of society, ways of how to know student's interests and skills, before process of learning which is integrated objectively and those ways are practiced in classrooms. Curriculum has a function as a tool and description as well of what practices in education should be done and what attainments to reach out. Curriculum is also a manual guide in the realization of education, so that a result is wished full of breath of that curriculum. Remembering how important of curriculum, it makes its own existence always becomes the first focus in every changes/revisions of the education system (Khodijah, 2014, Pg. 81).

Atmaja (2010, 359-360) said that the reordering of curriculum of Pesantren education based on some considerations;

a) people regard Pondok Pesantren has not a quality enough, as a result, parents too consider their children to study in Pondok Pesantren;
b) it is a leadership factor which is a principal problem in Pondok Pesantren, and methodology,

   and there is any disorientation in human resources developments and economic problems. So that, parents sending their children are identical with low-class.
c) people regard that institutions of education in general are better than Pondok Pesantren impinging the cultural academic and scientific.

In addition, Ainurrafiq (in Abuddin Nata, Pg. 55) explained that characteristics of curriculum within Pondok Pesantren start to be adapted with curriculum of Islamic education which is supported by the Ministry of Religiousness through formal schools (madrasah I or applied through personal policies. Description). The specific curriculum of Pesantren distributed in the other curriculum local contents is in the distribution of times to learn; those are people learning science and knowledge which is relevant to curriculum in universities at the times of learning or requiring knowledge. After that, activities of learning focus on Islamic course, Kitab Kuning especially.

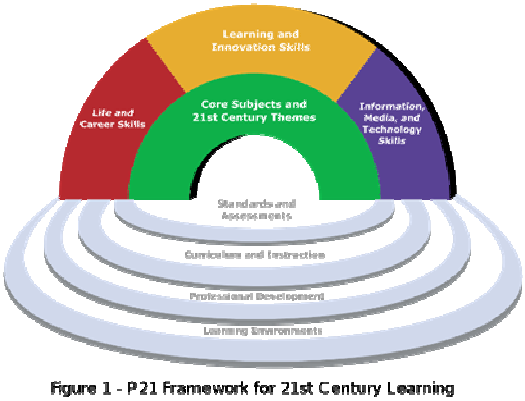
In the traditional view, curriculum is a series of material courses or something will be delivered by teachers to students. For instance, Ahmad Tafsir recommended material courses containing Rohani (divine), reasoning and physical aspects (2012, Pg. 86). Al-Ghazali divided concept of knowledge to science of fardhu ain and science of fardhu kifayah. Meanwhile, Ibnu Khaldun did it to three aspects; the science of language, naqli, and aqli (Ramayulis, 2019, Pg. 204). The function curriculum in Islamic education included education in Pesantren is to be a manual guide for teachers to bring out their students to the highest purpose in Islamic education, via numbers of knowledge, skills, attitude and creativity. In other words, it is to be human of ulul alabb by doing curriculum which is organized systematically (Dhofier, 2011, Pg. 87)

According to Muhaimin (2010, Pg. 1), curriculum can be defined as a bright way to step over by teachers and students to develop knowledge, skills, attitude, and values. The expanding of REI (Religious Education of Islam) can be viewed as; (a) activities resulting REI curriculum; (b) process correlating one component to the other to make REI curriculum better; (c) activities arranging (design), an implementing, judgement, and a complete REI curriculum (Muhaimin, 2010, Pg. 10).

3. 21th Century in a Landscape of Education

Education in 21th Century is an education which strives for emphasizing critical thinking, problem solving, creativity, innovation, communication, collaboration, and global awareness (Marjohan, 2013, Pg. 77). From those characteristics, it can be known that problem solving skills are essential to education in the recent times. Education is to try maintaining well consciousness and to change human behavior through a process of learning and teaching. It is math which has an important role to the skill of problem solving. Math is a science which is capable of training

person's skill of reasoning in the case of learning (Erman Suherman, 2003, Pg. 253). Skills of technology in a case of learning cannot be separated from skill of 21th Century, as said by Daryanto and Karim (2016, Pg. 13-14), "Certain skills to require in 21th Century are; (1) life and career skills, (2) learning and innovation skills, and (3) information media and technology skills." Those are summarized in a scheme called Century Knowledge Skills Rainbow. The picture following under;



Picture 2. 21st Century Knowledge Skills Rainbow

Source: Partnership for 21st Century Skills

The purpose of the national education in 21th Century formulated as such. The national education in 21th Century aims to make nation's dreams, that is Indonesian people which is prosperous and happy, before the law and equal with the other nations in the global world, via forming a society consists of a quality human resources, unique and autonomous, having dreams and skills to make their dreams come true (BSNP, 2010, Pg. 39).

B. METHODOLOGY OF RESEARCH

This research has the purpose to describe on how the expanding pattern of Pondok Pesantren Tarbiyatul Mubtadiin's curriculum in Kab. Bekasi and to find out on how the factors of challenges which is being faced by Pondok Pesantren Tarbiyatul Mubtadiin on 21th Century. This research uses the qualitative approach to describe the detailed patterns of curriculum and challenges. According to Jane Richie (in Meleong, 2012, Pg. 6), he stated that qualitative

research is to try to convey the social world and its perspective in the world, from conceptual aspects, behaviour, perception, and questions concerning people studied.

Data collection used in this research refers to Ulfatin's opinion (2004, Pg. 40) who said that there is no some data collection technic used in this qualitative research. The technic, in general, used in a qualitative research is: (1) deep interview, (2) parcipatory observation, (3) documentation. A data analysis is an important step in analytical activities, it is because the result of research depends on a technical analysis used and a capability to analyze a researcher. Bogdan and Biklen (in Lexy J. Meleong, 2004, Pg. 248) explained, "Data analysis is an effort done to how the data work, organizing data, classifying data to be a unit that can be managed, making synthesis, looking and finding patterns, finding of what important things and what to study, and deciding what can be told to other people.

C. THE RESULT OF RESEARCH AND ANALYSIS

Pondok Pesantren Tarbiyatul Mubtadiin Bekasi is in Village Buwek Raya RT 006/02, District South Tambun and Sub-District Sumber Jaya, Bekasi Regency. This Pondok Pesantren lies in an edge of road way which is easy to find out its existence. So that, to go to this Pondok Pesantren is not hard. Besides, the location of this Pondok Pesantren is surrounded by people's housing living in area of this Pondok Pesantren.

The patterns of curriculum used by Pondok Pesantren Tarbiyatul Mubtadiin in facing 21th Century uses a combination amongs four curriculum in which that they are different, or often called Pondok Pesantren Combination and it is used in all of the learning process done in Pondok Pesantren Tarbiyatul Mubtadiin Bekasi to support all activities such as, Kemenag's curriculum, Salafiyah curriculum, the 2013 curriculum, and KMI (Kuliyatul Mu'alimin Al-Islamiyah) curriculum.

The purpose of this Pondok Pesantren is divided into two; a purpose of the short period of time and long as well. That first purpose is to shape ideal santri as such:

a. Having good behavior, a capability of santri to manage good attitude in front of the other people.
b. Having good discipline, a capability of santri to manage time efficiently when taking obligation in their own daily lives.

c. Having a wide knowledge, preparing theirselves to continue to the higher level of education such as, Pondok Pesantren, or Senior High School, then entering university.
d. *'Arif billahi wa rasulihi*, loyalty to taking a pray of Allah SWT and to doing Sunnah of Prophet Muhammad SAW.

In the other side, the purpose of long period of time of Pondok Pesantren Tarbiyatul Mubtadiin is;

a. Religious knowledge planted in every santri
b. Practicing knowledge required by santri in a society, as a realization of spreading Islamic values, Dakwah
c. Giving material course to be memorized, those are memorizing juz 1, juz 30, and chosen epistle (Yasin, Al-Mulk, Ar-Rahman, Al-Waqiah, and Al-Jumu'ah) as a provision to them
d. Preparing santri to make them get the higher education level

To make these all, Pondok Pesantren Tarbiyatul Mubtadiin Bekasi implements a process of education consists from three aspects, those are;

Input of Pesantren education, implemented in two phases, the first phase is in Jan, Feb, March; and the second phase is in April, May, June. This Pondok Pesantren accepts all santri candidate who register. Acceptance through entering test which is done to know how far of candidate's skills, it is done as an interest of subdividing students.

The process of Pesantren education constitutes into two systems, those are salaf (traditional) system and khalaf (modern) system. By salad means that santri study, by stressing, to read and to comprehend Kitab Kuning by using sorogan and bandongan method. Meanwhile, khalaf, which is implemented in MTs bu using classical method as a combination amongs Kemenag's curriculum, Salafiyah, Tahfidz, Gontor's curriculum, Arabic language which is more dominant. So that, they make two consequences of final exam acted as.

The structure of curriculum in the process of the learning to Formal Education uses the 2013 Curriculum with combination of PMA No. 165, 2014:

No	Material Courses	**Class and Time Allocation**		
		VII	**VIII**	**IX**
Group A				
1	Islamic Religious Education			
	Aqidah-Akhlak	**2**	**2**	**2**

	Al-Qur'an Hadits	**2**	**2**	**2**
	Fiqh	**2**	**2**	**2**
	History of Islamic Civilazation	**2**	**2**	**2**
2	Pancasila and National Education	**3**	**3**	**3**
3	Indonesian Language	**6**	**6**	**6**
4	Arabic Language	**3**	**3**	**3**
4	Math	**5**	**5**	**5**
5	Sciences of Nature	**5**	**5**	**5**
6	Social Sciences	**4**	**4**	**4**
7	English Language	**4**	**4**	**4**
Kelompok B				
8	Art and Culture	**3**	**3**	**3**
9	Gymnastic Education	**3**	**3**	**3**
10	Prakarya	**2**	**2**	**2**
	Numbers of Time Allocation	**46**	**46**	**46**

Source: Curriculum of MTs Tarbiyatul Mubtadiin

Table

Schedule of Activity and List of Course of Kitab the Pesantren Studying

Time	**Day**			
	Saturday	**Sunday**	**Monday**	**Tuesday**
Ba'da Subuh	- Al-Qur'an	Al-Qur'an	Al-Qur'an	Al-Qur'an
Ba'da Ashar	- Safinah	Safinah		Tafsir Yasin
Ba'da Maghrib	Bayan/Hulasoh Kitab Safinah	Bayan/Hulasoh Kitab Safinah	Bayan/Hulasoh Kitab Safinah	Bayan/Hulasoh Kitab Safinah
Ba'da Isya'	*Muhadoroh*	*Muwajjah*	*Muhadoroh*	*Muwajjah*
Time	**Day**			
	Wednesday	**Thursday**	**Friday**	**Info**
Ba'da Subuh	- Al-Qur'an	Al-Qur'an	Al-Qur'an	
Ba'da Ashar	- Akhlaqul Banin		Ta'lim Muta'alim	
Ba'da Maghrib	Bayan/Hulasoh Kitab	- Tanqihul Qoul	Bayan/Hulasoh Kitab	

	Safinah	- Tahlil & Tahmid	Safinah	
Ba'da Isya'	*Muhadoroh*	*Muhadoroh*	*Muwajjah*	

Source: The Researcher's

The learning approach in curriculum of Formal Education uses scientific approach. Every teacher makes RPP (Planning of Learning Implementation) to reach out and a learning indicator as relevant as to the purpose. Content of the learning purpose in scientific approach is to manage the 4C skills of santri in which they do not get courses in the Pesantren learning, such as critical thinking, communication, collaboration, and creativity. The strategy in the Pesantren learning still used teacher-centered method. Adaptation is also used as a method, memorizing, speech, question and answer, quisioner. To make implemented above simple, the table following under:

Table of the Kitab Studied Based on Method Used

No	**Kitab to Study**	**Method**
1	Al-Quran	Sorogan
2	Safinah	Sorogan
3	Akhlaqul Banin	Bandongan
4	Tanqihul Qoul	Bandongan
5	Ta'lim Muta'allim	Bandongan

Source: The Researcher's

Meanwhile, there is any *Hidden Curriculum* in Pesantren Tarbiyatul Mubtadiin , that is extracurricular for santri, such as Pramuka, Wissnu (Intra Organization of Santri), khitobah of Arabic language and English speech studied, art, marawis art, art of reading and writing Al-Qur'an, daurah reading and understanding Kitab Kuning, Tahfidz Al-Qur'an which having curriculum by their own selves.

Daily activities done by santri, from Pesantren Activity to the well-organized activities; activities in curriculum have been systematized with formal education and Pesantren. Those implementations are to guide santri of how to practice disciplined things and norms, and to make purpose and vission-mission of Pesantren. The table following under is daily activities of santri:

Table

Schedule of Santri

No	Time	Activity
1	3:45-5:30 am	Wake up in the morning
		Sholat shubuh together
		Reading Al-qur'an
2	5:30-6:15 am	Arabic and English Vocabulary
		Sholat dhuha
3	6:15-6:45 am	Cleaning up
4	6:45-7:15 am	Breakfast
5	7:15-7:45 am	Preparation coming classroom
6	7:45-8:00 am	Coming to classroom
7	8:00-11:30 am	Learning and Teaching Activity
8	11:30-12:00 pm	Preparation for sholat
9	12:00-12:30 pm	Sholat Dzuhur and
		reading Al-qur'an
10	12:30-1:00 pm	Lunch
11	1:45-2:45 pm	Studying
12	2:45-3:15 pm	Sholat ashar
		Reading Al-qur'an
		Sema'an/bandongan
13	4:15-5:15 pm	Gymnastic
14	5:15-5:45 pm	Preparation to sholat maghrib
15	5:45-6:45 pm	Sholat maghrib
		Reading Al-qur'an
16	6:45-7:30 pm	Dinner
17	7:30-8:00 pm	Sholat isya'
19	8:00-10:00 pm	Studying with Homeroom Teacher Giving and requiring Arabic and English vocabulary
20	10:00-3:45 am	Rest

Source: The Researcher's

Evaluation is always the last part of every learning occured as material consideration to know how far understanding of santri to what they have studied. So that, the result of evaluation is the goal that determines santri get in the learning activities. It is also the learning of Kitab Kuning as result of santri's understanding. Staff and teachers who have taught Kitab Kuning course presents an exam opened in mid-semester and last-semester. Because of that, Pondok

Pesantren Mubtadiin presents an exam of reading Kitab Kuning where the material course used becomes an effort of evaluation to the result of santri's learning done at examination. So that, output of Pesantren education is wished able to produce good alumnus/alumna to activities in the next education, having good knowledge about religious things and knowledge in general, having a good memory of juz 1, juz 30, and the chosen epistle, having good disciplined behavior, loving teachers, and having good attitude and thinking to others.

Supporting and inhibiting factors in implementing curriculum at Tarbiyatul Mubtadiin Bekasi Islamic Boarding School, namely because the presence of Pondok Pesantren Gontor graduates being a supporting factor that will provide innovation and maintain the direction of education that cannot be separated from the role of government assistance. In addition, the obstacle is that there are still many santri who have not been able to follow some of the dominant lessons in Arabic, and also still found a number of santri who violate the pondok rules, and the lack of solidarity of the community around the pondok in supporting the existing boarding school program

D. CONCLUSION

Pondok Pesantren Tarbiyatul Mubtadiin Curriculum Pattern uses a type of combination including: Salafiyah Curriculum, Ministry of Religion Curriculum, Kuliyatul Mu'alimin Al-Islamiyah Curriculum (KMI) and the 2013 Curriculum. Educational Objectives at Tarbiyatul Mubtadiin Bekasi Boarding School which is to create students who have noble moral characteristics; disciplined, broad-minded, and '*arif billahi wa rasulihi*.

The implementation of education in Pondok Pesantren Tarbiyatul Mubtadiim is as follows: acceptance of new santri is carried out through two phase that receive all prospective new santri who has registered with various entrance tests for the benefit of Pesantren in the grouping of santri. The educational process used in this Pondok Pesantren is combining the salaf system (traditional) and the khalaf system (modern) which in the implementation of teaching, the salaf system with the study of Kitab Kuning guided by the kyai using teacher centered and the khalaf system with materials Ministry of Religion lessons combined with the Gontor book material by Islamic religious teachers. While in general learning at school, it uses a scientific approach that characterizes the implementation of the 2013 curriculum and the Ministry of Religion curriculum. Evaluations are carried out in Islamic boarding schools by testing students'

knowledge of the mastery of the book while in the implementation of evaluations in schools with a system of midterm and final semester exams.

Supporting factors in the implementation of Pondok Pesantren Tarbiyatul Mubtadiim is the presence of the role of Pondok Pesantren Gontor's graduates who will provide innovation and maintain the direction of education that is inseparable from the role of government assistance, and the inhibiting factor is that there are still many students who have not been able to follow some dominant Arabic language lessons, there are still some students who violate the regulations of the cottage, and the lack of solidarity of the community around the cottage in supporting the existing boarding school program.

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Undang undang Nomor 18 Tahun 2019 tentang Pondok Pesantren.

IMPLEMENTATION OF KIRKPATRICK MODEL EVALUATION IN AGRICULTURAL YOUTH ENTREPRENEUR GROWTH PROGRAM AT SMK PPN LEMBANG

Qonitah Aliyah, qonitahaliyah@gmail.com
Sri Handayani, srihandayani@upi.edu
Shinta Maharani, shinta.maharani@upi.edu
Agroindustrial Technology of Education, Faculty of Technology and Vocational Education, University of Indonesian Education

ABSTRACT

In the era of global competition that is sweeping the world today, the existence of entrepreneurship subjects in vocational education is very important. To equip students to be able to manage independent businesses not only requires mastery of knowledge but also changes in attitude and adequate entrepreneurial skills. The Agricultural Youth Entrepreneur Growth Program (*Penumbuhan Wirausahawan Muda Pertanian* - PWMP) is a training program carried out by the Ministry of Agriculture to realize farmers' regeneration that is designed for awareness, growth, development, and independence of the interests, skills, and entrepreneurial spirit of the younger generation in agriculture. This study aims to evaluate the PWMP program at SMK PPN Lembang using the Kirkpatrick model evaluation with 2 levels of evaluation, namely: level 1 - Reaction and level 2 - Learning. Level 1 evaluation aims to measure the level of satisfaction of participants with the organization of the program. Whereas level 2 evaluation aims to measure the participant's understanding of program material. This research was conducted on alumni of PWMP and PWMP advisors. The results showed that the results of the PWMP program at SMK PPN Lembang were included in the category of Success with level weights, level 1 - Reaction: 77.71% and level 2 - Learning: 76.25%.

Keyword: Entrepreneur, Kirkpatrick, Evaluation, PWMP

A. INTRODUCTION

Entrepreneurship education has become the most important thing for people who have the desire to pursue a career in business. Vocational Secondary Education is used as a comprehensive term that refers to aspects of the educational process that not only involve general education, but also involve learning about technology and related knowledge, practical skills, attitudes, and knowledge relating to the economic and social sector of life (Gamede & Uleanya, 2017). Academic interest in entrepreneurship is based on evidence of its contribution to economic growth, increasing social-productive networks, the dynamics of process innovation, and the creation of new jobs (Kantis, *et al.* 2002).

In Vocational High School, entrepreneurship is one of the subjects called *kewirausahaan*. In the era of global competition that is sweeping the world today, the existence of these subjects is very important. The general goal of learning entrepreneurship in vocational schools is to equip students to be able to live independently and to be able to create jobs that can generate income. Also, to equip students to be able to manage independent businesses not only requires mastery of knowledge but also changes in attitude and adequate entrepreneurial skills. Entrepreneurship subjects are presented at Vocational Schools with the intention that students have the knowledge and ability to manage independent businesses with professional business management (Sudarmiatin, 2009).

The Agricultural Youth Entrepreneur Growth Program (PWMP) is a training program carried out by the Ministry of Agriculture to realize farmers' regeneration that is designed for awareness, growth, development, and independence of the interests, skills, and entrepreneurial

spirit of the younger generation in agriculture. This training program aims to develop business opportunities for graduates so they are able to become job-creators in the agricultural sector (agribusiness) and encourage the growth and development of the capacity of agricultural education providers as a center of agripreneur development based on agribusiness innovation (BPPSDMP, 2018). SMK PPN Lembang is one of the schools that participate in the PWMP program.

The Agricultural Youth Entrepreneur Growth Program (PWMP) in SMK PPN Lembang has been running since 2016. This program is applicable for students majoring in ATPH (Food Crops and Horticulture Agribusiness) and APHP (Agribusiness of Agricultural Product Processing) at SMK PPN Lembang. Students who participate in this program will be provided training and venture funds which is expected to increase entrepreneurial interest and produce sustainable businesses. This series of PWMP program last for three years and has produced one batch of grads from SMK PPN Lembang.

The results of the program that have been done so that it can be in accordance with the desired goals can be known through evaluation. So that it can be seen how high the level of success of the planned activities. During its journey, the success of the Agricultural Youth Entrepreneur Growth program is unknown. Therefore a program evaluation is needed to find out the success of the program.

Unlike the system-based evaluation model whose scope is based on the whole program starting from the abstract aspects, processes, to the output of a program. The goal-based evaluation focuses on the success of a program's outcomes. The goal-based evaluation model is related to the achievement of all the goals and objectives that have been set. In Kirkpatrick's model, the evaluation was conducted through four levels, namely level 1 (reaction), level 2 (learning), level 3 (behavior), and level 4 (result).

This study aims to determine the results of the evaluation of the Agricultural Youth Entrepreneur Growth Program in SMK PPN Lembang in terms of the Kirkpatrick model evaluation level 1 (reaction) and level 2 (learning).

B. RESEARCH METHOD

This study is evaluative research conducted at the end of the program. The population in this study were 20 PWMP alumni in SMK PPN Lembang and 3 PWMP advisors in SMK PPN Lembang. Samples of alumni of the PWMP program at SMK PPN Lembang will take data using a questionnaire. While the sample of PWMP advisors in SMK PPN Lembang will be taken using interview data.

1. Instrument Validation

   The instrument validation is using the CVR (Content Validity Ratio) technique. Instrument validation will be carried out toward five validators. The selected validators were entrepreneurs in the field of training consultants, entrepreneurs in the field of food and beverage, Head of APHP Department in SMK PPN Lembang, the Committee of Bogor Agricultural University PWMP program, and linguist.

   The following CVR formula used in this analysis is as follows:

$$CVR = \frac{Mp - \frac{M}{2}}{\frac{M}{2}} = \frac{2Mp}{M} - 1$$

Mp = Number of experts who claim valid
M = Number of experts who validate

Giving value to the whole item using CVI. The CVI is simply the average of the CVR values for items that are answered yes:

$$CVI = \frac{jumlah\ CVR}{jumlah\ item}$$

The results of the calculation of CVR and CVI are in the form of numbers 0-1 the value categories are as follows:

Table 1. CVR and CVI Values Categories

Criteria	Information
0 – 0,33	Not Valid
0,34 – 1	Valid

Source: (Lawshe, 1975)

2. Data Analysis Results

Level 1, 2, 3, and 4 measurement data will be calculated using the weighting formula from Kirkpatrick. From the study of Rukmi, et al. (2009), the item weighting formula is as follows:

$$\text{Item Weights} = \frac{item\ score - i}{Highest\ score\ x\ Number\ of\ respondents}\ x\ 100\%$$

Item weight = Success rate
Item score = Score gained by all respondents
Highest score = The highest scale in the problem

To see the level of success of participants in implementing the program, three categories were used according to Ratnasari & Manaf (2015), namely:

Table 2. Succes Criteria of Program

No.	Item Weight	Level of Success
1.	> 66,7% – 100%	Successful
2.	> 33,3% – 66,7%	Less Successful
3.	0% – 33,3%	Not Successful

C. RESULT AND DISCUSSION

1. Level 1 – Reaction

Indicators measured in level 1 - Reaction are the level of participant satisfaction with the program. The quality of the process or implementation of a program can be measured through the level of participant satisfaction.

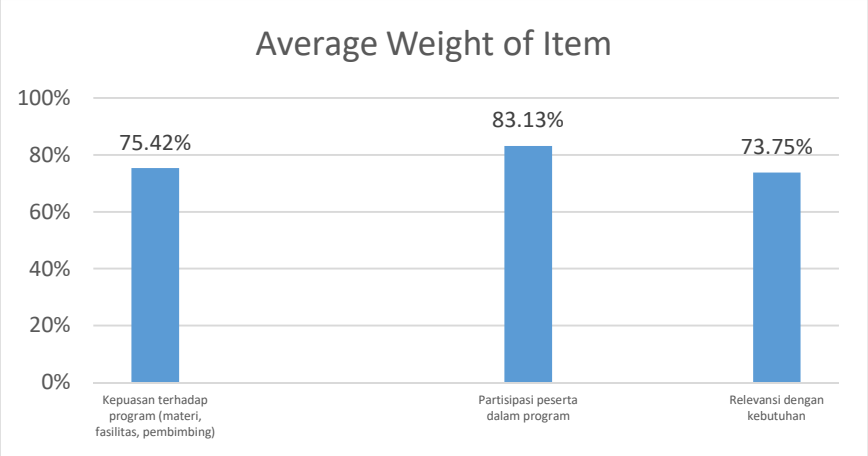

Figure 1. Level 1 - Reaction Questionnaire Result

Table 3. Level 1 - Reaction Interview Result

Indicator	Interview Result
Participation of participants in the program	In the beginning stages of the program, the participants participated fully in the program series. The participation of participants decreased at the stage of development and independence.
Relevance to needs	The school has no obligation in providing facilities, production land, and production facilities. At the stage of growth and development, the school provides lending for the facility, but at the independence stage, the school does not provide lending for the facility.

a. Satisfaction With The Program

The highest level of satisfaction of the PWMP participants was found in the participants' satisfaction with the material provided. According to the research of Rashid, et al., (2010), the success of a training program in improving knowledge, skills, and attitudes depends on the content of the training material. Also, research Siregar (2017) explained that the training methods also contribute to the achievement of the effectiveness of the training program.

Participants are satisfied with the support given by the advisors and the availability of mentoring time in guiding participants during program. This is in line with the results of the interview that the mentor always supports participants in the form of mental and scientific support during the production process. It was explained in Siregar's research (2017) that the advisors or trainer in the training who mastered the material well, supported the achievement of the effectiveness of the training program. Following research conducted by Haslinda & Mahyuddin (2009) which explains that a significant factor contributing to the effectiveness of training is the competency of trainers or mentors. Trainers who master the training program material are trainers who have broad insight and experience in carrying out work in their fields (Siregar, 2017). However, teachers who selected as advisors of the PWMP program are teachers from schools that have no experience in doing business.

Training program methods, training program materials, trainers or training program facilitators strongly support the course of the training program process. The program is considered effective if the training program is considered fun and

rewarding for the participants so that the participants are interested and motivated to learn and accept new knowledge (Siregar, 2017).

b. Participation in The Program

Indicators of participation in the program can be seen from the participation in a series of the selection process, Bimtek, preparation of quarter reports, and at the mentoring sessions. Described by Khodijah, et al. (2016), that participation in a training program is needed in the learning process because the principle of learning is learning by doing to change behavior, so participation is needed to achieve learning objectives.

Some participants did not participate in the whole program series until the end. That because at the independence stage there are participants who do not continue their business so that participants do not follow the entire program series. This is supported by the advisor's statement on the interview. At the stage of growth and development, participants are students of class XI and class XII. This helps the advisors to always provide support, both mental and scientific support. While at the independence stage, participants of the PWMP program have already graduated from school which makes it difficult for intensive communications between participants and advisors. This occurs in a lack of direct mental support from the advisors to the participants. Therefore some participants did not continue their business. As for some participants who chose to continue their education to the University level which caused the participants not be able to continue their business so that the participant's participation could not be declared 100% full participation.

c. Relevance to Needs

Indicators of relevance to needs are assessed from the relevance of the training components provided by the PWMP program to the needs of participants in their business. The training component provided by the PWMP program is a series of Bimtek where participants are given material and motivation about business, provides a series of internships where participants practice in the industry to give an overview of their business, and provide financial funding to run their business. The relevance of the training component is the suitability and compatibility of the relationship between the parts in the mental and physical processes carried out by students to achieve the objectives to be achieved (Dolong, 2016). Some participants felt that the series of PWMP programs did not suit the needs of their business. This can be because participants feel that the business material provided in the PWMP program is less effective in helping participants in doing business. The material provided in the PWMP program is only a theory in the classroom, lack of training in the form of practice. In Siregar's (2017) study explained that training methods contribute to achieving the effectiveness of training programs. Participants considered the nominal of funds provided was still insufficient, given the program that was run for three years. Based on the research of Setiarini (2013), business capital is an important foundation in building and even developing a business. Although in Supono's research (2011) it is said that capital in the form of money is not everything in building a business, according to Setiarini (2013), capital in business is needed by every company to finance its daily operational activities.

Relevance to the needs can also be seen from the participants' needs for supporting facilities. It was explained in the research of Elisa, et al., (2014) that

sufficient training facilities and places can support the implementation of training activities properly. It was also explained by Khurotin & Afrianty (2018) that facilities and infrastructure would hamper the process of implementing training activities if it was inadequate. There is no obligation for schools to provide facilities to the PWMP program. However schools open up opportunities so participants can borrow the tools needed from the school. At the stage of growth and development participants are allowed to borrow tools and land from the school. However some conditions must be fulfilled by PWMP participants who will borrow school equipment and land, that is complete administrative needs and the equipment and land borrowed is not currently being or will be used in teaching and learning activities. At the stage of independence, participants are not allowed to borrow tools and land from the school. This is because the participants are no longer a student so they do not have the rights to borrow from schools. Also at the stage of independence the participants are expected to be able to run their business independently without any assistance from the school

2. Level 2 – Learning

Indicators measured in Level 2 - Learning is the level of participants' understanding of the program material or the amount of reflection of program participants in a given material.

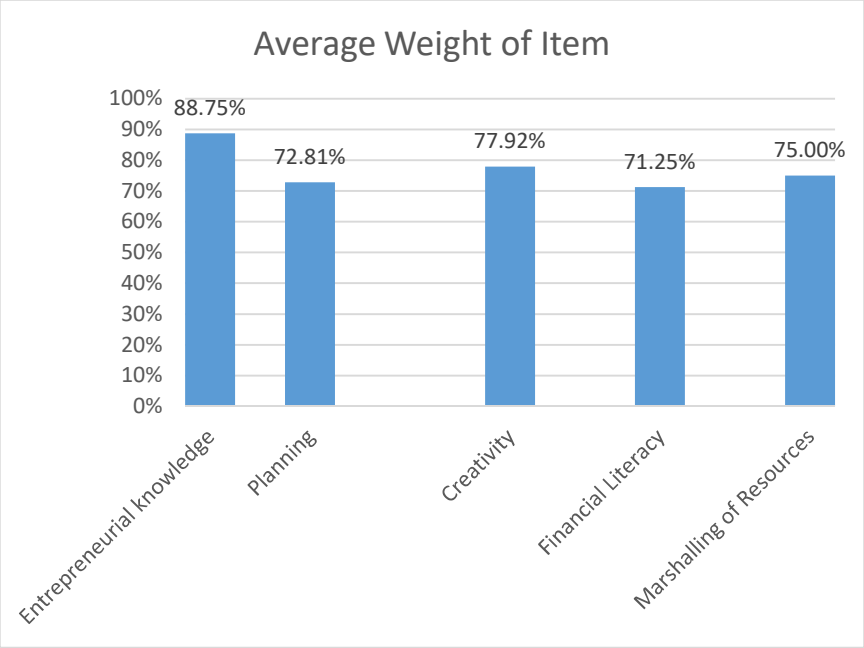

Figure 2. Level 2 - Learning Questionnaire Result

Table 4. Level 2 - Learning Interview Result

Indicator	Interview Result
Entrepreneurship knowledge	The selection of participants observed from cognitive in classes, evaluation in the field, and interviews. The series of internships have helped participants run their businesses. There is no assessment of the internship series.
Planning	Business plans are prepared in the form of reports. The business plan that has been prepared already covers the business needs that will be undertaken. There is no business goal in the business plan. There is no specific

	assignment structure given by the Ministry of Agriculture. Structure assignment made to adjust the type of business offered.
Financial literacy	Participants can draft well financially. The financial draft made by participants already include the necissity of doing business. There are shortcomings in financial reporting in the independence stage.
Marshaling resources	Networking and partnership have been built during the development and independence stage.

a. Entrepreneurial Knowledge

Indicators of entrepreneurial knowledge are assessed from general knowledge about doing business such as things needed in building a business and understanding that not all business ideas will be successful and accepted by the market (Tshikovhi & Shambare, 2015). Spady (2006) explained that general knowledge about doing business can help participants think structurally and realistically in building and running their business. Participants understand the needed to build and run a business. That is because participants build their business from the planning stage so that participants understand what needs to be prepared in building a business. Participants run their business to the stage of independence so participants understand the things needed in running their business.

The requirement to register as a PWMP participant is assessed from classroom activities on entrepreneurship subjects in class. The aspects assessed are the cognitive values of the participants in class and the skills of the participants on the field. Skills assessed in the field are project management skills for ATPH majors and skills in making products for APHP majors. Also, considered participants go through an interview process by the advisor to assess their determination and ambition to do business. The main assessment in the interview is to assess the character of considered participants to become entrepreneurs. In Jumaedi's research (2012), it is explained that self-confidence, risk-taking, and leadership are the three main characters of entrepreneur that affect business success. However, no special assessment sheet was carried out in the participant selection process. The internship series helped participants in learning the SOPs needed in their business. Also, the series of internships helped give an idea of the business that would be run by the participants. Therefore there is no assessment done on the internship series.

b. Planning

Planning indicators are assessed by understanding in creating business plans, defining business goals, and arranging group assignments (Moberg & Vestergard, 2014). Participants understand how and what steps that are required in starting a business and preparing a business plan. This understanding was formed from material that had previously been given in the Bimtek series. Also, participants developed a business plan from the initial idea formation so that participants understood the preparation of a business plan.

Some participants still have difficulty in preparing business plans, defining business goals, and arranging group assignments into the business. The business goals are not included in the business plan because participants are more focused on how to start their business compared to the goals to be achieved in the business. Singh, et al., (2015) explained that business goals are important in building a business. There are several aspects in formulating business goals; that is specific,

measurable, achievable, relevant, and time-bond (Garg & Shivam, 2017). Also, there is no particular arrangement regarding the group task structure so participants have to adjust the task structure to the type of business they are running.

Participants create a business plan in the form of a report. Yet according to Chandra's research (2016), business planning in the form of a business plan is ineffective because it requires a long time, the form of business could be change over time, and no one reads it. Before preparing a business plan, participants must decide the type of business that will be initiated, the products to be marketed, production needs, product trial by data, market research, financial plan, and arrange the structure of the task. The overall of business plan prepared by the participants had covered all needs in business. It's just that there are no business goals in the business plan. Business goals are important in building a business as a reminder of the participants' goals in building a business (Singh, et al., 2015). There is a more effective way of compiling business planning, namely using a business model canvas (Chandra, 2016). The business model canvas transforms a complicated business concept into a simple one that is presented on a single sheet of canvas containing nine key elements which include internal and external analysis of the company (Osterwalder & Pigneuer, 2012).

c. Creativity

The indicator of creativity is assessed from the participants' creative thinking and the things taught in the program about creativity. Some participants still have difficulty in improving the quality of the products. Participants are usually more focused on the development of monthly profits so they do not pay attention to the development of their products. Participants are taught how to think creatively in building their business during the Bimtek series. Also, participants can see opportunities through problems in running a business. This is a way of creative thinking where participants see a problem inclusively. According to Herviani, et al. (2019), inclusive thinking is the concept of seeing things from another perspective. This can lead participants to see opportunities through problems and think creatively.

According to Supardi (2012), creative thinking does not only require divergent thinking but the ability to understand problems and develop problem-solving plans. Creativity in the context of education or learning process can appear at any time and any place, therefore it needs to be trained so that it does not appear at any time, but this creativity occurs when faced with problems (Malaka, 2011). It can be concluded that creative thinking training is needed so that it can be used when needed.

d. Financial Literacy

Financial literacy indicators are assessed from participants' knowledge of the financial arrangements needed in doing business. Material regarding financial arrangements was given during the Bimtek series. Participants are expected to be able to read financial records, make financial plans, and manage finances in their business. This financial arrangement is important because participants' finances are obtained from the Ministry of Agriculture as funding capital assistance in their business. Also, participants are required to prepare a business plan in which there is a financial plan before starting a business. Anwar, et al. (2018) said that financial

knowledge in doing business is very important because it can be taken into consideration in making decisions and can make businesses financially stronger.

During the program, participants are required to make financial reports every three months as a form of monitoring from the Ministry of Agriculture of the participant's business. Participants are accustomed to making financial reports making it easier for participants to prepare and read financial reports. There are still participants who find it difficult to read financial records, create financial plans, and control finances. At the beginning of the production business requires more expense for the need for trial production of products and production equipment which is quite expensive. The participants were still confused in determining the scale of priorities in spending.

The financial design prepared by the participants includes the things needed in doing business. Although there is always happen unexpected things that are not included in the financial plan. At the stage of growth and development, participants prepare financial reports well because participants are always guided by the advisor. Business accounts that contain the amount of funding capital provided by the Ministry of Agriculture are held by the advisor so that the advisor can manage and monitor the participants' expenses. However at the stage of independence the ability of participants in managing finances decreased. There are many shortcomings in the financial reports such as the incompatibility of the amount of money held by the financial report and inadequate receipts attached to the financial reports. This is because the participants at the independence stage is no longer a student at school causing difficulties for the advisor in monitoring the participants' financial arrangements. Also, business accounts at the independence stage are fully held by the participants. This is because at the stage of independence participants are expected to be able to manage their finances independently.

e. Marshaling Resources

The marshaling of resources indicator is assessed from the ability of participants to build networks and partnerships with other businesses. In the Bimtek series, participants were given material on how to build networks and partnerships needed in developing their business. Explained by Moberg & Vestergard (2014) that the ability of marshaling of resources is seen by many researchers as the essence of entrepreneurship and this process often focuses on the role played in social aspects.

Based on the PWMP Business Idea Preparation module, participants were given material about networking in business during the Bimtek series. However the learning on Bimtek series done by just a theory. Meanwhile, according to Moberg & Vestergard (2014), networking skills in business are non-cognitive skills because they require practice and direct experience to learn.

D. CONCLUSION

Based on research that has been done on The Agricultural Youth Entrepreneur Growth Program (PWMP) in SMK PPN Lembang, obtained:

1. Level 1 – Reaction

The implementation of the PWMP program in SMK PPN Lembang in terms of level 1 - Reaction is included in the category of success with a weight of 77.71%. Overall the implementation of the PWMP program gave a positive reaction to the program.

Participants 'satisfaction with the program is assessed from the satisfaction with the material, the guide, and the relevance of the participants' needs.

2. Level 2 – Learning
   The implementation of the PWMP program at SMK PPN Lembang in terms of level 2 - Learning is included in the category of success with a weight of 76.25%. Overall the implementation of the PWMP program provides an increase in the knowledge and skills of participants in doing business. But there is still a shortfall in defining business goals, financial arrangements, and perform business ideas into reality.

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ANALYSIS OF CURRICULUM POLICY IMPLEMENTATION BASED ON THE ENVIRONMENT IN THE ADIWIYATA PROGRAM AT RAUDHATUL JANNAH HIGH SCHOOL CILEGON

Putri, Fenny Aulia, Viorennita Anggia, Mukhidin, Susilana Rudi
Curriculum Development Postgraduate Program
Universitas Pendidikan Indonesia
Email: fen.putri@gmail.com, anggiaviorennita@upi.edu, mukhidin@upi.edu, rudi_susilana@upi.edu

Abstract: The objectives of the study are to explain about: 1) the implementation of the policy of living environment-based curriculum in Adiwiyata program; 2) the supporting and inhibiting factors in the implementation of the policy of living environment-based curriculum in Adiwiyata program; 3) the solution in facing the barriers towards the implementation of the policy of living environment-based curriculum in Adiwiyata program.The approach used in this study was descriptive qualitative and the results of this study are: 1) the implementation of the policy living environment-based curriculum in Adiwiyata program at SMAIT Raudhatul Jannah Cilegon is stipulated in the decision letter of principal about the development of environmental learning materials and integrated into the instructional design of each learning in grades 11 through 12; 2) supporting and inhibiting factors in implementing the policy of living environment-based curriculum in Adiwiyata program include from teachers, students, and facilities and infrastructures; 3) the solution in facing the obstacles towards the implementation of the policy of living environment-based curriculum in Adiwiyata program at SMAIT Raudhatul Jannah Cilegon by carrying out several programs.

Keywords: *curriculum implementation, adiwiyata program*.

A. INTRODUCTIONS

Entering the 21st century, environmental care is increasingly being carried out in every corner of the world, precisely the era of environmental restoration based on love for the earth and all life in it. In addition, the intense industry-based development in all sectors has replaced land that should be used for environmental interests and sustainability. Environmental education is one important factor to minimize environmental damage. Environmental education is carried out as an effort to increase public understanding and concern in finding solutions and preventing the emergence of environmental problems. According to Sumardi (2007) environmental education will not change the situation and condition of the damaged environment to be good in a short time, but instead requires time, process, and resources. On this basis, environmental education must be sought as early as possible in order to minimize environmental damage. Therefore it is necessary to raise public awareness of the concern for environmental sustainability, instill community understanding of the problem, foster a sense of participation in maintaining the natural resources around to keep it looking beautiful and healthy.

Various studies and studies are believed that the high increase in community needs has led to many exploitative community behaviors towards meeting the needs of natural resources. These behavioral tendencies can in fact cause a very rapid decline in the quantity and quality of Natural Resources (SDA) in Indonesia. Human quality becomes a central issue and has an important role in efforts to save natural resources (KNLH, 2010). With better environmental knowledge, it is expected that all elements of the community are aware to participate in carrying out efforts to save and preserve the environment. The condition is certainly a very important thing and must be resolved by the nation and state.

Responding to these problems, the State Ministry of Environment in 2006 launched the Adiwiyata Program, a program that aims to encourage and shape schools in Indonesia so that

they can take part in implementing government efforts towards environmental protection and sustainable development for the interests of present and future generations. come.

The State Minister of Environment entered into a joint agreement on environmental development and development with the Minister of National Education as outlined in Decree Number: Kep.07 / MENLH / 06/2005 and Number: 05 / VI / KB / 2005 which in 2010 was intended for Heads District and City Education Offices throughout Indonesia, whose contents outline on the call for environmental education (PLH) to be implemented in schools from elementary to high school level by integrating environmental material into curricular and extra-curricular activities to realize environmental-cultured schools. The curriculum is seen as an important and strategic part in improving the quality of education. The curriculum aims to lay the foundation of intelligence, knowledge, noble moral personality, and independent life skills and follow further education.

Raudhatul jannah High School Cilegon is one of the schools implementing the environmental education curriculum. Submission of environmental material to students is done through a varied learning curriculum, carried out to provide understanding to students about the environment associated with everyday problems.

Thus seen several things that must be achieved include; 1) maximizing the management and or development of supporting facilities both inside and outside the school area; 2) improving the quality of healthy food services and reducing the consumption of plastic waste; 3) development of waste management systems; 4) development of curricular activities to increase students' knowledge and awareness about the environment; 5) manage the use of electricity that is not excessive, 6) participate in environmental action activities carried out by outsiders; 7) building partnership activities or initiating the development of environmental education in schools. In addition, the school is also expected to involve the surrounding community in carrying out various activities that benefit both the school community, the community and the environment in the development of participatory-based learning activities.

According to the Adiwiyata guidebook (2010: 15) the development of an environment-based curriculum is the second indicator of the Adiwiyata program assessment. The indicators for developing an environment-based curriculum must develop four criteria, namely: 1) the development of cross-subject learning models; 2) excavation and development of materials and environmental issues that exist in the surrounding community; 3) development of learning methods based on environment and culture, , and 4) development of curricular activities to increase and increase student awareness about the environment.

The approach used in this study is a qualitative approach, in this study will look at the implementation of curriculum policies based on the environment in an effort to realize a school of environmental care and culture in SMAIT Raudhatul Jannah. This study explains the efforts of schools in terms of carrying out environmental cultured policies, what supporting factors cause the program to run, and cannot be separated from the obstacles encountered. Furthermore, finding solutions in overcoming obstacles that occur for the success of the achievement of schools that care and have environmental culture.

The research location was carried out at Raudhatul Jannah High School Cilegon. This school received an award from the city Adiwiyata program in 2018, and headed for the provincial level Adiwiyata school in the 2019/2020 school year.

B. DISCUSSION

Schools in implementing curriculum policies based on the environment determine several policies as a strong legal umbrella in running school programs that are environmentally friendly and cultured. Schools determine the policy based on indicators determined in the Adiwiyata program by the State Ministry of Environment.

1. Implementation of Environmental Based Curriculum Policy

Schools in determining policy involve several parties. The policy regarding the Adiwiyata program is contained in the Decree of the State Ministry of the Environment which is then disseminated to schools in an effort to realize schools so that they care and have environmental culture. Decree Number: Kep.07 / MENLH / 06/2005 and Number: 05 / VI / KB / 2005 which in 2010 was intended for Heads of District and City Education Offices throughout Indonesia, the contents of which outline an appeal for Environmental Education (PLH) is implemented in schools from elementary to high school level by integrating environmental material into curricular and extra-curricular activities to realize environmental-educated schools. From the Ministerial Decree, the school made a policy as stipulated in the Decree of the Head Maaster of SMAIT Raudhatul Jannah Cilegon Number: 421/105 / 35.73.307.05 / 2008, December 24, 2008, concerning the development of environmental materials in teaching and learning activities in the 2008/2009 school year. The Decree explains that the development of environmental learning materials is applied in learning activities in the classroom and outside the classroom. Furthermore, the implementation of teaching and learning activities in a monolithic manner with environmental material for the whole starting from 10^{th} to 12^{th} grade.

The Principal's Policy applied at the school has already been enacted. The policies outlined are set out in a number of policy provisions which include environmental and cultural school policies, curriculum development policies based on the environment contained in KTSP, budget policies to allocate related activities, and policies regarding adequate infrastructure facilities to support the implementation of the education curriculum the environment at school. It was also conveyed that in forming the policy, it involved several parties, both from the main schools, teachers, deputy principals, curriculum sections, and school committees. Furthermore, so that the implementation can be accepted by all parties, socialization is carried out to all parties in the school.

Based on the informant's opinion that the environmental policy in the school has been stated in the decree and applied in each subject during the learning process. Until now the Adiwiyata program in the school is running, PLH material has become monolithic. Likewise with the vision and mission that have been adjusted towards environmental care which is in accordance with the opinions of the informants which are also reinforced by the opinions of other informants. The vision and mission are also displayed on the wall so that it can be known by all school residents.

2. Support for the Implementation of Environmental Curriculum Policy

School support in order to realize environmental preservation, the involvement of all components of society is absolutely necessary. To realize a school that cares and is cultured in the environment, school members need to be involved in a variety of environmental learning activities. Besides that, the school is also expected to involve the surrounding community in carrying out various activities that benefit both the school community, the community and the environment. Meanwhile, through observations and documentation conducted by researchers present pictures of the condition of the school, mainly canteen facilities only sell food or drinks that are free of plastic packaging, then in the canteen food sold must be free of preservatives. This is becoming more of a concern in the school to support and encourage students to care and be cultured in the environment in schools according to the policies made.

Facilities in the form of a healthy and clean school canteen, applying an environmental culture that is by selling foods that are healthy, clean, and free of preservatives, dyes, and similar adiftive materials. In addition, the School implements plastic free twigs and straws,

with the aim that students at the school are accustomed to paying attention early on to consuming healthy and clean food, mainly free of preservatives, and accustomed to using one-time alternative plastic.

From the results of the interview, it gives an illustration that school support in the context of realizing schools that are environmentally friendly and cultured uses ways to include; Formation of a forum that involves students and teachers every Friday holding a joint cleaning activity. Furthermore, the guardians of students bring food prepared from home with the provisions free of preservatives, dyes and the like. this is a form of support for the school's concern for healthy and clean culture. Not only that, hygiene which was previously the responsibility of the janitor at the school, also became lighter because of the cooperation to be aware of each other to maintain and maintain cleanliness at the school.

The school formed a nature-loving organization called Radix, which means root. With their appointment as ambassadors for the school environment, they have a mission to invite other students to always try to maintain the cleanliness of the school environment. In addition, in the Adiwiyata school management standard at the high school level, the responsibility of implementing the program involves students, and the Radix organization is responsible for several of these programs, including the greening, cleaning and plastic waste reduction programs, waste management, and school garden maintenance.

3. Obstacles to the Implementation of Environmental Curriculum Policies

The implementation of environment-based curriculum policies in the Adiwiyata Mandiri program in Dinoyo Malang State Elementary School often faces various problems which are not minor. Therefore schools must be able to respond by overcoming problems that might hamper the course of the policy being implemented. There are several factors that can hinder the implementation of policies for implementing an environment-based curriculum in the school, including;

4. Teacher

Teachers in teaching appear to lack variation in developing environmental subject matter, so that their delivery to students is still incomprehensible, and teachers are less able to provide the delivery of material with new things that can be related to the environment around the school.

5. Students

Students are the subject of education that are the nation's next generation. The difference in the pattern of education brought by children from the family environment and the heterogeneity of the characters of each individual child is an obstacle to efforts to increase the social development of students, so this greatly affects the social development of students. It is seen that every change of the new school year students who enter this school will get environmental study material, this becomes something new for students, especially class 10^{th}, therefore it requires habituation in the reception of environmental material being taught.

6. Facilities and infrastructure

There are many adequate facilities available at this school as learning material to support environmental materials. Lack of attention and intense care caused some of the existing facilities to gradually break down. Several bins of government contributions that were initially good seemed untreated placed in a corner of the school building. So re-procurement is needed, and more attention is an effort to raise awareness of maintaining together with adequate facilities in schools that need to be reiterated.

7. Solution in Overcoming Obstacles to the Implementation of Environmental Curriculum Policy

To minimize the obstacles that occur, the school provides a strategic solution to overcome the problems found in the school. In the interview passage one of the teachers explained that the strategy for overcoming the obstacles was as follows:

a. Development of environmental education
   This is a routine activity carried out by the school every semester, the environmental curriculum policy at this school is always considered to be sought for rejuvenation to be in accordance with environmental issues that occur around. So that teachers in mastering environmental learning materials can be prepared at any time in providing material to their students.
b. Instilling Care and Environmental Cultivation
   The teacher regularly reminds students of the importance of caring for the environment and being able to maintain sustainability and cleanliness.
c. Optimizing LH Learning Support Facilities
   optimize supporting facilities to make the learning atmosphere at the school feel alive. The nuances of healthy, clean, beautiful, and decorated in green in each building and its ornaments add to the impression of life and conducive.
d. Actively Participate in Environmental Action Activities
   The school holds an agenda once a year, to mingle outside by inviting the surrounding community to care about environmental sustainability. By means of campaigns about environmental care and maintaining environmental beauty. This can be done when determined by the moment of the earth's day which is usually commemorated in October.
e. Creating a Student Cadre of Environmental Envoys
   The school prepares its student cadres in a year to produce environmental ambassadors who are made proud of and can be used as role models for other students to always be able to get used to caring and cultured behavior towards the environment.
f. Maximum and Composting Waste Management
   The school is very concerned with the waste problem. Waste sorting is really carefully chosen. Divide waste into 2 criteria, namely organic waste and inorganic waste.
g. Establish a School Environment Concern Class Forum
   The school environment committee has a role as: 1) the guarantor of all school members (including students) feels represented to make decisions in the program implementation process, 2) to encourage all school members to care about the existence of the program, 3) ensure that the program is supported by school management, and 4) as a medium to connect or involve communities outside the school in running the program.

8. Make an Environmental Mission

The mission of the school environment is a clear statement of the expectations or commitment of the school to improve the quality of the school environment and the creation of a culture of caring for the environment. In making school environment missions the participation of students is very important because by involving students in making environmental missions will increase motivation and responsibility to realize what is contained in the school environment mission.

C. Conclusions

The implementation of the environmental education curriculum policy in the Adiwiyata Mandiri program at SMA Raudhatul jannah Cilegon runs in accordance with the policy provisions as outlined in the Principal's Decree, so that in its implementation there is a strong

legal umbrella and provides commitment and joint consequences for the achievement of a school of care and cultured environment.

Support that always gives influence for the progress of teaching and learning in this school comes from various parties. Mainly on the school side, teachers make optimal efforts to always pay attention to their students by instilling in themselves students to be aware of caring and cultured environment in the school. In addition, teachers take the initiative to develop themselves with many efforts to carry out activities outside of school to attend training related to environmental discourse which can then be conveyed to their students in adding new discourse about the environment. Support was also provided through the collaboration of schools with the local Environmental Service in the form of infrastructure contributions, namely environmentally friendly landfills. Meanwhile, the obstacles that exist both from students who look less optimal in caring behavior and environmental culture, so teachers must continue to pay attention with patience, then the participation of the community outside the school has not been able to play an active role to work together towards the vision and mission of the school.

Schools provide solutions in dealing with obstacles by creating several program activities. The purpose of this activity program is to increase the strengthening of the quality of human resources, especially school residents, in implementing policies on caring and cultured environment. This school program in addition to overcoming existing obstacles, is also a strategic program that can be used as a value benefit for long-term programs and for the sustainability of the quality of the school in carrying out the vision and mission of a school that is environmentally friendly and cultured.

1. Suggestion

The schools are more intense and work together in carrying out the vision and mission of the school, so as to create conditions in schools that have awareness of caring and cultured environment, that is by giving attention to students if there is a violation in maintaining school conditions, then given a warning or if needed sanctions so that students can form a responsibility and be aware of always creating a school of environmental care and culture. Conversely the teacher is also committed in this regard, if the teacher violates the rules set, must be sportsmanlike and remind each other not to take actions that make the cause known by their students. So there is an example of a model that is continuously used as an example of their students.

The school always has a good collaboration, especially the community outside the school and also related institutions which include environmental services, and non-governmental organizations that play a role in caring for the environment. So that support continues to flow from the community, both materially and morally, for the progress and value of the school's benefits in maintaining the school's achievements as a caring and cultured Adiwiyata Mandiri school.

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THE IMPORTANT ROLE OF SELF CONCEPT FOR CRITICAL THINKING SKILL

Mecy Agusmin[1], Arwin Arianto[2], Husnul Khotimah[3]
Students, School of Postgraduate Studies, Indonesian University of Education, Bandung, Indonesia[123]
mecy.agusmin@upi.edu, arwingere@upi.edu, husnulkhotimah@upi.edu

ABSTRACT

Learning in the process will go through the stage of thinking. Stages of thinking can be developed into high-level thinking, one of which is critical thinking. Critical thinking skill is an ability that must be mastered in the 21st century. Critical thinking skill can help students in analyzing problems, making arguments, evaluating and conveying conclusions. If students have good critical thinking skills, they will certainly be able to help students answer the tests or questions raised by the teacher so that the learning outcomes received by students will be better. The self concept have an important role in increasing critical thinking, because critical thinking is closely related to the process of self-recognition, self-confidence, and self-identity that is owned by each student. This research method is a research with literature study. In this study, it was found that positive student self-concepts were able to have a role in increasing students' thinking skill. Suggestions from this study, so students can recognize and understand their concepts in order to improve critical thinking skill better.

Keywords: *Critical Thinking Skill, Self Concept*

1. INTRODUCTION

The learning process in the 21st century is learning that aims to produce people who have critical thinking and problem solving skills, as well as information and communication skills (Schrum, Davis, Lund, & Jacobsen, 2015). Thinking begins with physical or psychological discomfort that comes from a lack of problem solving whose solution becomes the goal for an individual (Şendağ & Ferhan Odabaşı, 2009). Development of students' ability to work together in solving problems becomes an important factor in education (Gotoh, 2016). The quality of students' thinking determines their abilities in learning activities (Adair & Jaeger, 2016).

Bloom's Taxonomy proposes six categories of learning basic knowledge, secondary understanding, application, analysis, synthesis and evaluation, where the first two categories do not require critical thinking, but four categories require higher-level thinking that characterizes critical thinking (Adair & Jaeger, 2016) . Critical thinking can improve cognitive and student participation in social science lessons (Kahveci & Atalay, 2015). Students' cognitive abilities are the ultimate goal of critical thinking (Samson, 2016), collaborated with the discussion method of critical thinking skills that can improve the analysis of topics raised in learning activities (Karabulut, 2012).

Critical thinking develops ways of thinking in the reasoning process of students facing social problems (Lim, 2015). Critical thinking influences students to solve problems faced (Dileklii, 2017). Critical thinking can also be used in decision making, determining choices and studying various choices (Murawski et al., 2012). Someone who thinks critically will make better decisions and judgments in more complex situations (Gambrill, 2006).

The concept of critical thinking skills was introduced by two experts, namely (Glaser, 1941) and (Ennis, 1985), (Ennis, 1993). Discussion of critical thinking skills is still a main

ingredient in research experts in education (Lim, 2015; Aybek & Aslan, 2016; Marin & Pava, 2017). Developed countries and developing countries make some changes in the field of education to support critical thinking skills (Aybek & Aslan, 2016). The development of technology, the choice of methods and learning models also affect students' critical thinking (Karabulut, 2012).

Research on critical thinking skills is carried out in various fields of social education (Samson, 2016), curriculum effectiveness in social studies education (Kahveci & Atalay, 2015), problem solving in learning (Gotoh, 2016); (Adair & Jaeger, 2016), and learning styles (Dileklii, 2017). Although critical thinking does not guarantee better living conditions for students, knowing critical thinking enables them to make more accurate decisions affecting the future (Dileklii, 2017).

Higgins expressed self-concept (self concept) can stabilize attitudes and behavior, then the core aspects of self-concept (one's self-scheme) may be relatively unresponsive to changes in one's social circumstances because of their interests in determining themselves and their broad elaboration, they may can access themselves well (Markus & Wurf, 1987). Physical self-concept is usually related to appearance, whereas psychological self-image is based on thoughts, feelings, and emotions (Hurlock & Jansing, 1934). Research on self-concept has been done a lot, and states that there is an influence of self-concept on student behavior (Guskey, 1988), self-motivation and leadership (Shimir, Robert j, & Arthur, 1993), thinking ability and self-assessment (Song & Hattie, 1985).

2. RESEARCH METHODOLOGY

The method in this research is based on literature study, which is collecting data and information from scientific journals, books, and research results. The data obtained were then analyzed using a scientific theoretical approach (literature review) by combining several theories about self-concept and critical thinking skills as well as other relevant theories.

3. RESULT AND DISCUSSION

3.1 *Critical Thinking*

Critical thinking was stated by Glaser (1941) in his article An Experiment in the Development of Critical Thinking (Adair & Jaeger, 2016). Gleser states that the ability to think critically is: (1) the attitude of inquiry which involves the ability to acknowledge the existence and acceptance of the general need for evidence in what confirms to be true; (2) knowledge of the nature of valid conclusions, abstractions and generalizations that weigh accuracy with various types of evidence logically and (3) skills in using and applying attitudes and knowledge (Miri, David, & Uri, 2007).

The concept of critical thinking ability is based on Piaget's (1970) constructivist learning theory. Piaget's constructivist perspective is based on radical constructivism, with a focus on individual cognitive processes combining with social interaction. Piaget (1970) no longer needs to choose between social excellence or intelligence over collective intelligence is social

equilibrium resulting from mutual influence and all group cooperation. Constructivism learning theory according to Vygotsky is based on three main ideas: (1) that intellectuals develop when individuals face new ideas and find it difficult to link these ideas with what they already know; (2) that interactions with others enrich intellectual development; (3) the teacher's main role is to act as an aide and mediator of student learning (Jonathan rh, 1993).

Robert H.Ennis in his article entitled A Logical Basis for Measuring Critical Thinking Skills (1985) and Critical thinking assessment (1993). According to (Ennis, 1985) critical thinking is reasonable and reflective thinking focuses on deciding what to believe or what to do. Critical thinking is an intellectual process in conceptualizing, applying, analyzing, synthesizing, and or evaluating various information obtained from observations, experiences, reflections, where the results of this process are used as a basis for taking action (Walker, Paul & Finney, 1999). Critical thinking is the process of analyzing or evaluating information about a problem based on logical thinking to determine decisions (Yanti Rakhmawati, Muh. Chamdani, 2013). The ability to think critically is defined as a set of skills and dispositions that enable a person to solve problems logically and try to reflect independently by way of metacognitive regulation in the problem solving process itself (Gotoh, 2016).

The role of critical thinking skills (Santos, 2017) is first to facilitate the process of research, observation, exploration. Second, it helps to identify and define scientific problems. Third, find the right solution for the problem. Fourth, able to help the decision making process. Fourth, sources of information, criticism, critical questions, question formulation. Fifth, reliable construction of knowledge. Sixth, the source of ideas for argumentation-defense, discussion and debate. Seventh, able to evaluate, be careful and rigorous testing. Eighth, able to reject or accept a hypothesis. Ninth, solving, clarifying differences and concluding true statements. Tenth able to clarify the meaning. The difference occurs in some of the opinions above, but in essence the same is to reveal if critical thinking is the process of understanding in learning by analyzing information or problems and determining the decision as a way out.

3.2 *Self-Concept*

The concept of self based on humanistic theory is the core of individual experience that is slowly distinguished and symbolized as a shadow of the self that says "what and who I really am" and "what I really should do". Humanistic theory according to Maslow (1965) is a learning process in humans are the process through which to actualize themselves and learning is the process of understanding as well as understanding who the self is, how oneself is, until what potential exists in the self to be developed in a certain direction (Schott, 1992).

The concept of self as a permanent inner awareness, regarding experiences that relate to me and distinguish me from non-me (Rogers, 1985). Self-concept is the concept of someone from whom and what he is. This concept is a mirror image, determined in large part by the roles and relationships with others, and what other people's reactions to it might be. Self-concept includes physical and psychological self-image. Physical self-image is usually related to

appearance, whereas psychological self-image is based on thoughts, feelings, and emotions (Hurlock & Jansing, 1934).

The definition of self-concept according to (Song & Hattie, 1985) self-concept consists of academic and non-academic self-concepts. Furthermore, non-academic self-concepts can be divided into social self-concepts and self-appearance. (Song & Hattie, 1985) general self-concepts can be divided into academic self-concepts, social self-concepts, and self-appearance. Further division can be made at the bottom of the hierarchy. For example the ability of self-concept can be divided into subject-specific self-concepts.

The concept of self consists of several components (Hurlock, 1974), namely first, perceptual or physical self-concept, a person's image of his appearance (the attractiveness of his body or body), such as: beauty, beauty or the beauty of his body. This component is characterized by how students perceive themselves based on their physical characteristics with students accepting or not part of their body, feelings or impressions of others about their appearance. Second, conceptual or psychological self-concept, this concept is about how students perceive themselves about someone about their abilities (weaknesses), and their future, and includes the quality of their life adjustments: honesty, self-confidence, independence, and courage. This concept is characterized by how students perceive themselves of quality in living adjustments. Third, attitudinal, this component is related to how students feel about themselves, their attitude towards their existence, their attitude towards their present and future existence, their attitude towards worth, pride and humiliation.

A person's self-concept can be seen through one's assessment of him (Berzonsky, 2004) including: (1) physical aspects, a person's evaluation of everything owned by his body, clothing, and objects, (2) aspects of social self, social roles played by individuals and the extent to which an individual's assessment of his appearance, (3) aspects of moral self, namely the values and principles that give meaning to life, and (4) aspects of psychic self, namely thoughts, feelings, and attitudes of individuals towards him .

Therefore, in principle self-concept is the way a person views himself from various physical, psychological, academic, non-academic aspects which are shown by various other people's responses to that person.

3.3 *The Important Role of Self-Concept For Students' Critical Thinking Skill*

Critical thinking includes the process of constructivist analysis to examine what is happening in the environment can be used to find solutions to problems, take action towards goals, make decisions and conduct retrospective evaluations (Şendağ & Ferhan Odabaşı, 2009). Critical thinking as a set of skills and dispositions that allows one to solve problems logically and try to reflect independently by way of metacognitive regulation on the problem solving process itself (Gotoh, 2016). Developing critical thinking skills can achieve two successes in life, academic and work. Using this critical thinking ability, students tend to broaden the perspective from which they see the world and enhance their ability to navigate important decisions in their lives (Jacob, 2004).

The information processing approach focuses on the characteristics of students, including not only self-confidence, but also such as self-concept and self-efficacy, but also beliefs about the nature of intelligence, knowledge, and motivation (Pajares, 1992). Many self-concepts in individuals, and nevertheless will always vary depending on individual motivational circumstances or on prevailing social conditions, so that self-concepts work on core concepts embedded in the context of more tentative self-concepts related to the prevailing situation (Markus & Wurf, 1987).

The concept of self will affect the behavior that will be done, then the perception of others about someone will become a standard for that person in assessing his own personality (Mussen & Conger, 1956). The concept of self according to (Hurlock & Jansing, 1934) is based on body shape factors, disability, clothing, names or nicknames, intelligence intelligence, level of aspiration or ideals, emotions, type and prestige of the school, social status, family economy, friends- friends, and influential figures or people.

Positive self-concept will be a determinant of one's success in achieving success, children will have mental readiness to learn, be more obedient in overcoming difficulties and be able to reach higher levels of achievement, have high motivation in developing their potential (Agustriana, 2013). Negative self-concept is assumed as an individual's negative judgment, such as looking down on oneself, disrespecting oneself, even hating and having difficulty accepting the condition of the individual's self (Burns, 1993).

Self-concept has a positive effect on students' critical thinking skills (Setiawan, 2016) and (Barus, Restuati, & Gultom, 2017). Educational psychologists also revealed that there is a positive relationship between self-concept and an increase in students' learning potential both increasing the ability of thought processes, intelligence and behavior that lead to an increase in student learning achievement at school (Desmita, 2012). Positive self-concept will be able to make individuals think critically, meta-cognitive thinking, a combination of reflection and reason leading to the last element, belief in the validity of the premise, process or solution to the problem, which can also lead to action, critical thinking develops conclusions by concluding or concluding answers to question and then reflect on the quality of reasoning; the end result is action, based on these conclusions (Ralston & Bays, 2015).

4. CONCLUSION

The concept of self can improve critical thinking because thinking is closely related to the process of self-recognition, self-confidence, and self-identity that is owned by each student. Teachers can maximize themselves to recognize students' self-concepts by motivating, advising, supporting students to be able to improve students' positive self-concepts so that it also impacts on students' critical thinking skills, which are marked by students being able to analyze problems, make arguments, evaluate and convey conclusions.

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DEVELOPING TEACHING MATERIALS BASED ON AUGMENTED REALITY ON GEOGRAPHY LEARNING

Maya Yulinda, Enok Maryani, Epon Ningrum

Universitas Pendidikan Indonesia, Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia Telp. +62-22-2013161
Universitas Pendidikan Indonesia, Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia Telp. +62-22-2013161
Universitas Pendidikan Indonesia, Jl. Dr. Setiabudhi No. 229 Bandung 40154 Jawa Barat – Indonesia Telp. +62-22-2013161

ABSTRACT

The importance of educational innovation in the development of technology 4.0 currently requires educational institutions ranging from schools to tertiary institutions to take part in it. Technology is very much needed in producing better education, one of which is innovation in learning. Class theory learning accompanied by lecture method (conventional) as a bridge of knowledge with daily life needs an innovation, this is because learning lecture method (conventional) has been felt like an additional burden for students because the methods used tend to be monotonous. Augmented Reality is designed to help students interact with their learning resources directly, thereby allowing the students to develop they are learning geography with fun. The research aims to develop Augmented Reality in geography learning on geological disaster mitigation material by looking at the steps of preparing Augmented Reality based learning resources**.** The research method used is a waterfall model that consists of the main stages of needs analysis, system design and software, system implementation and testing, and maintenance.The research results obtained are based on Augmented Reality learning resources along with the steps of preparing geological natural disaster mitigation learning resources. The contents of Augmented Reality are geological natural disaster mitigation material which is explained in 3D and also video. This research will continue at the evaluation level of online learning that can be done by teachers.

Keywords: Augmented Reality, geography learning, geological disaster mitigation

A. INTRODUCTION

The importance of educational innovation in the development of technology 4.0 currently requires educational institutions ranging from schools to tertiary institutions to take part in it. Technology is very much needed in producing better education, one of which is innovation in learning. Geography lessons are lessons that are considered not easy for most students (Graham, 2011). The lack of visualization learned in these geographical subjects and the vast scope of the material makes many of them uninterested in this subject. On the other hand, the development of technology in various fields such as information technology in the field of learning, with the presence of information technology, can help especially high school students (Senior High Schools) in learning geography subjects. In this case, the role of information technology is very large to provide data on information, especially hydrosphere. Learning resources are still using Geography textbooks. The learning source so far uses paper printed sheets of paper so that sometimes certain obstacles are felt by students such as the lack of practicality and lack of clarity about abstract geographical material in their explanation. The innovation that needs to be done is to apply information technology in answering students' complaints against learning geography, especially in explaining the material that must be clearly described. This study aims to develop Augmented Reality in geography subjects.

Augmented Reality is expected to make it easier for students to learn geography, especially about geographic material that is abstract and reduces paper waste that has been used. Based on these problems, a knowledge of the mitigation of geological natural disasters is indeed quite difficult to describe because it is a natural phenomenon that is difficult to see directly but can be felt when the disaster occurs by humans.

Also, the knowledge obtained sometimes causes boredom because the material provided is considered unattractive and monotonous. This one-way method gives rise to geography learning activities itself often done by the teacher, the position of students being passive listeners, and those who can only accept the lessons given are the only source of knowledge. This is what reduces the interest of the community to obtain knowledge that is very important for human life. AR is a technology that combines both 2D and 3D virtual objects into a real environment and then projects these virtual objects in real-time (Roedevan, 2014). Many fields are helped in AR technology such as medicine, entertainment, engineering, and the military. In this research, a learning resource based on Augmented Reality based on 3D Learning Media is expected to be able to be used by teachers and high school students in a mobile manner, providing an important experience in learning geography about geological natural disaster mitigation for life, and to facilitate understanding geology natural disaster mitigation learning such as covering how the process of earthquake, tsunami, landslide, and volcano erupts in the form of the process of visualizing 3D content in geography subjects.

B. MATERIAL AND METHOD

1. Method

The research method used is the waterfall model which consists of the main stages of needs analysis, system and software design, system implementation and testing, and maintenance.

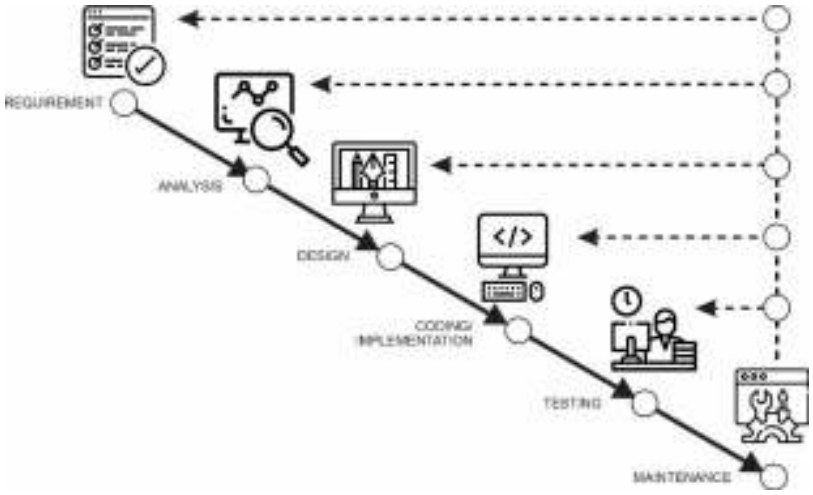


Image 1. Method of software development life cycle (SDLC) of the waterfall model.

2. Mitigation

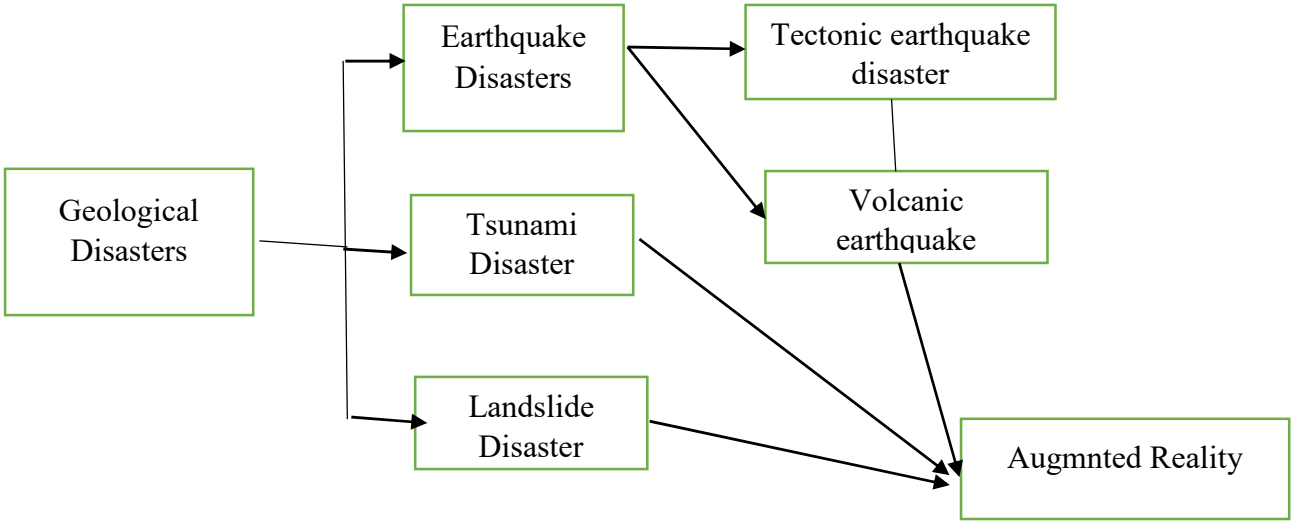
Utilizing Information Technology (IT) in the delivery of information has developed very rapidly, especially when the latest technology used to convey information, one of which is Augmented Reality (AR). According to Haryani and Triyono (2017, p.1) in AR technology, users can visualize objects or historical objects in a 3-dimensional form.

Meanwhile, according to Mustika et al (2015, p. 278), Augmented Reality (AR) is a natural way to explore 3D objects and data, AR is a concept of a blend of virtual reality with world reality. So that virtual objects 2 Dimensions (2D) or 3 Dimensions (3D) as if seen real and united with the real world. In AR technology, users can see the real world around them with the addition of virtual objects generated by the computer. By utilizing AR technology, the teaching material will be presented virtually with three-dimensional objects, which will display the parts of the hardware functions. Teaching aids using the Augmented Reality system are easier to understand than conventional teaching aids, through these aids students seem to be confronted with objects that are learned in real life so the teaching and learning process is more enjoyable, even the aids with the Augmented Reality system can help students to understand the material easily (Wahyudi, Wibawanto, and Hardyanto. 2017, p.2)

C. RESULTS AND DISCUSSION

1. AUGMENTED REALITY DESIGN

Identification of all the requirements of the augmented reality mobile application for 3D learning media in the mitigation of geological natural disasters. Needs analysis aims to analyze all the list of user needs clearly which will be the system features. Needs analysis that explains the steps for making Augmented Reality for teaching geography on geological natural disaster mitigation materials. Augmented Reality as a learning resource on geological disaster mitigation material. Augmented Reality will be described as the characteristics of geological disasters that will be depicted in 3D and animation. Geological disasters consist of earthquakes which are divided into two tectonic earthquakes and volcanic earthquakes, Tsunami geological disasters, and landslide geological disasters. Of the three geological disasters to make it easier to describe it will be explained by Augmented Reality media which will be depicted in 3D and anime. Chart of geological disaster mitigation that will use Augmented Reality media learning resources:



Geological Disaster Chart that will be made in the media Augmented Reality

2. Application Overview

In the augmented reality application for 3D learning media geological natural disaster mitigation is an application used to help facilitate users, especially class XI high school students where there are basic geography subjects in which there is mitigation of geological natural disasters. Users can use their Android smartphone to view 3D shapes and videos of geological natural disaster mitigation with AR, so users or students can better understand the explanations contained in 3D geological natural disaster mitigation along with related information videos.

a. Implementation and experimentations Figure 1 shows the algorithm process in designing the application. When starting the application, we will see Login. Then, username and password must be added for security. If the username and password do not match, the app will be back to Login menu. If login is successful, the camera will be activated. The camera will identify whether there are 2D and 3D pictures. If it is only 2D, errors will happen. When the software is downloaded, there will be information on application operational success (see Table 1). In this table, there will be six aspects. To indicate that the software is successfully downloaded and is able to be operated, there will be “confirm” and “check-list” columns. This first aspect is related to installation process to Android-based smartphones. The second aspect is related to whether the application can run well or not. The third one is notifications telling if usernames and passwords are correct and also the LOGIN form. The fourth step is camera testing to detect markers. The fifth step is testing video players to identify audio and video files. The last step is testing the Play, Pause, Exit, and Stop in video players.

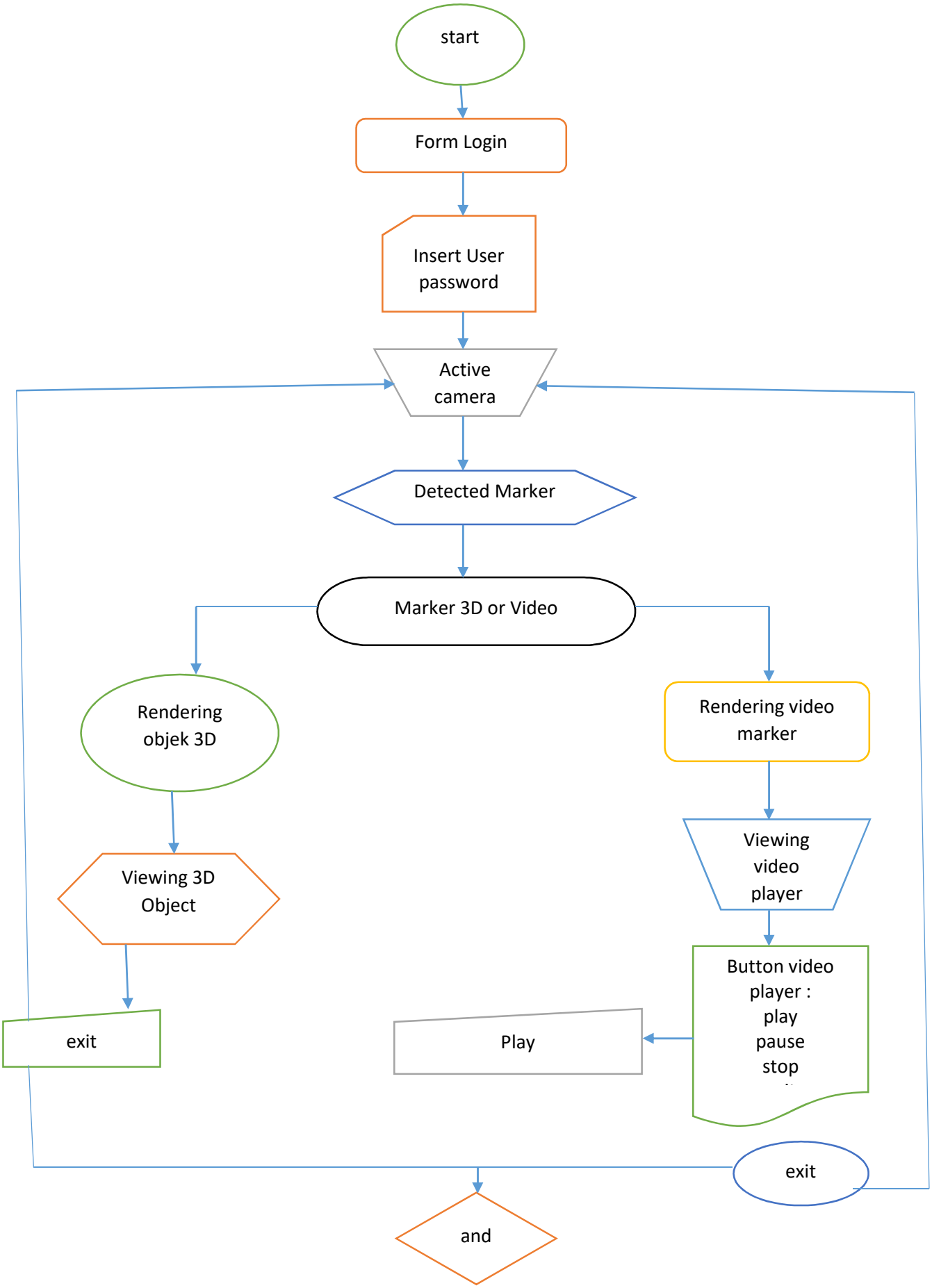

start
Form Login
Insert User password
Active camera
Detected Marker
Marker 3D or Video
Rendering objek 3D
Viewing 3D Object
exit
Rendering video marker
Viewing video player
Button video player : play pause stop
Play
exit
and

Figure 2 shows the main interface of ARtikon-Joyful, a software developed based on Android operating system. In the first appearance of the menu, there will be several pictures indicating how to use the application. There are three steps explained in Indonesia language. The first button shows “Buka Aplikasi“, which means open application. The second button tells “Letakkan Marker pada Bidang Datang” which functions as to put objects on the flat surface. To make sure that the marker can be read, the lighting should be adequate. The last button on the interface is “Arahkan Kamera ke Arah Objek Marker”, which functions to shoot the camera to the object marker.

3. Implementation

This section displays an interface screenshot of an augmented reality mobile application for 3D learning media for geological natural disaster mitigation. Implementation of the interface here consists of a splash screen interface, main menu, main menu, quiz menu. Figure 2 shows the splash screen display before the user enters the application's main menu.

image 2 Display Splash Screen Implementation

image 3 Implementation of the Main Page Application

image 3 shows the main menu display button consisting of the start menu, quiz menu, guide menu and exit.

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CURRICULUM 2013 IN THE IMPLEMENTATION OF INCLUSIVE EDUCATION

Rindi Mulyadi dan Deni Darmawan
rindimulyadi@upi.edu, ddarmawan@upi.edu
Pengembangan Kurikulum - Universitas Pendidikan Indonesia

ABSTRACT

Education is one of the priorities in development as stated in the preamble to the 1945 Constitution and it is made clear in article 31 that the State guarantees that every citizen is entitled and obliged to attend education. Both general education and education for students with special needs through inclusive education. The government is obliged to provide good educational services for each of its citizens without any difference. Inclusive Education is one of the strategies to provide access to education for all children with special needs to attend education together with other children. In this study the authors used the literature study research method to find out how the implementation of the 2013 curriculum in inclusive education. The results show that the 2013 curriculum as a national curriculum can accommodate the needs of children with special needs through several modification models such as: (1) Model Duplikasi, (2) Model Modifikasi (3) Model Subtitusi, (4) Model Omisi. The Four curriculum models above can be used to support inclusive education. So far around 29,317 schools at all levels in Indonesia have implemented the three curriculum models above in inclusive education, or about 11% of the government has succeeded in guaranteeing equal education for students with special needs.

Keyword: Curriculum, Inclusive Education

A. PENDAHULUAN

Kurikulum merupakan suatu alat untuk mencapai tujuan pendidikan. Kesesuaain kurikulum menjadi kunci keberhasilan pendidikan seperti apa yang kita inginkan, Sebagai alat yang penting untuk mencapai tujuan, kurikulum hendaknya menjadi jembatan yang menghubungkan antara pendidikan dengan kebutuhan dimasyarakat dengan begitu kurikulum harus mampu mengikuti perubahan zaman dan kemajuan ilmu pengetahuan dan canggihnya teknologi, selain itu kurikulum berkembang sejalan dengan perkembangan teori dan praktik pendidikan.

Kurikulum 2013 melalui pengembangannya lebih menekankan kepada pendidikan karakter dan kompetensi sebagai tujuannya. dengan begitu kurikulum 2013 memiliki harapan melalui jalur pendidikan dapat menciptakan manusia yang bermartabat , mandiri serta mampu bersaing secara kompetensi dengan bangsa – bangsa lain secara global. Tentunya hal ini dapat dicapai apabila kurikulum 2013 mampu menciptakan manusia yang produktif, kreatif, inovatif, dan berkarakter.

Untuk menjamin mutu pendidikan dan pemenuhan ha katas Anak Berkebutuhan Khusus (ABK). maka dicetuskanlah sekolah inklusi. Sekolah inklusi adalah sekolah yang menyelenggarakan pendidikan untuk Anak Berkebutuhan khusus. dalam Alimin (2005) menjelaskan bahwa pendidikan inklusi adalah sebuah proses dalam merespon kebutuhan yang beragam dari semua anak melalui peningkatan partisipasi dalam belajar, budaya dan masyarakat,

dan mengurangi eklusivitas di dalam pendidikan. Artinya pendidikan inklusi adalah penggabungan antara siswa regular dengan anak – anak berkebutuhan khusus tanpa adanya diskriminasi. Pentingnya pendidikan inklusi di Indonesia, terlihat ketika disahkannya PP No.70/2009 yang berimplikasi bahwa penyelenggaraan pendidikan inklusi menjadi tanggung jawab bersama antara pemerintah pusat, pemerintah daerah, organisasi social kemasyarakat dan stakeholder terkait.

Saat ini baru dimiliki sebanyak 29.317 sekolah penyelenggara inklusif di seluruh Indonesia mulai dari SD, SMP, SMA dan SMK (Dapodik, per 31 Januari 2019). Artinya baru sekitar 11% dari jumlah sekolah di Indonesia yang sudah menyelenggarakan pendidikan inklusif, sementara dalam peta jalan, ditargetkan bahwa pada tahun 2021 semua sekolah menyelenggarakan pendidikan inklusif. Kondisi ini menjadi dasar pertimbangan dilakukannya review terhadap Peta Jalan Pendidikan Inklusif untuk disesuaikan dengan kondisi dengan durasi tahun dimulai dari tahun 2019 s.d. 2024.

Dalam rangka pemenuhan hak atas pendidikan secara memadai untuk ABK yang selama ini masih belum terpenuhi haknya, maka pada tahun 2013 lalu Kementerian Pendidikan dan Kebudayaan menyiapkan adaptasi kurikulum 2013 bagi ABK. Adapun pengembangan kurikulum 2013 untuk ABK disesuiakan dengan kemampuan anak dan jenis hambatan atau kekurangannya. Anak harus dilatih kreatif, inisiatif dan kritis agar potensi yang dimiliki dapat dikembangkan dengan baik. Sedangkan guru lebih banyak berperan sebagai pembimbing dan fasilitator dalam proses pembelajaran. Jadi guru tidak boleh memaksakan anak yang ini harus sama dengan anak itu, tapi disesuaikan dengan kebutuhan dan kemampuan anak karena satu anak dengan yang lain punya kemampuan masing-masing, akan tetapi khusus untuk ABK, belum ada panduan teknis tentang aplikasi dan pengajaran kurikulum 2013

B. KAJIAN LITERATUR

1. Konsep Implementasi Kurikulum 2013 dalam pendidikan Inklusi

a. Kurikulum

Menurut Hilda Taba (Taba, 1962, pp. 10–11), kurikulum adalah rencana pembelajaran yang berkaitan dengan proses dan pengembangan individu anak didik. Bagaimanapun polanya tiap kurikulum akan memuat rencana - rencana yang mengarah pada komponen-komponen tertentu yakni pernyataan tentang tujuan pembelajaran, seleksi dan organisasi bahan pelajaran, bentuk dan kegiatan belajar mengajar, serta evaluasi pembelajaran.

J. Lioyd Trump dan Delmas E. Miller yang di kutip S. Nasution (Nasution, 2001, p. 6), kurikulum itu termasuk metode pembelajaran, cara mengevaluasi siswa dan program pembelajaran, perubahan tenaga pengajar, bimbingan penyuluhan, supervisi dan administrasi, alokasi waktu, jumlah ruangan, dan kemungkinan memilih mata pelajaran.

Kurikulum akan berubah sesuai kebutuhan zaman kurikulum adalah alat untuk mencapai tujuan dari pendidikan, andil kurikulum cukup besar dalam menentukan kualitas dari hasil belajar selain memberikan pengetahuan, kurikulum harus mampu menyiapkan peserta didik agar mampu dan siap untuk menjalani kehidupan secara lebih matang.

b. Implementasi Kurikulum

Kunandar (2007 : 211) menyatakan bahwa Implementasi adalah suatu proses penerapan, ide, konsep, kebijakan atau inovasi dalam suatu tindakan praktis seingga memberikan dampak, baik berupa perubahan pengetahuan, keterampilan, maupun nilai dan sikap. Implementasi kurikulum dapat diartikan sebagai aktualisasi kurikulum tertulis dalam bentuk pembelajaran.

Hamalik (2007 : 238) Implementasi Kurikulum adalah penerapan atau pelaksanaan program kurikulum yang telah dikembangkan dalam tahap sebelumnya, kemudian

diujicobakan dengan pelaksanaan dan pengelolaan, sambil senantiasa dilakukan penyesuaian terhadap situasi lapangan dan karakteristik peserta didik, baik perkembangan intelektual , emosional serta fisiknya.

Dari para pendapat diatas dapat disimpulkan bahwa implementasi merupakan penerapan kurikulum terlutis dalam bentuk pembelajaran dengan memperhatikan penyesuaian terhadap peserta didik, baik perkembangan intelektual, emosional dan fisiknya.

Implementasi kurikulum 2013 merupakan aktualisasi kurikulum dalam pembelajaran dan pembentukan kompetensi serta karakter peserta didik. Implementasi kurikulum membutuhkan kemampuan dan keaktifan guru dalam menciptakan berbagai macam kegiatan yang telah diprogramkan.

c. Pendidikan Inklusi

Pendidikan inklusif merupakan cara pandang tentang pendidikan yang terbuka dan menghargai hak asasi manusia. Hal ini menyebabkan meningkatnya pengharagaan dan pengakuan terhadap keberagaman atau perbedaan. Pandangan tentang penyeragaman dan penyamarataan menjadi tidak relevan lagi. Perbedaan tidak lagi dipandang sebagai penyimpangan melainkan dilihat sebagai sumber pengayaan (Sunanto, 2009). Sebagai realisasi dari pandangan seperti itu, dalam bidang pendidikan muncul gagasan bahwa pendidikan itu hak semua orang, atau pendidikan itu untuk semua (UNESCO, 2006). Untuk merealisasikan ide bahwa pendidikan itu untuk semua maka cara yang paling efektif adalah dengan mengembangkan ideologi dan konsep pendidikan inklusif. (Booth, 2002).

Pendidikan Inklusi Berbeda dengan konsep pendidikan luar biasa atau PLB, konsep utama dan asumsi yang melandasi pendidikan inklusif adalah justru dalam berbagai hal bertentangan dengan konsep dan asumsi yang melandasi pendidikan luar biasa (Stubbs, 2002 : 38).

Dalam bukunya Prabowo (2017 : 9) menyatakan bahwa pendidikan inklusi adalah satuan pendidikan yang menyelenggarakan pendidikan bagi semua pembelalajar. Artinya pendidikan berlangsung tanpa membeda – bedakan antara siswa regular

dengan anak berkebutuhan khusus maka dari itu desain dai pendidikan inklusi adalah dengan meniadakan eklusif diantara para peserta didik.

2. Penelitian Sebelumnya

Sunardi (2009) menjelaskan bahwa trend perkembangan pendidikan inklusif di Indonesia sejak tahun 2004 sekolah inklusif di Indonesia (81,40%) adalah pada SD. Namun, bila dibandingkan dengan jumlah seluruh SD yang ada di Indonesia yaitu 144.567, maka jumlah seluruh SD inklusi di Indonesia sebenarnya baru mencapai 0,44%. Selanjutnya, dengan mengambil angka kasar jumlah penyandang cacat usia sekolah di Indonesia adalah 1,5 juta, maka jumlah anak berkelainan yang terlayani pendidikannya melalui sekolah inklusi sebenarnya baru mencapai 1 % dari seluruh populalsi yang ada. Namun dengan adanya Peraturan Menteri Pendidikan Nasional RI Nomor 70 Tahun 2009 Tentang Pendidikan Inklusif Bagi Peserta Didik yang Memiliki Kelainan dan Memiliki Potensi Kecerdasan dan/atau Bakat Istimewa, yang didalamnya menegaskan bahwa setiap Pemerintah kabupaten/kota untuk menunjuk paling sedikit 1 (satu) SD dan 1 (satu) SMP pada setiap kecamatan dan 1 (satu) satuan pendidikan menengah untuk menyelenggarakan pendidikan inklusif, maka diyakini jumlah anak berkelainan dan jumlah sekolah penyelenggara inklusif di Indonesia akan semakin meningkat.

Mayasari (2016) dalam penelitiannya implementasi kurikulum 2013 pada Anak Berkebutuhan Khusus (ABK) di SD Muhammadiyah Sapen strategi pelaksaan kurikulum disesuaikan dengan gradasi berat atau ringannya kondisi peserta didik. Penelitian ini menunjukan bahwa kurikulum bersikap fleksibel untuk menyesuaikan dengan anak – anak berkebutuhan khusus.

Regiliana (2016) dalam penelitiannya menunjukan kesesuaian kurikulum pendidikan inklusi dengan implementasinya di MI Ma'arif Keji dilihat dari keseluruhan aspek termasuk dalam kategori sangat sesuai. Dengan demikian, pelaksanaan kurikulum pendidikan inklusi telah sesuai dengan apa yang direncanakan dan diharapkan oleh madrasah. Meski demikian, kelemahan atau kendala masih ditemukan dalam setiap komponen seperti kurangnya dukungan masyarakat, belum terpenuhinya kualifikasi guru pembimbing khusus, kurangnya guru dalam membuat suasana belajar yang kondusif, dan kompetensi siswa yang masih perlu ditingkatkan.

Rukhaini (2019) dalam penelitiannya Implementasi kurikulum yang ada di Lentera Hati dapat dikatakan sudah berjalan dengan baik pada tataran proses pembelajarannya. Namun pada sisi perencanaan dan evaluasi masih membutuhkan perbaikan. Proses pembelajaran masih diutamakan atau diprioritaskan dari perencanaannya. Sehingga hasil dari implementasi yang dilakukan belum dapat terukur dengan jelas dari sisi keefektifan maupun efisiensinya. Meskipun kelas bersifat heterogen, yakni berisikan kekhususan yang beragam dari para siswa. Namun proses pembelajaran yang dilakukan sangat menjunjung tinggi kekhususan antar individu.

Sani (2015) dalam penelitiannya menunjukan rancangan perangkat pembelajaran (tujuan pembelajaran, materi/isi, proses pembelajaran, dan evaluasi pembelajaran) dalam implementasi Kurikulum 2013 bagi peserta didik berkebutuhan khusus (PDBK) di Sekolah Dasar Inklusif Klampis Ngasem 1/246 dalam memberikan pembelajaran kepada siswa peserta didik berkebutuhan khusus dalam pembelajaran kurikulum 2013 yaitu kurang efektif terutama bagi peserta didik berkebutuhan khusus karena siswa peserta didik berkebutuhan khusus tidak mampu mengikuti pembelajaran kurikulum 2013 hanya peserta didik berkebutuhan khusus seperti siswa Slowlearner dan siswa Tunadaksa yang sedikit mampu mengikuti pembelajaran seperti anak normal lainnya jika peserta didik berkebutuhan khusus seperti siswa Autis, Tunagrahita, Tunarungu dan Anak Berkesulitan belajar tersebut diberikan pembelajaran melalui PPI membaca, menulis dan berhitung dan PPI perilaku.

C. METODE

Studi kepustakaan dapat diartikan sebagai suatu langkah untuk memperoleh informasi dari penelitian terdahulu yang harus dikerjakan, tanpa memperdulikan apakah sebuah penelitian menggunakan data primer atau data sekunder, apakah penelitian tersebut menggunakan penelitian lapangan ataupun laboratorium atau didalam museum.

Pengertian studi kepustakaan menurut beberapa Ahli yaitu: Menurut M. Nazir dalam bukunya mengemukakan bahwa yang dimaksud dengan: “Studi kepustakaan adalah teknik pengumpulan data dengan mengadakan studi penelaahan terhadap buku-buku, literatur-literatur, catatan-catatan, dan laporan-laporan yang ada hubungannya dengan masalah yang dipecahkan.”(Nazir,1988: 111).

Selanjutnya menurut Nazir (1998 : 112) studi kepustakaan merupakan langkah yang penting dimana setelah seorang peneliti menetapkan topic penelitian, langkah selanjutnya adalah melakukan kajian yang berkaitan dengan teori yang berkaitan dengan topik penelitian. Dalam pencarian teori, peneliti akan mengumpulkan informasi sebanyak-banyaknya dari kepustakaan yang berhubungan. Sumber-sumber kepustakaan dapat diperoleh dari: buku, jurnal, majalah, hasil-hasil penelitian (tesis dan disertasi), dan sumber-sumber lainnya yang sesuai (internet, koran dll). Bila kita telah memperoleh kepustakaan yang relevan, maka segera untuk disusun secara teratur untuk dipergunakan dalam penelitian. Oleh karena itu studi kepustakaan meliputi proses umum seperti: mengidentifikasikan teori secara sistematis, penemuan pustaka, dan analisis dokumen yang memuat informasi yang berkaitan dengan topik penelitian.

D. HASIL DAN DISKUSI

Dalam Permendiknas No. 70 Tahun 2009 tentang Pedoman Implementasi Pendidikan Inklusi, ada 8 (delapan) komponen yang harus mendapatkan perhatian dari pemangku kepentingan (stakeholder) sekolah inklusif, yaitu : (1) peserta didik, (2)kurikulum, (3) tenaga pendidik, (4) kegiatan pembelaran, (5) penilaian dan sertifikasi, (6) manajemen sekolah, (7) penghargaan dan saksi, (8) pemberdayaan masyarakat. Untuk meningkatkan point – point yang lain point no 2 menjadi kunci dalam implementasi Pendidikan inklusi tersebut.

Indonesia Menuju Pendidikan inklusi Secara formal dideklarasikan pada tanggal 11 agustus 2004 di Bandung, dengan harapan dapat menggalang sekolah reguler untuk mempersiapkan pendidikan bagi semua anak termasuk penyandang cacat anak. Setiap penyandang cacat berhak memperolah pendidikan pada semua sektor, jalur, jenis dan jenjang pendidikan (Pasal 6 ayat 1). Setiap penyandang cacat memiliki hak yang sama untuk menumbuh kembangkan bakat, kemampuan dan kehidupan sosialnya, terutama bagi penyandang cacat anak dalam lingkungan keluarga dan masyarakat (Pasal 6 ayat 6 UU RI No. 4 tahun 1997 tentang penyandang cacat).

Melihat kondisi dan system pendidikan yang berlaku di Indonesia, model pendidikan inklusif lebih sesuai adalah model yang mengasumsikan bahwa inklusi sama dengan mainstreaming, seperti pendapat Vaughn, Bos & Schumn.(2000). Penempatan anak berkelainan di sekolah inklusi dapat dilakukan dengan berbagai model sebagai berikut:

a. Kelas reguler (inklusi penuh)

   Anak berkelainan belajar bersama anak lain (normal) sepanjang hari di kelas reguler dengan menggunakan kurikulum yang sama

b. Kelas reguler dengan *cluster*

   Anak berkelainan belajar bersama anak lain (normal) di kelas reguler dalam kelompok khusus.

c. Kelas reguler dengan *pull out*

   Anak berkelainan belajar bersama anak lain (normal) di kelas reguler namun dalam waktu-waktu tertentu ditarik dari kelas reguler ke ruang sumber untuk belajar dengan guru pembimbing khusus.

d. Kelas reguler dengan cluster dan pull out

   Anak berkelainan belajar bersama anak lain (normal) di kelas reguler dalam kelompok khusus, dan dalam waktu-waktu tertentu ditarik dari kelas reguler ke ruang sumber untuk belajar dengan guru pembimbing khusus.

e. Kelas khusus dengan berbagai pengintegrasian

   Anak berkelainan belajar di dalam kelas khusus pada sekolah reguler, namun dalam bidang-bidang tertentu dapat belajar bersama anak lain (normal) di kelas reguler.

f. Kelas khusus penuh

   Anak berkelainan belajar di dalam kelas khusus pada sekolah reguler.

Kurikulum pendidikan inklusi menggunakan kurikulum sekolah reguler (kurikulum nasional) yang dimodofikasi (diimprovisasi) sesuai dengan tahap perkembangan anak berkebutuhan khusus, dengan mempertimbangkan karakteristik (ciri-ciri) dan tingkat kecerdasannya yang artinya kurikulum harus adaftif dalam implementasi kurikulum dengan mempertimbangkan kebutuhan peserta didik khususnya anak – anak berkebutuhan khusus.
Pengembangan kurikulum adaftif untuk siswa berkebutuhan khusus dalam buku prabowo (2017 : 37) menjelaskan ada empat model kemungkinan pengembangan kurikulum adaftif untuk pendidikan inklusi : (1) Model Duplikasi, (2) Model Modifikasi (3) Model Subtitusi, (4) Model Omisi.

1) Model Duplikasi

Duplikasi artinya Salinan serupa benar dengan aslinya. Menyalin berarti membuat sesuatu menjadi sama dan serupa. Dalam kaitannya dengan model kurikulum, duplikasi berarti mengembangkan dana tau memberlakukan kurikulum untuk siswa berkebutuhan khusus secara sama atau serupa dengan kurikulum yang digunakan untuk siswa pada umumnya atau regular.

2) Model Modifikasi

Modifikasi berarti mengubah atau menyesuaikan. Dalam kaitan dengan model kurikulum untuk siswa berkebutuhan khusus, maka model modifikasi berarti cara pengembangan kurikulum, dimana kurikulum umum yang diberlakukan bagi siswa – siwa regular dirubah untuk disesuaikan dengan kondisi, kebutuhan dan kemampuan siswa berkebutuhan khusus

3) Model Subtitusi

Subtitasi berarti mengganti. Dalam kaitannya dengan model kurikulum, maka substansi berarti mengganti sesuatu yang ada dalam kurikulum umum dengan sesuatu yang lain. Penggantian dilakukan oleh siswa berkebutuhan pendidikan khusus, tetapi masih bisa diganti dengan hal lain yang sebobot dengan yang digantikan. Model substansi bisa terjadi dalam hal tujuan pembelajaran, materi, proses maupun evaluasi.

4) Model Omisi

Omisi berarti menghapus / menghilangkan. Dalam kaitan dengan model kurikulum, omisi berarti upaya untuk menghapus / menghilangkan sesuatu, baik sebagian atau keseluruhan dari kurikulum umum, karena hal tersebut tidak mungkin diberikan kepada siswa berkebutuhan khusus.

Dengan menggunakan model kurikulum tersebut dapat membantu implementasi kurikulum 2013 dalam pendidikan Inklusif, tentunya guru harus mampu menganalisis setiap kebutuhan peserta didik dengan begitu kurikulum akan lebih fleksibel dalam implementasinya sehingga dapat mencapai tujuan dari pendidikan tersebut.

E. KESIMPULAN

Kurikulum merupakan suatu alat untuk mencapai tujuan pendidikan. Kesesuaain kurikulum menjadi kunci keberhasilan pendidikan seperti apa yang kita inginkan. Terlebih untuk anak – anak berkebutuhan khusus dalam implementasi kurikulum, kurikulum harus mampu

mengakomodir kebutuhan – kebutuhan peserta didik, maka dari itu model pengembangan kurikulum adaftif dapat membantu kurikulum 2013 dalam implementasinya dimana model pengembangan kurikulum adaftif itu ada empat (1) Model Duplikasi, (2) Model Modifikasi (3) Model Subtitusi, (4) Model Omisi. Diharapkan dengan mengembangkan kurikulum 2013 dalam implementasinya dapat membantu tercapainya tujuan kurikulum tersebut.

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TEACHER PERCEPTIONS: PROFESSION AND MODEL

Evy Kurniawan, Syamsu Y. L. N, Titin Kartini
Psychology of Education, School of Postgraduates
Indonesia University of Education

ABSTRACT

The background of the article depicted that teacher perception was a professional who was able to develop the professional value in supervising, training, assessing and evaluating students cognitively, and also becoming model for students in terms of attitude.

The purpose of the article was to explore the teacher perceptions as profession and model. The research was a part of a thesis research on teacher professionalism value as model. The subject of the research was senior high school teachers in Bandung; five teachers were civil servants and five other teachers were non-civil servants. The age range of the subject was between 24-50 years old with bachelor degree and master degree qualifications from different field of studies.

The data were obtained through written Open-Ended Questions and analyzed by 2 stages of Human Coding. The result of the research showed that teacher perceptions as profession and model had three characteristics: Virtues and Values, Learning and Knowledge, Competence and Skills. The three characteristics belonged to teachers as a profession and a model. The percentage of each characteristics was different: Virtues (44%), Competence (38%) and Knowledge (18%).

The article was expected to contribute an insight toward teachers related to teacher characteristics as a profession and a model for students in the school and the society.

Keywords: Teacher, Education, Profession, Model

A. BACKGROUND

The teacher is a model or example for students both in school and outside of school. Especially when the teacher is in the school environment it is certain that every student considers that his existence is as a model that is exemplary. As in a teacher's proverb in gugu and in imitation means that the teacher as an educator is not only tasked to transfer knowledge, but also must be a figure that should be followed and a model for every student. The role of the big tendencies is not easy to discuss, let alone be rejected. Mulyasa (2005) states that being a model teacher is the basic nature of learning activities, and when a teacher does not want to accept and or use it constructively, it has reduced the effectiveness of learning. So it is clear, that every teacher who has the responsibility as an educator should consider the reasons why they are used as models by students in schools. As a model, the teacher also has a psychological role which will later have an impact on the duties and principles of being a teacher. According to usman (2004) the role of the teacher is psychologically seen as an educational psychologist; artists in human relations (in this case between students at school); catalytic agent, namely a person who has an influence in causing renewal (innovators); and mental health workers.

As an example, the teacher's behavior and words can be a concern and spotlight of students and people around their environment. Mulyasa (2005) and Sanaky (2005) stated several things that should be the subject of attention and discussion for a teacher as a model and example of every student and the value of teacher professionalism, namely; the teacher must have a basic attitude; the teacher must pay attention to the speaking style; work habits; attitude through experience and mistakes; how to dress; how the relationship between human beings; how is the thought process; neurotic behavior; taste; decision; general health and lifestyle. Teachers are professional workers who must be able to develop their professional values in giving

instruction, training, evaluating and evaluating students both cognitively and attitudes. According to Rugaiya and Sismiati (2011) Teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing and evaluating students in early childhood education through oral, primary and secondary education. In Chapter I, the general provisions of UUGD, article 1 paragraph 1 states that teachers are professional education with the main task of educating, teaching, guiding, teaching, training, evaluating and evaluating students in early childhood education in the path of formal education, basic education and education intermediate. To become an educational profession, a teacher intended by the National Education Association (NEA) must have the following conditions: involve intellectual activity; cultivate the body of specialized science; requires a long professional preparation; requires training in a continuous position; promising life careers and determine their own standards (standards).

Natsir (2007) says that Improving the welfare of teachers does not automatically improve the quality of education. The level of welfare of teachers must then have a domino effect on their mentality in teaching. This aspect of mentality or morality is very closely related to the work ethic. Low mentality will produce a work ethic that cannot be proud of. Improving the quality of education must also start from improving the work ethic of the organizers involved in the education institution. Teacher certification rules which are basically usaa to make teachers become professional staff actually indicate that the certification regulations failed to make teachers become professional staff. The gal is due to teachers pursuing motivated certification to increase income from certiikasi namely increase income and welfare alone, without seeing their functions and responsibilities as a professional teacher (Sukasni and Egendy, 2017).

The state of the teacher as a professional experiences degradation in carrying out his duties and functions. The decline in the quality of the process and the results of the educational process so far has become a kind of obsession that has not been achieved. Murwati (2013) states that the quality of teachers in Indonesia is still relatively low. The low quality of teachers in Indonesia can be seen from the feasibility of teaching teachers. That is due to the lack of competence and qualifications of teachers as educational staff. Based on the Human Development Index (HDI) notes, other facts show that the quality of teachers in Indonesia is still far from sufficient to make fundamental changes such as the competency-based curriculum (KBK). From the HDI statistical data there are 60% of elementary school teachers, 40% of junior high schools, 43% of high schools, 34% of vocational schools are considered not suitable to teach at their respective levels. In addition, 17.2% of the teachers or equivalent to 69,477 teachers taught not in their field of study. Improving the quality of education is indeed a homework that is also not completed despite various ways have been done. According to Saroni (2011), the estimated deterioration in the quality of the results of the education and learning process has resulted in the implementation of various self-quality improvement programs for teachers.

The quality and teaching ability of a teacher can be assessed as the most important actor in the learning outcomes of students. According to Skolekert (2006), a teacher must possess cognitive abilities and achievement values and be able to develop his professionalism. Research conducted by Agung (2011) shows that 81.81% of teachers' perceptions of the concepts and

practices of teacher professionalism in Bali respond positively to the importance of continuing teacher professional development. This proves that teacher professionalism must continue to be developed and endeavored so that the quality of the education process is getting better. In addition, based on field data and research conducted, it shows that the feasibility of teachers in teaching is still doubtful. In addition, the professionalism of teachers in Indonesia is still low (Utami, 2012). This is the cause of the gap between the data in the field with the actual ideal conditions. Even so, to improve the quality of a teacher's self to become professionals in their fields, there are still many ways that can be done in improving the quality of a teacher's self. According to Saroni (2011) to be able to improve the quality of the teachers themselves, Teachers are required to develop and improve their abilities in their field of work. So, teachers can carry out their duties and functions well and be an example for students. Teacher professionalism is a currency that must be considered so that students and the community continue to respect and position the teacher as a "role model", where the task and obligation of the teacher is to provide guidance, direction and educational and learning facilities to students. From that, the existence of a teacher is needed because the role and function can be a guide and guide for every student who follows the education and learning process to achieve his learning goals.

According to Noddings (Stronge, 2013) explained that psychological teacher can influence the classroom climate and affect students in the class. It is clear that in carrying out their duties and functions the teacher must look happy and carefree both for himself and for students in the school environment. Thus, the figure of a teacher who is a role model in front of students can maintain the teacher's brand image as a figure that should be emulated. This has become the homework for teachers today in developing themselves into teaching staff who are not only tasked with transferring knowledge, but also must involve themselves emotionally with students in the school and community environment. Utami (2012) said from the results of his research that partially, the emotional intelligence of teachers significantly had a direct effect on teacher professionalism.

Thus, to fill the research gap related to the topic, the researcher is motivated to conduct a study entitled Professional teacher values as a model. This study aims to find out how the teacher's professional value for the quality of education as a model for students both at school and in the surrounding environment

The quality of the teacher and his teaching ability are considered as the most important factors in children's learning outcomes. Teachers have significant differences in effectiveness and differences in children's achievement are often greater in one school than between schools. Analysis of the school evaluation data in particular pays attention to the cognitive (achievement, ability) and emotional importance (attitudes, values) of the teacher on teaching outcomes (Skolverket, 2006). Teaching is seen as a profession that requires reflective thinking, continuous professional development, independence, responsibility, creativity, research, and personal judgment. These indicators are to assess the quality of teachers must reflect these values and attributes (Jones, 2003). Jephcote & Salisbury (2009) said that the value system owned by the teacher structured his professional identity such as; facilitate the needs and interests of students who often sacrifice the balance between work and life outside of work and are often under pressure and stress. Many teachers draw their years of experience in school to

explain values, attitudes, and beliefs as well as their educational ideology and practice in the classroom (Jephcote & Salisbury, 2009).

Beliefs, values, feelings and attitudes are part of emotions, underlying and influencing the way we act (Boardman, 1992).

In empirical studies, teacher's professional values reflect their personal, social and relational values. Professionalism values encourage teachers to face daily challenges at school, one of which is commitment found as an important predictor of work achievement, attendance, retention, burnout and turnover, as well as its influence on student motivation, achievement, and attitudes towards learning in school (Robson , Bailey & Larkin, 2004; Tirri, 2010).

The level of commitment teachers have is seen as a key factor in influencing teachers' willingness to engage in critical, cooperative and reflective practices (Jones, 2003). There are six interconnected categories, which represent the different ways in which the teacher feels, understands, and conceptualizes commitment; as 'passion' (positive emotional attachment), as an investment of time outside the hours of interaction with students; as a focus on the individual needs of students; as a responsibility to instill knowledge, attitudes, and values; as 'maintenance of professional knowledge'; and as an attachment to the school community.

Teacher learning or education needs to focus on the personal process of becoming a professional teacher, with a good basic balance between the cognitive (knowledge) and affective (value) dimensions of learning about teaching (Malm, 2009; Robson, Bailey & Larkin, 2004). Students are considered more effective when trained in values and virtues that are socially accepted by teachers who clearly apply and clearly apply them in their own personal and professional behavior, that is, as the teacher aims to provide a model of integrity, honesty, self-control, and respect for those who are taught, teachers must also try to instill these values and virtues in themselves (Carr, 2006; Robson, Bailey & Larkin, 2004).

B. METHODOLOGY

In this study the design used is a qualitative approach with a constructivist design grounded theory research. The subject of the research was senior high school teachers in Bandung; five teachers were civil servants and five other teachers were non-civil servants. The age range of the subject was between 24-50 years old with bachelor's degree and master's degree qualifications from different fields of studies. The data were obtained through written Open-Ended Questions and analyzed by 2 stages of Human Coding. Researchers used a purposive sampling technique (Cozby & Bates, 2015). To corroborate research data, researchers validate data to determine the accuracy or credit of findings (Creswell, 2012). The validation strategy and research interpretation will be carried out with a member checking and triangulation strategy between different data sources thereby increasing the accuracy of the study. Triangulation is the process of corroborating evidence from different individuals, different types of data (field notes / interviews) and different data collection methods (documents and open ended questions). In addition to triangulation, researchers conduct member checking with participants to determine whether the data presented by researchers is accurate in its decomposition. Member checking is the process when the researcher asks the participants in the study to check the accuracy of the description. This examination involves the process of

bringing the findings back to the participants and asking them (in writing or in the form of an interview) about the accuracy of the report.

C. RESULT & DISCUSSION

The result of the research showed that teacher perceptions as profession and model had three characteristics: Virtues and Values, Learning and Knowledge, Competence and Skills. The three characteristics belonged to teachers as a profession and a model. The percentage of each characteristics was different: Virtues (44%), Competence (38%) and Knowledge (18%).

These results indicate that participants perceive more that virtues are the most important thing the teacher has. Beliefs, values, feelings and attitudes are part of emotions, underlying and influencing the way we act (Boardman, 1992). Teaching is seen as a profession that requires reflective thinking, continuous professional development, independence, responsibility, creativity, research, and personal judgment. These indicators are to assess the quality of teachers must reflect these values and attributes (Jones, 2003). There are three main objectives in teachers that are divided into sub-categories, 'knowledge and understanding', 'skills and capabilities' and' values and norms. Beliefs and personal values possessed by teachers influence their capacity in decision making and problem solving on a daily basis of life. According to Goodson & Sikes, 'professional development can work only when it involves its own personal or personal development' (Jones, 2003). Therefore, values can serve as a source of stability for teachers who maintain awareness of the goals of their work and develop their strengths and professional pride (Nias, 1996). This is supported by Nixon who argues that value is important because it influences actions by ensuring awareness of what is true or raising awareness of attacks (Jones, 2003). The research also shows how important the affective aspects of value are as significant to the continuing professional development of qualified teachers, and provides the flexibility and support to let them reassess their personal beliefs and modify their original assumptions to align with values that support their professional practice. Teachers need to foster confidence in decision making as well as a positive picture of themselves as a teacher in order to minimize the risk of teachers as mere 'operatives', who choose to implement the judgment of others rather than acting according to their beliefs (Jones, 2003)

In addition to personal values, teachers need to consider the ethical standards of their profession, because professional ethics reflects the values and virtues of the teacher. According to empirical studies, teachers cannot separate the moral character they have from their professional self. The establishment of the teacher's moral character serves as a moral approach in reasoning, guiding their direction in interacting with students, and providing hope for the future, while the professional approach in teacher reasoning includes rules and principles that guide in pedagogical practice and decision making (Husu & Tirri, 2007).

Morally sensitive Indivdu brings many abilities, techniques, and components of interpersonal sensitivity, including seeing from the perspective of others, cultivating or strengthening empathy, and interpreting situations based on images of what might happen and who will be affected (Albrecht, 2006 ; Goleman, 2006).

The process of clarifying values must hold on the values expressed in the actual situation in the school (Husu & Tirri, 2001). If a teacher says that he holds the principle of honesty, we must ask him to explain what it means to him in relation to behavior in real life at school or in the classroom. We must identify whether there are gaps between their values and behavior at the individual or organizational level (Tirri, 2010).
In empirical studies, teacher's professional values reflect their personal, social and relational values. Professionalism values encourage teachers to face daily challenges at school, one of which is commitment found as an important predictor of work achievement, attendance, retention, burnout and turnover, as well as its influence on students' motivation, achievement, and attitudes towards learning in school (Day 2002 in Robson, Bailey & Larkin, 2004; Tirri, 2010).

Besides the second is competence, which is a factor that influences teacher professionalism. Competence is an activity that can be observed including aspects of knowledge, skills, values, attitudes, and stages of its implementation as a whole (Muyasa, 2008). Teacher competence is a combination of personal, scientific, technological, social, and spiritual abilities that form teacher competency standards. Nugroho (2014) states that the most important factor in increasing teacher professionalism is by providing training / training which includes syllabus development workshops, short courses, training, further education, educational seminars etc. Training can affect the teacher's Professionalism value which can encourage teachers to face daily challenges in school, one of which is a commitment that must be consistently carried out by the teacher. And the third is knowledge, professionalism is interpreted as occupational or normative value, something that should be maintained in employment by and for workers. Professional value is always regarded as an integral thing in professionalism. Values form the direction or direction of the profession, part of the internalized value system will be a code of ethics that forms the ethical practices of individuals. Wong (2011) states that professional value plays an integral role in maintaining or sustaining the continuity or continuity of the profession, which makes professional value a significant thing for professionalism. Demonstrating the essence of professional value provides a way for individuals to conceptualize their work and deliver their community contributions to the public. Schank & Weis states that the growth of professional value occurs through practices or habits that are constantly practiced and experience from professional education (Idid & Arandas, 2016). Education, training, and experience are fundamental requirements, but when it has been achieved, the policy in making decisions based on competence becomes very important to consider (Evetts, 2013).
Then according to Freidson, the ideal position typical of professionalism is based on the belief that the knowledge and abilities of certain specialties require a foundation in abstract concepts and formal learning (Evetts, 2013). In addition, there are more pessimistic interpretations where professionalization is intended to realize personal goals in his work such as in terms of income, status, and power, as well as the monopoly of protection of work or occupational jurisdiction. Furthermore, there is an analysis that professionalism as a discourse on control and changes in terms of work or position, returns to professionalism as occupational value, but is used with a view to controlling workers or professionals.
Therefore, in this case professionalism has a role to rationalize, restructure, load and control the work and workers. Thus, it is stated that there are challenges to the concept of

professionalism as occupational value, some contextual factors including clarifying aspects of professional knowledge and expertise, cases of malpractice and 'unprofessional' behavior, exaggeration and over simplification by the media, interference politics, and policies that carry personal perceptions over public interests. Analysis of professionalism as occupational value has various interpretations, sometimes positive, sometimes negative, or a combination of both (Evetts, 2011). Then, Robson, Bailey, & Larkin, (2004) say it is important to emphasize that the term 'professionalism' represents a symbol or discourse, namely as a set of ideas rather than as a particular reality.

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PENGEMBANGAN KURIKULUM EKSTRAKURIKULER PRODUKSI FILM BERBASIS KREATIVITAS MENGGUNAKAN MODEL TYLER

Risa Zakiatul H[1], Ivan Jonathan Kristianto[2], Mukhidin[3], Rudi Susilana[4]
Universitas Pendidikan Indonesia

Abstrak

Pada penelitian kali ini akan dilakukan pengembangan kurikulum ekstrakurikuler produksi film yang ditekankan kepada kreativitas. Penelitian ini akan dilakukan di SMA BPK Penabur 1 Bandung. Pengembangan kurikulum yang dilakukan akan diterapkan berdasarkan model Tyler. Penelitian dilakukan guna menyusun kembali kegiatan pembelajaran dalam ekstrakurikuler sehingga dalam perencanaan, implementasi dan penilaian didapatkan hasil yang sesuai dan dapat mengembangkan kreativitas secara optimal. Proses yang akan dilakukan adalah melakukan wawancara terhadap pengajar ekstrakurikuler dan juga pengisian kuesioner dari peserta didik sebagai analisis kebutuhan untuk melihat hasil pembelajaran yang terkait dengan kreativitas. Berdasarkan asumsi, hasil penelitian yang dilakukan adalah 1) Kurikulum ekstrakurikuler produksi film dapat dikembangkan dengan menggunakan model Tyler, 2) Hasil pembelajaran di dalam ekstrakurikuler produksi film mendorong kreativitas secara signifikan, dan 3) Ketercapaian hasil belajar yang diharapkan oleh peserta didik tercapai sesuai perencanaan yang dilakukan di awal.

Kata Kunci : Ekstrakurikuler, Produksi Film, Kreativitas, Model Tyler.

A. INTRODUCTION

In 21st century, the world community continues to grow, including people in Indonesia. In response to this, education as the institution that encourages people to be a better person needs to move students to be able to compete in this era. There are several competencies that are required in the face of the 21st century, one of which is 4C, Critical Thinking, Creativity, Communication, Collaboration. All four parts need to be embedded in students.

In formal education, there are several activities in it. One of the activities present as a support is extracurricular activities. However, extracurricular activities in schools are often not optimally developed. There are only activities without a clear learning plan and goals. In response, researchers saw that 21st century competencies could be developed in extracurricular activities if they were prepared better. In this studied, researchers look after one of the extracurricular activities held in one of the high schools in Bandung, namely extracurricular film production. The research conducted will try to develop an extracurricular

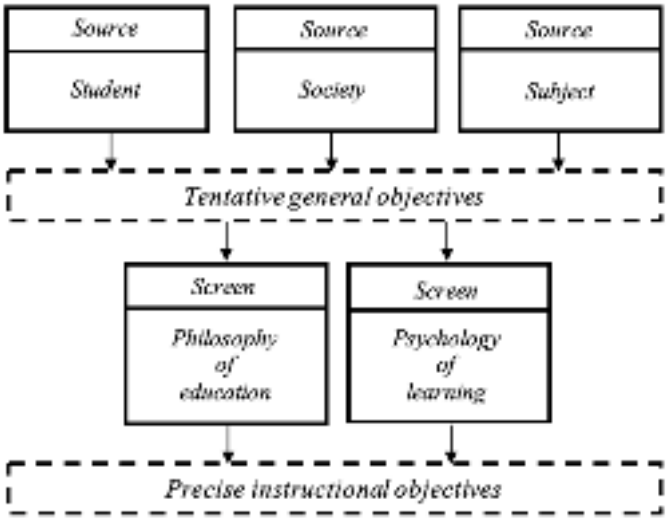
curriculum for film production, then look at the achievement of creativity competencies through this extracurricular, and then it will be seen the achievement of learning outcomes of each student.

B. RESEARCH METHOD

The research method used in this research is exploratory sequential design. This research method is a combination of quantitative and qualitative research methods. First step was to interview the teacher about extracurricular film production. Interviews were conducted face-to-face with the teacher by asking questions which were divided into several sections. There are 5 classified interview sections. The first part of the interview relates to the vision, mission, and extracurricular product output of film production. The second question relates to the number of members, the duration of one meeting and the effective learning rules. As for the third part questions related to students' initial abilities, the fourth question relates to teaching methods that are often used and the fifth question relates to the final assessment.

After finding the final results of a sequence the next thing that is done by researchers is to test the result in a wider population. Ideally this research method can be applied in a wider population, but due to various obstacles experienced by researchers, this stage is not carried out, even though it will not change the validity of the data that has been obtained because the final results of this data can be applied in similar aspects.

The next step is to implement data collected before. Data obtained by conducting face-to-face interviews and direct observation conducted directly in the field. Based on the results of interviews conducted, we formed a curriculum for extracurricular film production to develop creativity. In the process of developing this curriculum, we use the Tyler model. The following steps are taken in developing the curriculum using the Tyler model:



After the data is collected and sufficient to be processed and answer questions, the next step is to analyze the population in the extracurricular film production class using quantitative methods. This step was taken to find out whether the curriculum design that had been prepared previously through the interview process and the use of the tyler model could develop competencies in the creative field or not.

In one class, there were 24 members of the film production extracurricular involved as respondents to the questions compiled. Data analysis was performed by processing quantitative data and calculating the percentage of participants' responses. After the data is analyzed, the researcher can conclude the interpretation of the overall results of this study.

C. DISCUSSION AND RESULT

Through interviews conducted, most of the reasons for students choosing to join the film production extracurricular program were due to their interest in film production. Members of the extracurricular film production are also present to find out more about film production and develop their insights. The instructor at the school (as a source of field of study) also said that the aim of the extracurricular Want is to want to grow prospective filmmakers and create new perspectives in the creative industry in each individual extracurricular participant. In the people's perspective on film production, the film itself can provide a new insight into one's personality. Various kinds of problems can also be expressed through the production of films that are watched by many people. Films can show more about politics, religion, and encourage emotions that cannot be conveyed and encourage people as spectators to open wider eyes and see and feel in new ways.

From these findings, hopefully, the development of competence in extracurricular film production is more related to the taste, tastes, and insights on how to mix a good film to convey certain messages to the public. In this regard, related to 21st century competence, film production is closely related to creativity. Creativity is a pattern of thinking that involves every aspect of a person working together that involves the process of seeing (receiving information), thinking (processing information), and innovation (forming new ideas). Through existing films, it is hoped that film producers can transform in creative ways existing phenomena to be shaped and rearranged in one good film.

We can conclude from the process of finding information, the general objective of extracurricular film production is to create people who are able to produce films, with broad insights, and be able to apply their creativity in concocting a film that gives a message to others.

In accordance with the tyler model used, a general tentative educational objective previously obtained will be reviewed. The 2 sections that will be used to review are the philosophy of education and the psychology of learning chosen. In this case, the philosophy of pragmatism education was chosen, which is an understanding that believes that truth is obtained through human experience. Education encourages students not to understand what must be thought, but to understand how to think. This educational philosophy was chosen because it is in accordance with the educational objectives at the beginning, which is to bring experience for each student and build understanding and creative thinking. This selection will refer to the aim to encourage students in critical discussion, exchange ideas and develop broader insights in the context of cinema. Then also encourage students to do basic techniques in making a film, in the direction of the teacher, to then provide evaluation and input. Patterns like this will re-emphasize the development of insights, how to communicate, and how to apply them not only in each person, but when working with others.

The chosen psychology of learning is the psychology of learning that comes from the theory of naturalism. This relates to the form of extracurricular as a place to develop themselves, according to their interests. In this learning psychology, children are seen as individuals who have certain potentials and abilities. This theory also views that children have the will and ability to learn. So the teacher must create an environment that is able to encourage learning and achieve optimal development. Hopefully, through this learning psychology, children are not fed with materials, but teachers can focus on developing conditions in learning and selecting materials that encourage learning for students. Through the right situation, students can discuss and develop creative mindsets.

From the educational philosophy and learning psychology chosen, it can be rewritten more specific learning objectives are as follows:

- Students have authentic insights and references in developing a film work.
- Students can be critical and able to appreciate a work.
- Students are able to actively communicate to receive input, and position themselves in developing ideas and creativity.
- Students are able to get used to the basic techniques of film production practice in accordance with the theory being studied.

Then, from the results of curriculum that have been set, conducted research related to learning objectives that are applied more specifically in extracurricular film production which is divided into two dimensions. The first dimension relates to how students are able to think creatively. Then, the second dimension that is discussed is how students are able to work creatively together with others. The following is processed data for each group of questions

Dimension	Percentage
Think creatively	80%
Work creative with others	76%

From these data, it can be seen that the average student is able to think creatively well at a percentage of 80% and able to work creatively with others well at a percentage of 76%. From the overall data, the total number of children who are better at creative thinking than those who work is 14 people. In contrast, the total number of children who were better at creative work with others were arrested by 10 respondents. In connection with the results of each dimension studied, to improve the ability to work with others, requires increased time and ability to meet, exchange ideas, create new ideas creatively. Creative collaboration can occur in a compilation of people caring for, respecting, and agreeing with each other. Next, it can be seen the average percentage for each question in the dimension studied.

Question		Percentage
Think Creatively	I gather opinions in discussions to solve problems.	80,0%
	I build broader ideas through simpler ideas.	82,5%
	I convey ideas that have never existed before.	77,5%
	The idea that I gave is useful for others.	75,8%
	I filter opinions or ideas that I find.	83,3%
	I investigated more deeply the ideas I found.	80,8%
	I compare my ideas with other people's ideas.	80,0%
Work Creative with others	Other people easily understand the ideas that I tell.	66%
	I am able to work together in implementing ideas with other people.	74%
	I provide input on ideas submitted by others.	79%
	I can explain the difference between my ideas and existing ideas.	78%
	I can accept if my ideas are not approved by others.	79%
	I was able to learn from failure to come up with new ideas.	79%
	In developing ideas, I am patient in processing with others.	80%

Then, from each of the dimensions studied, the highest achievement in the ability to think creatively is in the statement, "I filter opinions or ideas that I find." With an average percentage of 83.3%, while the lowest achievement is in the statement, "The idea I gave was useful for others." With an average percentage of 75.8%. These results indicate that, in

creative thinking, students tend to be selective in accepting and getting new input. This is because new ideas or input are often seen as disturbing thoughts. Especially individuals with high levels of neuroticism tend to see new ideas as something that provokes threats and anxiety about the ideas they have. This result also shows that students tend to be selective and able to think critically in creativity. However, this also makes students in class feel the idea is not beneficial to others, because almost everyone tends to want to maintain their own ideas.

Next, the highest achievement in the ability to work creatively with others lies in the question, "In developing ideas, I am patient in processing with others." With an average percentage of 80%, while the lowest achievement is in the question, "People others easily understand the ideas I tell. "with an average percentage of 66%. Regarding the lowest results, it shows that there are difficulties found in conveying ideas or thoughts that we have to others in understandable language. This can be increased by review the views or ideas that are owned, as well as eliminate differences in methodologies that are usually used in delivery. When distance and difference in communication are absent, the creative ideas that are conveyed will be well received. In addition, there are several elements of communication that can be improved in students such as linguistics (words), visual-spatial (pictures), auditory (sounds), interpersonal (oriented to others), and intrapersonal (self-knowledge). To improve the delivery of messages in communication, learning can be done in the form of assignments in the form of presentations and subsequently confirmed to peers to convey what is captured from presentations brought by friends. The hope, by knowing which parts are not understood, students are able to learn to find and improve aspects that are not conveyed, with different methods or ways of delivering ideas. By mastering this, students are expected to be able to convey ideas well, so that they can work creatively with others effectively and efficiently, to then produce sharp and original ideas.

Although the level of ideas and communication tends to be low, overall achievements related to creativity can be said to be achieved. Students are able to think creatively and work creatively with others. The results of other questions show a number of more than 70% which indicates that the development of other aspects related to creative competence is quite sufficient.

D. CONCLUSION

Based on the previous discussion, the researcher tries to conclude that the extracurricular existence of film production is due to the high student interest in the extracurricular. Not only because of the talent they have but also because of the interest students have in the world of cinema. This requires schools to facilitate students with

extracurricular film production. In addition, the film industry is currently rife and requires a lot of experts who are able to create films, have broad insights about film, and are able to apply their creativity. This program is considered capable of becoming a forum for these goals, although in its implementation many obstacles are found. To support the program, this research can be the answer. This is proven based on the results obtained that students can achieve creativity in accordance with what is expected.

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THE EFFECT OF SELF-EFFICACY AND STUDY HABITS ON STUDENTS LEARNING ACHIEVEMENT

Anggia Meilindasari, meilindasari.anggia@gmail.com
Prof. Dr. H. Syamsul Hadi Senen, M.M.
Prof. Dr. H. Disman, M.S.

ABSTRACT

The students learning achievement become one of the important purpose in learning activities. Learning achievement is often used as reference to recognize and to improve the talents and also the competencies. Thus presented in many assesments. Such as, daily assignments scores, daily test scores, mid-exam scores, final exam scores and national exam scores. The results of the assesments become a reference to measure the success rate of students in the learning process based on the predeterminated standards. There are many factors that effects the students learning achievement. Triadic Reciprocality Theory by Albert Bandura, that learning is influenced by various interacting factors. There are individual factors, habits factors and environment factors. Reffer to those theory, this research aims to determinated the self-efficacy effect and study habits on learning achievement, uses explanatory survey method. This research was held at three high schools in Tasikmalaya. The results showed that: 1) the self-efficacy has positive effects toward study habits, 2) the study habits has positive effects toward the success rate of students, 3) the self-efficacy has positive effects toward the success rate of students by direct an undirect study habits.

Keywords: Self-efficacy, Study habits, Students Learning Achievement

A. INTRODUCTION

Students learning achievement becomes one of the important purpose in learning activities (Bhat & Khandai, 2016) . This even applies to all education systems in all over the world (Sedaghat, et al., 2011). Learning achievement is often used as a benchmark in recognizing and improving students talents and competencies (Bhat & Khandai, 2016). Learning achievements are presented in the form of assesments. Such as, daily assignments scores, daily test scores, mid-exam scores, final exam scores and national exam scores. The results of the assesments become a reference to measure the success rate of students in the learning process based on the predeterminated standards by the institution (Bhat & Khandai, 2016). This issues has been criticized in academic field for many decades (Entwistle, et al., 1974; Holtzman, et al. 1954; Lent, et al., 1984).

The matter of low learning achievement is still an important thing to study, not least in Indonesia. This was proven based on the data of *Trends In International Mathematics and Science Studies (TIMSS)* in 2015, Indonesian students ranked 36th out of total of 49 countries in terms of conducting scientific procedures. It was indicated that Indonesian students need to strengthen the abilities to integrating or analyzing the informations, and to get the conclutions, and also to generalizing the knowledge which is possessed to the other things (Utari & Senen, 2018), in which the ability of economic literacy.

Utari et al. (2018) said that the importance of economic literacy abilities in people's lives. They also said that those could make the individuals effectively in the society within the global economy that increasingly connected. The another goals, those

abilities could helped the students those pursue the high education and also had the job that become the financially responsible citizens (NCES, 2013)

Various studies have to uncover many factors that could be solve this problems. Albert Bandura in the Triadic Reciprocality Theory, explained that the success of achievement learning objectives is obtained through the supports of various interrelated elements in the learning process. Those concept said that learning process involves many factors, such as individual factors, habits factors and environment factors (Pajares, 1996).

Many studies at past decades indicated that self-efficacy become one of many invidual factors that contributed to the academic achievement (Coutinho & Neuman, 2008; Lent et al., 1984; Schunk, 1991; Valentin & Hadi, 2018). Bandura (1997) according to his *Social Cognitive Theory*, explained that the importance of self-efficacy for the individual to solve the tasks in order to achieve their goals. The students beliefs and awareness are closely related to improved the academic quality (Sungur & Tekkaya, 2006). Therefor, somebody will be able to compete in the era of globalization and world of work (Aqzayunarsih, et al., 2019).

Self-efficacy is defined as a belief in a person so that in order to catch the situation and produces many positive values and beneficials (Laura, 2010). Those situation refers to the actions of invidual to solved their problems so that they could achieved their own goals (Sihaloho, 2018). Self-efficacy assessment are measured by the level of difficulty that students have been though *(magnitude),* the level of individual confidence toward their competencies *(strength),* and also the level of achievements individuals success rate to solve their problems *(generality)* (Bandura, 1997).

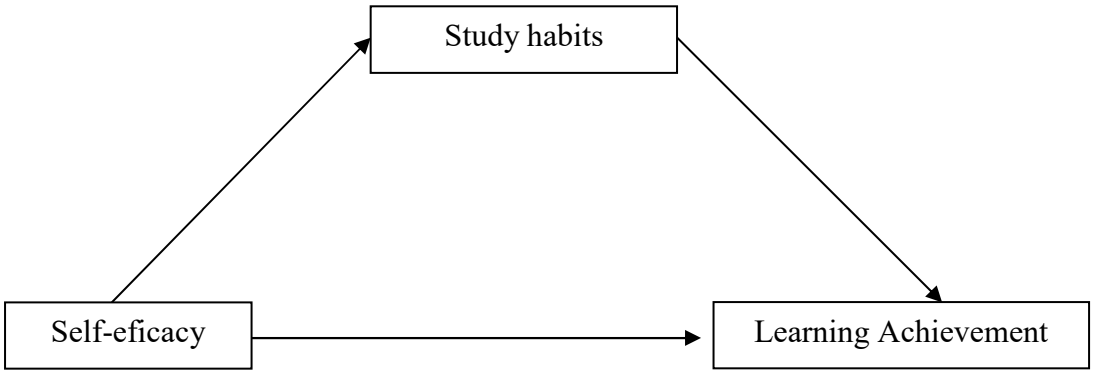
The other factors that signed the important role to improving academic quality are the study habits. The individu could thinks and regulates their behavior, so that the personality of individual aspect would involved the interaction with their environment. *Social Learning Theory* by Bandura, emphasized that the individual act based on the value control and expectations, also though the power of their mind (Siahi & Maiyo, 2015).

However, there are so many research to study the effectiveness of the study habits that related to the students learning achievement. Some of them, showed the survey instruments about the study habits, they was Brown and Hotzman in 1967. It was Study Habits Study Attitude (SHSA). The condition of the study habits is characterized by the following: 1) *work method*, such as the use of effective learning procedures, the skills and effiecency while performing academic assigments; 2) *delay avoidance,* the accuracy in completing the assigments and the abilities to withstand the disturbance; 3) *teacher approval,* the behaviors and the teaching methods; and 4) *educational acceptance,* the acceptance of established educational purpose (Credé & Kuncel, 2008).

The students are the main subject in education, so that the personal students factors are the key to their academic achievement. Those factors, could be either cognitive and non-cognitive factors (Credé & Kuncel, 2008). The self-efficacy is a part of individual cognitive factor. It doesn't have a permanent effect toward in such a situation but it also needs to be intregated with other components, such as social factor and behavior itself to solve the difficult problems (Bandura, 1982). Meanwhile, the study habits that one of the individual non-cognitive factors, also have a relation to be involved

in academical students achievement. So that if they have a good study habits, it could possibly for the students to learn independently (Sartika, et al., 2018).

The concept of self-efficacy relates to the individual desire and the individual ability to do their tasks (Bandura, 1977). Study habits that routinely done, can improved the specialization capability (Sartika et al., 2018). Based on that explanations, this research intends to examine the relationship between the self-efficacy and the students learning achievement, therefor the study habits could be the mediate between those variables. Credé & Kuncel (2008) confirmed that the study habits could affected the students learning achievements through a direct approach nor as a mediator. The paradigm to this study is described as follows.



B. RESEARCH METHOD

The research methods is a procedure to carried out the research. This research using the explanatory survey method. It goals to explain and examine the relationship between the self-efficacy (independent variable) toward the students learning achievement (dependent variable) through the study habits (intervening variable). The data collecting technique use a survey method by means of a closed questionnaire. The sample on this research has used selected 312 students of 11th grade social program of three high schools in Tasikmalaya with simple random sampling technique.

The hypothical test use *path analysis* by SPSS 24, with the following hypotical.

1) The self-efficacy themselves had a positive effecting toward the study habits
2) The study habits themselves had a positive effecting toward the students learning achievement of students
3) The self-efficacy themselves had a positive effecting toward the students learning achievement of students both directly and undirectly though the study habits

C. RESULT AND DISCUSSION

Based on the research that have implemented the results of *the path* analysis to determined the effect of variables the self-efficacy, the study habits, and the students learning achievement of 11th grade social science program students in Tasikmalaya.

3.1 The 1st Hypothesis Test Results

The verification the truth about that hypothesis has been done with regression analyze SPSS 24 aplication, showed this following this output results.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,632[a]	,400	,398	8,17144

a. Predictors: (Constant), The Self-efficacy

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	47,607	2,813		16,922	,000
	Efikasi Diri	,549	,038	,632	14,364	,000

a. Dependent Variable: The Study habits

The table showing the self-efficacy *standardized* beta value on this equation are 0.632 and value of the significance are 0.000, and also the t-test value are 14.4364 > t_{table} value 1.9676. Which means, the self-efficacy had a significance effect to the study habits. Meanwhile, the magnitude of the effect of the self-efficacy variable toward the study habits as $(0.632)^2$ = 0.400 or 40%. This means that the self-efficacy effects the study habits by 40%, while the remaining 60% has been effected by other factors. The sign (+) showed the positive effect between the variables and showed the one direction relationship, whether the higher level of the self-efficacy will followed by the hhigher level of the the students study habits.

3.2 The 2nd Hypothesis Test Results

It was hypothesized that the learning habit had a positive effect on the students learning achievement. In case to seek the truth of hypothesis, then do the partial test by following statistical hypothesis:

1) $H_0 = ß_1 = 0$: The study habits have no effect on the students learning achievement
2) $H_a = ß_1 > 0$: The study habits effects on the students learning achievement

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,691[a]	,477	,476	3,12891

a. Predictors: (Constant), The Study habits

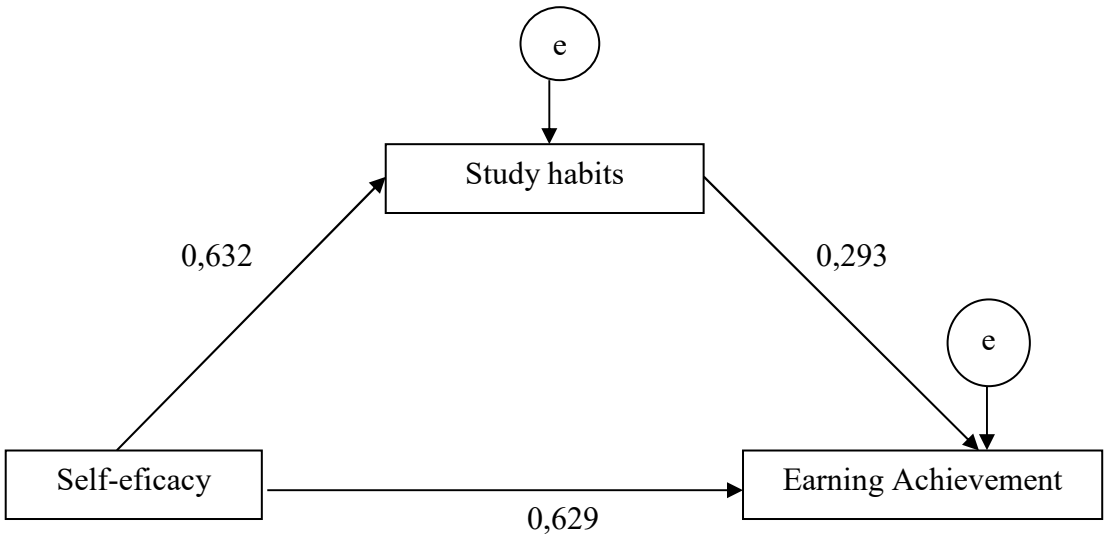
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	57,070	1,485		38,442	,000
	Study Habits	,284	,017	,691	16,827	,000

a. Dependent Variable: Students Learning Achievement

Based on the data from statistical test using SPSS 24, obtained the t_{hitung} value the study habits variable within 16.827 (P = 0.000) > significant testing, then the rate of error by 5% ($\alpha = 0.05$). So that has been decided that to rejected H_0 , this mean also that H_α has been accepted. Thus, it's concluded that the study habits effect the students learning achievement. With the t-test value by 16.827 > t_{table} value by 1.9676. So that means the study habits had significant effect toward the students learning achievement. The magnitude of the effect of the study habits on the students learning achievement by 47.7% while the remaining 52.3% are effected by other factors. The sign (+) showed the positive effect between the variables and showed the one direction relationship, whether the higher level of the self-efficacy will followed by the higher level of the the students study habits.

3.3 The 3rd Hypothesis Test Results

It was hypothised that the self-efficacy has a positive and significant effet on the students learning achievement through the study habits. The prove of the truth on this hypothesis can be done by the path of analysis the following chart:



$Y = \rho YX_1 + \rho YX_2 + e_2$

$= 0{,}629X_1 + 0{,}293X_2 + 0{,}534$

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	55,064	1,105		49,849	,000
	Self-efficacy	,224	,014	,629	16,068	,000
	Study Habits	,120	,016	,293	7,479	,000

a. Dependent Variable: Students Learning Achievement

In the SPSS 24 output regression equation, the value of *standardized* beta for the self-efficacy by 0.629 and the study habits by 0.293 within the significance value by 0.000. The value of $e_1 = \sqrt{(1 - 0{,}400)} = 0{,}775$ and the value of $e_2 = \sqrt{(1 - 0{,}715)} = 0{,}534$.

The results of the path analysis showed that self-efficacy could have a direct effect through the study habits then to the students learning achievement. The direct effect has a value by 0.629. while the magnitude of the indirect effect by (0.629) x (0.293) = 0.184 or the total of the self-efficacy effect toward the achievement students are (0.629) x (0.629 + 0.293) = 0.813

Therefor, to testing the significant effect, it has to compared the t-test value with the t_{table} value. The t-test value as 7.479 > the t_{table} as 1.9676. So then, it can be concluded that the self-efficacy had significant effect toward the students learning achievement through the study habits. The sign (+) showed the positive effect between the variables and showed the one direction relationship, whether the higher level of the self-efficacy will followed by the higher level of the the students study habits both directly and undirectedly through the study habits.

The self-efficacy is one of the factors that effects the students learning achievement. As the individual belief and their abilities to solve the problems is a reflection on so various experiences in the past. More the self-efficacy on individual that they would believed that they could do their own activities independently. Thus, it would be a provision to the individual to be able to responses so many challenges in their future.

It constant with Amanda Utari's states that the positive effects between the self-efficacy toward the students learning achievement. So it means too, the higher the self-efficacy will increase the students learning achievement. This research also supports by Sri Hardianti Sartika, whom explained that the study habits have a positive effect on students learning outcome. In her research, had proven that the study habits can mediate the effects of teacher competency factors and learning motivation on students learning outcomes. The results of her research showed a significant positive relationship between the variables of teacher compentecy, motivation, and study habits both directly and undirectly. Wheter the effects was relatively small, though.

D. CONCLUSION

Based on the findings and the discussion of the research that has been done, then it can be concluded that:

1) The self-efficacy students in State High School of Tasikmalaya in the high categories.
2) The learning habit students in State High School of Tasikmalaya are quite good.
3) The students learning achievement of students in State High School of Tasikmalaya are relatively quite high.
4) The self-efficacy has a positive and significant effect toward the study habits.
5) The learning habit has a positive and significant effect toward the students learning achievement.
6) The self-efficacy has a positive and significant effect toward the students learning achievement both directly and undirectly through the mediator study habits.

E. ACKNOWLEDGEMENT

There were need more improvement of active involvement of students as the main subject of learning, so it could improve the leaning achievement. There could be more efforts by mentoring the teachers nor the parents and also the community in order to improve the quality of the students as well education goals within. Someone who has high self-efficacy believes that they could be able to solve many problems and challenges. The writer believed and expected to the next researcher that need more variables dan diversity that have not been studied in this research.

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LOCAL CONTEXT LEARNING THROUGH STEM TO STRENGTHEN LOCAL CULTURE ATTACHMENT FOR FACING THE 21ST CENTURY ERA IN JUNIOR SECONDARY SCHOOL (CASE STUDY IN YOGYAKARTA PROVINCE)

Nina Purnamasari, nina.suwondo@gmail.com
Fera Herawati, feraherawati16@gmail.com
Center of Curriculum and Learning, Agency for Research and Development, Ministry of Education and Culture
Republic of Indonesia
Jl. Gunung Sahari Raya, Eks Kompleks Siliwangi, Pasar Baru, Jakarta Pusat, 10002

ABSTRACT

The area where students live needs to be introduced to the learning process that they understand the environment in which they live. However, not many junior high school teachers use the local context as a resource in the learning process. This results in students not knowing the environment where they live well. Though non-contextual learning will provide an artificial and not comprehensive learning experience. Therefore it is necessary to develop a learning model that can accommodate local context. The appropriate learning model, one of which is the STEM approach. Learning with the STEM Approach is learning that integrates Science, Technology, Engineering, and Mathematics, by focusing the learning process on solving real problems in everyday life. This study aims to develop local context learning through the STEM approach in several junior high schools in Yogyakarta. The application of STEM learning developed in this study integrates the Basic Competencies of several subjects namely Science, Mathematics, crafts and Indonesian in making replica one instrument of all the Kiyai Nagawilaga gamelan. This replica, gamelan replica made from used bottles. The research method used is research and development. The research was conducted based on the needs analysis obtained based on the results of the questionnaire, FGD, observation, and interviews. Development is carried out through several stages, namely the development of models and learning tools, trials, revisions, and dissemination. The STEM learning model has proven to increase focus, learning motivation, communication and collaboration skills, altogether more attach to their local culture. Competencies are demand for 21-st century education, that students must have in order be able to exist in the disruptive era.

Keywords: *Local context and culture, STEM, Learning model, Inspiration*

A. INTRODUCTION

Indonesian students must be prepared to face the era of disruption because in this era technological and scientific developments have explored all aspects and classes of human life (Ardiansyah, 2018). This era of disruption requires critical thinking and alternative solutions to deal with the changing order of life (Pratama, 2018). Thus, the skills students must possess in the era of disruption include communication, collaboration, critical thinking, and creativity. The skills that these students must possess are expected to be accommodated in the Curriculum. The 2013 curriculum as a curriculum that is currently in force, was compiled by the government to develop and strengthen student skills in dealing with 21st-century developments (Murti, 2013).

Griffin & Care, E. (2015) defines 21st-century skills-based on four categories. First, individuals must be involved in certain ways of thinking, including metacognition, knowing how to make decisions, engaging in critical thinking, being innovative, and knowing how to solve problems. Second, have good

communication skills and be able to work together in a team. Third, use the right tools and have enough knowledge to work, and have information technology literacy. Fourth, be good citizens by participating in government, showing social responsibility which includes cultural awareness, competent, and always developing career-related skills. The common thread of some of the definitions above is the tendency of abilities that must be possessed such as creativity, innovation, curiosity, intelligence, and adaptability

21st-Century skills are important to develop because, that skills will help students to survive in the future. These skills can be formed through the main principles of 21st-century learning that were conceived by Jennifer Nichols (2013), namely: 1) Learning based on students; 2) Education that builds collaboration; 3) Contextual based learning, and 4) Learning is an effort to unite students with their community.

Contextual based learning to unite students with the community will help students get to know the environment in which they live. The word context comes from English, which means atmosphere, circumstances (Echols and Shadily, 1984). It is hoped that learning can link the material in the subject matter with everyday life situations that are unique to the region. So students have the attitudes, knowledge, and skills needed to get to know and love their environment and to develop excellence and wisdom in their area of residence. (Permendikbud Number 79 of 2014, Article 2, 4, and 6).

Indonesia with various cultures and local wisdom must be utilized for the advancement of education in the form of contextual learning. Currently, there are still many teachers use textbooks only as the main learning source. Utilization of the potential of the local environment for learning, especially local culture, is still lacking. Contextual learning by linking local culture is expected to develop the attitudes, knowledge, and skills of students in solving various daily problems they face. Current learning focuses only on theory and has not been linked to the surrounding environment and culture. Some conclusions from previous studies stated this results, including Pargito in Lampung (2000: 112), Hadi in East Java (1997: 101), Samion in West Kalimantan (2002: 25), Sasongko (2004: 3), and Sapri (2000: 16) in Bengkulu. These studies result that students became not appreciating their own culture (Alexon, et al. 2010).

Learning will be meaningful if students can connect concepts and content with existing problems around them (Beers, 2011; Anggraini, 2017). When learning does not accommodate this, it will lead students to competencies that have not increased significantly. As seen from the results of PISA that show the ability of Indonesia students still low. PISA used as a parameter because this program analyzes the

ability of students to apply scientific and mathematical concepts in daily life as measured through knowledge, application, and reasoning (OECD, 2015).

Learning innovations that made the learning process more meaningful and achieve the competencies expected, is through the STEM approach (science, technology, engineering, and mathematics). Principles of STEM which by the real-life of students, expected to bridge this problem. The implementation of STEM in learning requires a lot of creativity and the ability of educators to link subject content in STEM aspects to real life. However, separate learning instructions between subject matter will affect to the ineffective of student learning experiences. Therefore, an integrated learning approach with the context of relevant social problems is considered to be able to prepare students for lifelong learning (Bindel, 2018).

STEM learning is expected to help students solve problems and draw conclusions from previous learning by applying them through science, technology, engineering and mathematics (William, 2011, Robert & Cantu, 2012; Lou et al. 2017; Utami, IS 2017). Through STEM, students are expected to have the skills of learning and innovation, such as discuss critical, creative, innovative, and able to communicate and collaborate (Winarni, Zubaidah, and Koes, 2016). Thus, students understand that the education they take is very important and useful to solve problems in the real world right now (Bank, 2009). further STEM learning can encourage students to increase higher thinking skills, improve the way of problem solving, and increase retention (Stohlmann et al 2012).

Based on the discussed earlier, it is necessary to develop STEM learning models that are integrated the local context, namely "Local context learning through STEM to strengthen local culture attachment for facing the 21-st century era in junior secondary schools (Case Study in Yogyakarta Province)". Yogyakarta Province was chosen as the locus of research because this province has local regulations that require education based on culture since 2011

B. RESEARCH METHODS

The method used in this study is a research and development method following the Borg et al. (2003). The research and development model of Borg in this research is adjusted based on needs which can be broadly described in Diagram 3.1 Research Flow Diagram as follows.

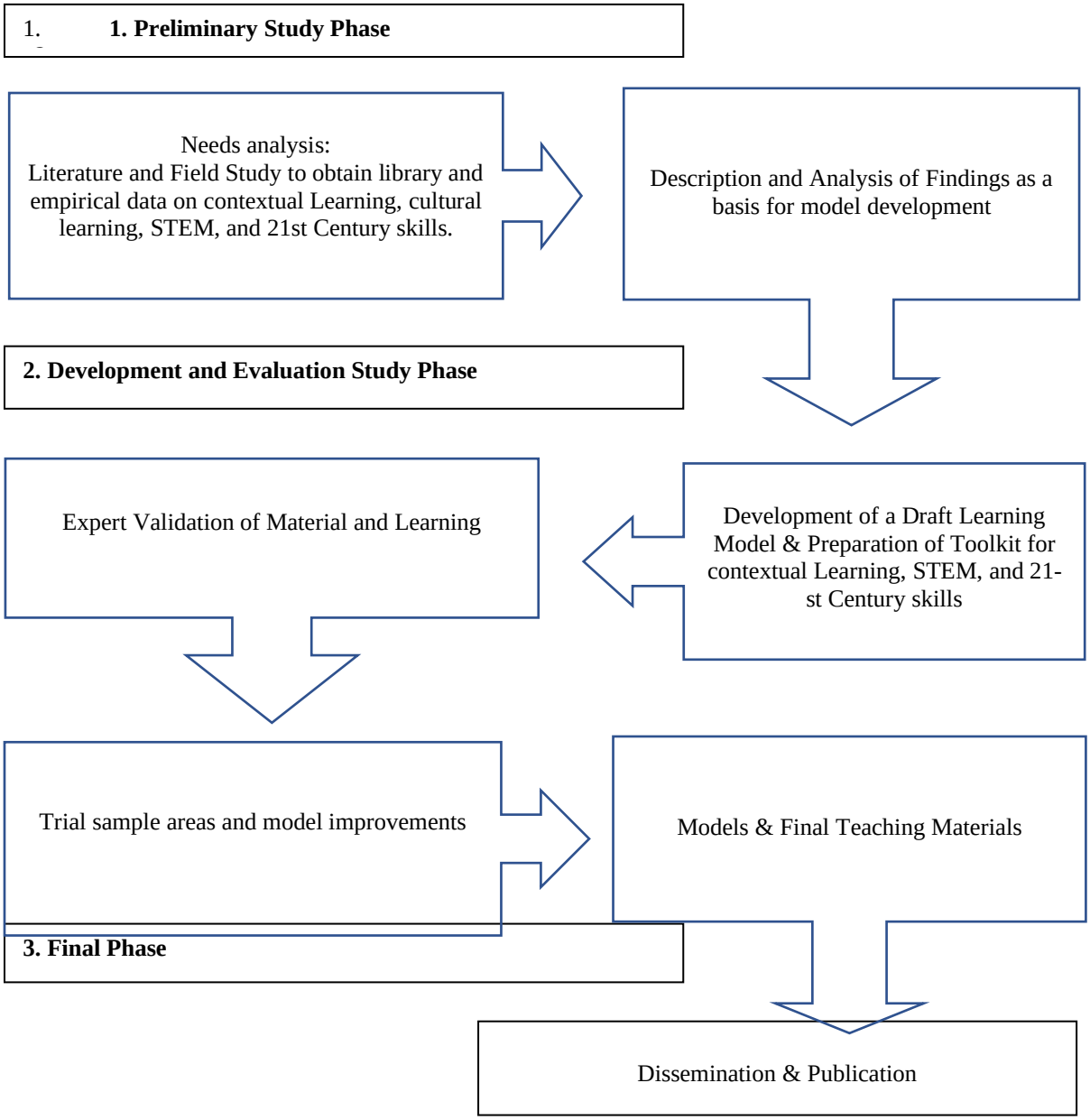

Diagram 3.1 Research Flow Chart

The flow of this research consisted of three stages, namely the preliminary study stage, the development and evaluation study stage, and the final stage. Each stage can be explained as follows:

The preliminary study phase includes (1) needs analysis aimed at gathering preliminary data about students' needs according to teacher and student perceptions, reality or reality that occurs in schools especially learning activities, programs that have been carried out by teachers, and student learning outcomes. Methods of data collection through interviews, questionnaires, focus group discussion, learning observation, and study documentation. (2) study the literature to obtain library data on learning,

STEM, local context and 21st-century skills in the sample area. The description and analysis of the results of the preliminary study are used as a basis for developing the model.

The second stage is the development and evaluation study stage. This stage includes several steps, namely (1) the development of a draft learning model and the preparation of the learning model set, (2) validation of the subject matter and learning and improvement of the learning model, (3) testing the learning model in the sample area, and (4) refining the model and teaching material. When the model has been completed, proceed with the third stage, namely the final stage includes dissemination and publication.

C. RESULTS AND DISCUSSION

Analysis of the results of the preliminary study shows that the 2013 curriculum which has been implemented for 6 years, not provided students many opportunities to involve actively in solving their surrounding problems. This problem happened because schools did not integrate their local context in the learning process. Right now, the learning process at school only integrated local context into subjects of arts and culture, crafts, and/or physical education. So that the learning process needs to be developed according to the local context following the potential and uniqueness of an area. STEM is very good when it is related to the local context because must start from simple problems faced by students in daily life. The solution of which is the application of the concepts being learned. Therefore, learning the local context is important for students, so they will have a comprehensive understanding and love their locality where they live more.

The development of this learning model is based on Yoshisuke Kumano in Deni Dharmawan and Dinn Wahyudin (2018) research. It states that at the level of primary to senior secondary education, teachers need to be given the student the latest information about the phenomena in their surroundings. What meant by phenomena is the process of occurrence of something in a sufficiently long period to produce circumstances, things, conditions, and natural events that have positive or negative impacts on humanity. This phenomenon, related to the environment surrounding should be used as learning materials or learning resources that are can be explored through various points of view. From these challenges, the teacher can develop a learning model that integrates several subject matters that can analyze the background, processes, and changes that result from phenomena.

The implementation of STEM in the context of reinventing STEM in the 2013 Curriculum requires a strategic approach. To implement STEM, a basic understanding and a strong concept of how students learn (Kelley and Knowles 2016). Therefore, it is recommended not to integrate all subject matters in

one lesson because it can be rendered difficult for teachers. At least it integrated two content from two different subjects into one learning.

The STEM developed in this study integrates several subjects namely Science, Mathematics, crafts and Bahasa Indonesia Basic Competencies in making a replica of the Kiyai Nagawilaga Gamelan using used bottles. Development of this learning model discuss start with Bahasa Indonesia content about explanatory text on Gamelan Kyai Nagawilaga. Continue with the matter of resonance space in science by calculating the area of resonance space based on the geometrical space in mathematics. The science content developed in this study about the sound as submersion of resonance in gamelan. As a musical instrument related to the content in the craft to design the procedures for making gamelan replicas. This kind of learning model developed to facilitate the teacher in planning and implementing STEM. Learning activities are designed to target STEM aspects. This learning was developed by integrating material from the Basic Competencies of different subjects to be related to each other.

The STEM learning model with local context was developed through steps as a continuous cycle as follows: 1) Context analysis to obtain information about the potential excellence of the Yogyakarta region; 2) determine themes based on the potential of local excellence namely Gamelan Kyai Ngawilaga; 3) review the Basic Competencies of the subjects and determine those relevant to the theme at the same level; 4) determine indicators of competency achievement; 5) determine relevant indicators, compile learning materials, and the allocation of time; 6) compose an integrated syllabus according to the theme; 7) compose the lesson plan.

After the series of learning, models have been completed, a model test is conducted. This trial was carried out through (1) observation, namely by taking a picture of student behavior in STEM learning, (2) questionnaire to the teaching teacher and interviews about intrinsic motivation to some students who were randomly selected, (3) test, as a result of the learning. Participants in this study were 8th-grade students in 5 state junior high schools in the city of Yogyakarta in the 2018/2019 school year. This STEM learning is carried out 2 times a week for 4 weeks, with 2-3 hours of activity per session. The number of students participating in STEM learning is 210 students. STEM learning can make students more active in learning, and become more focused because of the continuity of material between subjects.

The development of the STEM learning model should be carried out by the teacher who will implement it. It is important to the teacher understand the breadth and depth of the content that will be provided

that so the basic competencies will be achieve. Moreover to having a good understanding, to be able to develop this learning model the teacher must have the ability to communicate and collaborate with teachers from other subjects. Therefore the teacher can precisely determine which content is taught firstly and the tasks given as a basis in build students understanding concepts, and to determine the allocation of learning length. So as a whole this learning model can guide students to have a more comprehensive understanding.

Learning with the STEM approach of making miniature gamelan Kyai Naga Wilaga either directly or indirectly can develop 21st-century skills in students. This can be seen in the learning process, namely (1) communication can be seen through the ability to express opinions with clear sentences, convey commands clearly communicate the idea well, and put it in a report, (2) collaboration can be seen through collaboration and interaction in making projects, (3) critical thinking can be seen in the activities of designing, engineering, testing and improving the model of miniature gamelan, (4) creative, can be seen in the design process to create a miniature gamelan Kyai Naga Wilaga needed a high level of creativity so that it can produce products such as planned, functioning, and has aesthetic value.

Based on the results of interviews, observations, and test the students obtained a positive response regarding learning with the STEM. This can be seen at the learning process when student have good interest, very active in asking questions, discussing, and doing assignments to produce well-assigned products.

D. CONCLUSIONS AND RECOMMENDATIONS

Local context as part of STEM learning can provide a fun, effective and comprehensive learning experience so that it is more meaningful for students. Learning outcomes through assessment result is quite good because students have good understanding on the content being studied. But it still needs to be considered the time allocation for the achievement of entirely Basic Competence of each subject in that is not related to the theme.

learning model can be implemented and gives good results because the sample teacher who uses this learning model has a good understanding of the content to be learned. Also, teachers must have the ability to communicate and collaborate with other subject teachers, so that they can guide students to a comprehensive understanding.

The STEM learning model as an approach can be used to develop 21st-century skills namely communication, collaboration, critical thinking, and creative. 21st Century skills are very important to develop so that Indonesian students can survive in the era of disruption. In the era of disruption if only mastering knowledge, without being accompanied by the skills needed properly, will have difficulty facing life in the 21st century.

Further research and development of learning models are expected to broaden studies on different subjects and subjects. Moreover, this research can be continued by comparing student learning outcomes between those who use STEM and those who do not.

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THE DIFFERENCES OF STUDENTS' SELF-IDENTITY AS MALAYSIAN CITIZENS BASED ON GENDER AND ETHNICITIES

Zunaida Zakaria, Mohd Mahzan Awang, Abdul Razaq Ahmad
Faculty of Education, The National University of Malaysia

ABSTRACT

This article examines and identifies student self-identity as Malaysian citizens based on gender and ethnicity differences. The practice of students' identity as a Malaysian has five aspects i.e. understanding human behavior, causes and consequences in History, the uniqueness of homeland, patriotic citizenship and understanding of democracy. The study involved a number of 1920 Year Five primary school students in Peninsular Malaysia which comprised of 480 students each from four zones. Among the zones involved are north, south, middle and east. This study utilized a survey research design by using a set of questionnaire for data collection. Data was analysed using descriptive and inferential statistics of the SPSS software version 22.0. Descriptive analysis focuses on the mean and standard deviation, mean while the inferential statistics focus on Two-Way MANOVA analysis. Results of the pilot study shows that all constructs were examined at strong level of reliability between 0.9 35 and 0.936. Findings of actual study revealed that there were no significant differences of self-identity based on gender while there are significant differences in student self-identity based on ethnicity. This study implies that effective and comprehensive programs are required in order to enhance the sense of equality and depth among students of various ethnic groups in Malaysia.

Keywords: *identity, nationality, gender, ethnicity, patriotism, democracy, Malaysia*
Research Grant Codes: GG-2019-015 & GG-2018-013

A. INTRODUCTION

History curriculum development in Malaya has been around since the days before independence (Aini Hassan, 2008). However, the development of the History curriculum in the pre-independence period was slow and non-progressive. The history curriculum taught during that time was only intended so that students can understand the Malay culture through literary experience, especially in the form of Hikayat Hang Tuah (Khoo Kay Kim, 1992). In fact, the British never emphasized on local history curriculum. This is because they were scared that their political and economic status will be threatened (Suffean Hussin, 1996). Only in 1930 the History subject was taught in the Malay medium schools but more focused merely reading and memorizing facts contained in history textbooks.

History is one of the subjects that all students in the Primary School History Curriculum (KSSR) must learn from Year 4 in Level II. All of this is to increase students' understanding of History subjects in the early stages so that students gain knowledge and master the history skills. The History curriculum integrates knowledge, skills, citizenship elements and civic values into its implementation inside and outside of the classroom. In KSSR, the elements of citizenship and civic values taught through the subject of History are fundamental to the production of citizens with national identity. These elements can shape Malaysians with social cohesion and national integration. Thus, knowledge and understanding of aspects of the history of the nation can produce students who are patriotic by giving exposure to analyzing and evaluating historical facts in detail. History subjects at the primary level are a continuation of

the secondary level as a dynamic discipline (Abdul Razak et al., 2013) . This is an effort to equip students with the development of knowledge, skills and practice of pure values as well as the application of their sense of identity as Malaysian citizens.

Multi-ethnicities in Malaysia

The implementation of citizenship elements and civic values is via Citizenship Dimensions. This element refers to a nation that inhabits a geographic environment that has an ethos as a link between the ethnic groups that inhabit it. Malaysia has multi-ethnicities, cultures and religions. As a nation of various ethnics and racial backgrounds, they each inherited their ancestry. Therefore, for the Chinese or Indians they remain with their original identity and not Malay despite living in Tanah Melayu (old name for Malaysia). This is also the case for other ethnic groups such as Iban and Kadazan where despite being the original inhabitants of Malaya, due to not being Muslim and do not speak the Malay language, they are not recognized as a Malay but recognized as bumiputera.

Ahmad Ali Seman (2012) stated that history education allows students not only to understand the community, culture, country by knowing the past but also allows loyalty fostered among students. This is also supported by Haydn (2001) who believes that through education history, students will be able to explore their own lives, understand their own country and society. In addition, through the history of nation building, people can see differences such as ethnic differences and ways of life in society. For Fletcher (1989), developing a multicultural society requires all young people to understand how local communities shapes community identity and relationships.

Students Self-Identity Practices as Malaysian

Malaysian national identity has a close link with the historical backgrounds of the Malay civilization. Historical fact has proved the supremacy of the Malays in Malaya. Islam has been at the forefront of national identity formation in line with the provisions of the Federal Constitution. According to Zainul Rijal (2010) national identity does not appear suddenly when the country attains independence but before the advent of colonialism itself where it has become a symbol of people's pride. This identity is untouched by invaders, even after hundreds of years that they ruled Malaya.

In this regard, a nation with a strong sense of identity is difficult to accept outside influence, which is contrary to the culture of the nation. The identity of a nation is a structured and dynamic belief, attitude and opinion held by a nation. Individuals with self-identity will understand who they are and be careful in the actions and behaviors which are opposed to the religious, cultural and customs. Self-identity results from a series of beliefs and understandings which arise from the thoughts and actions of an individual (Abdul Razak et al. (2014)) .

According to Rogers (1981), the formation of identity is a result from the influence of the environment of individual interaction. This means that the identity of the nation is the result of a combination of its collective members' self-concept. A good environment is necessary to

create a good society and good morals but must also be born based on environmental factors which can influence human life habits . Mohamad Khairi and Asmawati (2010) argue that the environment can affect one's appreciation towards moral values. According to him, the appreciation of moral values is the final stage of the social process which is shaped by social learning. The level of appreciation of values is a reflection of the most lasting and most rooted social influence and as a result of a desire for the truth that exists in a person that involves an element of strong belief.

Research Aim

The purpose of this study was to examine the differences between the practice of student self-identity as a citizen of Malaysia based on gender and ethnicity. The practice of self-identity can be measured based on several constructs such as understanding human 800ehaviour, causes and consequences in History, the uniqueness of homeland, glorious and patriotic citizens as well as the understanding of democracy. Self-identity refers to the qualities or characteristics of a person or a nation that form the identity and character of that nation (Ahmad Mohamad Said, 2009).

B. METHODOLOGY

The study was conducted using a questionnaire containing 33 items comprising demographics (4 items), understanding human behavior (5 items), causes and consequences in history (5 items), homeland uniqueness (5 items), patriotic citizens (7 items), and democratic practice (7 items). The questionnaires in this study used a 1 to 5 likert scale of Strongly Disagree, Disagree, Strongly Agree, Agree and Strongly Agree. In order to measure the level of environmental support, the interpretation of mean scores as follows:

Table 1 Interpretation of Mean Scores

Scale range	Mean Score Interpretation
1.00 - 2. 2 0	Low
2. 2 1 - 3. 4 0	Medium Low
3. 4 1 - 4. 60	Simple
4. 61 - 5.80	Medium High
5.81 - 7.00	Height

Source: Jamil Ahmad (2002)

The pilot study involved 80 students to obtain the validity and reliability of the instrument used. The pilot study was a preliminary study conducted on a small number of samples before conducting the actual study. This pilot study aimed at analysing respondents' understanding of the accuracy of terms, languages and adjust the format and words used in the questionnaire items (Alias, 1992). The pilot study showed that the Cronbach's alpha value of each component studied is at level 0.986 . The data were analyzed using *SPSS* computer software version *22*. Descriptive statistics (mean and standard deviation) and inference

statistics (One-way MANOVA) . This study involved 1920 year 5 students of a total of 800 (41.7 %) male students and a total of 1120 (58.3 %) female students. For ethnicities, 46.9% are Malay, 30.2% and 22.9% are Chinese and Indians respectively.

C. RESULTS

Overall Level of Students' Self Identity as Malaysian Citizens

Descriptive analysis involving mean and standard deviation were conducted to determine the level of self-identity among students as Malaysian citizens.

Table 2: The level of Self Identity as Malaysian Malaysian Citizen as a Whole

Item	Mean	SD	Interpretation
Understanding Human Behavior	3.60	0.72	Medium high
Causes and Consequences in History	3.38	0.69	Moderate
The Uniqueness of the Homeland	3.92	0.79	Medium high
Patriotism and Citizenship	4.07	0.68	Medium high
The Practice of Democracy	3.62	0.60	Medium high

The descriptive analysis in Table 2 shows that Malaysian citizenship is generally at a relatively high level. The aspects with the highest mean were the patriotism and citizenship with a mean score of 4.07 and standard deviation of 0.68 followed by The Uniqueness of the Homeland with the mean score of 3.92 and standard deviation of 0.79. While the lowest mean is the Causes and Consequences in History with a mean score of 3.38 and a standard deviation of 0.69.

The Differences in Students' Self-Identity Practices as MLaysian Citizen Based on Gender and Ethnicities

The practice of self-identity as Malaysian citizens include the aspects of human behavior, cause and consequences in History, the uniqueness of homeland, glorious and patriotic citizens as well as understanding of democratic practices. Comparison of Malaysian citizenship practices by gender and ethnicity was performed using the Two-Way MANOVA test. The results of the MANOVA analysis are as shown in table 3 as follows.

Table 3 Two-Way MANOVA Analysis of Differences in Malaysian Citizenship based on Gender and Ethnicity

Effect	Wilks' Lambda value	The value of F	DF between groups	DF In Group	Sig
Gender	0.996	1,354	5	1912	0.239

Ethnicity		0.960	7,984	10	3824	0.000
Gender * Ethnicity	*	0.969	11967.830	5	1912	0.394

Table 3 shows that based on the comparison of the mean scores of Malaysian citizenship practices based on gender; there is no significant differences in Malaysian citizenship practices in terms of understanding human behavior, causes and consequences in history, the uniqueness of homeland, glorious and patriotic citizens as well as understanding of democratic practice by gender. On the other hand, there is a significant differences in the self-identity practices among students based on ethnicities.

Subsequent multiple ANOVA analysis was performed to look at the difference of mean score for each dependent variable in the practice of Malaysian citizenship based on gender and ethnicity. Table 4 shows the comparison of mean scores and standard deviations of aspects of Malaysian citizenship by gender and ethnicity.

Table 4 Mean Score and Standard Deviation for the Aspects in the Practice of Malasyian Self Identity based on Gender and Ethnicities

Malaysian Self-Identity Practices	Gender	Ethnic	N	Mean	Standard Deviation
Understanding Human Behavior	Male	Malay	392	3.65	0.86
		Chinese	267	3.81	0.62
		Indian	141	3.66	0.89
		Total	800	3.71	0.79
	Female	Malay	833	3.68	0.83
		Chinese	94	3.93	0.81
		Indian	193	3.72	0.85
		Total	1120	3.71	0.83
	Total	Malay	1225	3.67	0.84
		Chinese	361	3.84	0.68
		Indian	334	3.70	0.87
		Total	1920	3.71	0.82
Causes and Consequences in History	Male	Malay	392	3.49	0.84
		Chinese	267	3.66	0.65
		Indian	141	3.58	0.82
		Total	800	3.56	0.78
	Female	Malay	833	3.51	0.82
		Chinese	94	4.09	0.80
		Indian	193	3.55	0.69

		Total	1120	3.56	0.81
	Total	Malay	1225	3.50	0.83
		Chinese	361	3.77	0.72
		Indian	334	3.56	0.75
		Total	1920	3.56	0.80
The Uniqueness of the Homeland	Male	Malay	392	3.83	0.61
		Chinese	267	4.06	0.56
		Indian	141	3.94	1.15
		Total	800	3.93	0.73
	Female	Malay	833	3.84	0.61
		Chinese	94	4.30	1.69
		Indian	193	4.02	0.99
		Total	1120	3.91	0.84
	Total	Malay	1225	3.84	0.61
		Chinese	361	4.12	0.99
		Indian	334	3.99	1.06
		Total	1920	3.92	0.79
Patriotism and Citizenship	Male	Malay	392	4.04	0.61
		Chinese	267	4.15	0.60
		Indian	141	4.03	0.72
		Total	800	4.07	0.63
	Female	Malay	833	4.04	0.60
		Chinese	94	4.24	1.20
		Indian	193	4.07	0.84
		Total	1120	4.06	0.71
	Total	Malay	1225	4.04	0.60
		Chinese	361	4.17	0.80
		Indian	334	4.05	0.79
		Total	1920	4.07	0.68
The Practice of Democracy	Male	Malay	392	3.69	0.73
		Chinese	267	3.85	0.65
		Indian	141	3.79	0.70
		Total	800	3.76	0.70
	Female	Malay	833	3.70	0.73
		Chinese	94	4.04	0.79
		Indian	193	3.90	0.53
		Total	1120	3.77	0.70
	Total	Malay	1225	3.70	0.73
		Chinese	361	3.90	0.67
		Indian	334	3.85	0.61
		Total	1920	3.76	0.70

Table 4 shows that female students (mean = 3.71 and SD = 0.83) have similar mean to male students (mean = 3.71 and SD = 0.79) in terms of understanding human behavior. In terms of cause and consequences in history, it was shown that male students (mean = 3.56 and sp = 0.78) also had similar mean to female students (mean = 3.56 and SD = 0.81). Furthermore, it was found that female students (mean = 3.91 and SD = 0.84) had lower mean than male students (mean = 3.93 and SD = 0.73) in terms of the uniqueness of homeland construct. While in terms of glorious and patriotic citizenship, female students (mean = 4.06 and SD = 0.71) had lower mean than male students (mean = 4.07 and SD = 0.63). The study also found that male students (mean = 3.76 and sp = 0.70) had lower mean than female students (mean = 3.77 and SD = 0.70) in terms of democratic practice.

The practice of self-identity as Malaysian citizens for the understanding of human behaviour construct based on ethnicity shows that Chinese students (mean = 3.84 and SD = 0.68) have a higher mean as compared to students of Malays (mean = 3.67 and SP = 0.84) and indian ethnicities (mean = 3.70 and SD = 0.87). In term of cause and consequences in History, Chinese students (mean = 3.77 and SD = 0.72) also have a higher mean than Malays (mean = 3.50 and SD = 0.83) and Indians (mean = 3.56 and SD = 0.75). This is also similar in the aspect of the uniqueness of the homeland where it was found that Chinese students (mean = 4.12 and SD = 0.99) have a higher mean compared to the Malays (mean = 3.84 and SP = 0.61) and Indians (mean = 3.99 and SP = 1:06) . The study also found that students of Chinese ethnicity (mean = 4.17 and SD = 0.80) have a higher mean than Malays ethnic (mean = 4:04 and SP = 0.60) and eIndian ethnics (mean = 4.05 and SP = 0.79) for the construct of glorious and ptraiotic citizens. While the aspect of understanding democracy, it is also revealed that Chinese students (mean = 3.90 and SD = 0.67) have a higher mean as compared to Malay (mean = 3.70 and SD = 0.73) and Indian (mean = 3.85 and SD = 0.61). Table 4.67 shows the results of the Two-way ANOVA to find out the mean differences in Malaysian citizenship practices based on gender and ethnicity.

Table 5 Two-Way ANOVA Analysis in Self-Identity Practices of Malaysian Citizens Among Male and Female Youths based on Ethnicities

Demography	Self-Identity Practices of Malaysian Citizens	Type III Sum of Square	Df	Sum of Square	F	Sig.
Gender	Understanding Human Behavior	1.101	1	1.101	1.635	0.201
	Causes and Consequences in History	2.386	1	2.386	3.758	0.053
	The Uniqueness of the Homeland	1.720	1	1.720	2.760	0.097
	Patriotism and Citizenship	0.172	1	0.172	0.369	0.544
	Democracy Practices	1.416	1	1.416	2.873	0.090
Ethnic	Understanding Human Behavior	9.197	2	4.599	6.829	0.001
	Causes and Consequences in History	22.348	2	11.174	17.601	0.000
	The Uniqueness of the Homeland	26.614	2	13.307	21.355	0.000
	Patriotism and Citizenship	5.118	2	2.559	5.490	0.004
	Democracy Practices	15.662	2	7.831	15.886	0.000
Gender*Ethnic	Understanding Human Behavior	19150.24	1	19150.24	28439.6	0.231
	Causes and Consequences in History	17879.72	1	17879.72	28163.8	0.421
	The Uniqueness of the Homeland	21750.14	1	21750.14	34905	0.324
	Patriotism and Citizenship				49118.	
	Democracy Practices	22.893.43	1	22893.43	8	0.132
		19980.04	1	19980.04	40533.6	0.143

Table 5 revelas that there were no significant differences in understanding human behavior (F = 1.635 and sig = 0.201), cause and effect in history (F = 3.758 and sig = 0.053), homeland uniqueness (F = 2.760 and sig = 0.097), patriotism and citizenship (F = 0.369 and sig = 0.544) and the practice of democracy (F = 2.873 and sig = 0.090) based on gender gender.

Comparison on the aspects of Malaysian citizenship practice by ethnicity, however, found significant differences in understanding human behavior (F = 6.829 and sig = 0.000), cause and effect in history (F = 17.601 and sig = 0.000), uniqueness of thehomeland (F = 21.355 and sig = 0.000), patriotism and citizenship (F = 5.490 and sig = 0.004) and democratic practices (F = 15,886 and sig = 0.000). To look at the differences in Malaysian citizenship practices by ethnicity in more detail, Post Hoc Scheffe test analysis was performed. The results of the analysis are displayed in Table 6

Table 6 Post Hoc Scheffe Test on the Differences of Self-Identity Practices Based on Ethnicities

Self-Identity Pratice as Malaysian Citizen	(I) Ethnic	(J) Ethnic	Mean Diefference (I-J)	Standard Error	Sig.
Understanding Human Behavior	Malay	Chinese	-0.16	0.04	0.003
		Indian	-0.02	0.05	0.909
	Chinese	Malay	0.16	0.04	0.003
		Indian	0.14	0.06	0.061
	Indian	Malay	0.02	0.05	0.909
		Chinese	-0.14	0.06	0.061
Causes and Consequences in History	Malay	Chinese	-0.26	0.04	0.000
		Indian	-0.05	0.04	0.509
	Chinese	Malay	0.26	0.04	0.000
		Indian	0.21	0.06	0.002
	Indian	Malay	0.05	0.04	0.509
		Chinese	-0.21	0.06	0.002
The Uniqueness of the Homeland	Malay	Chinese	-0.28	0.04	0.000
		Indian	-0.15	0.04	0.008
	Chinese	Malay	0.28	0.04	0.000
		Indian	0.13	0.05	0.079
	Indian	Malay	0.15	0.04	0.008
		Chinese	-0.13	0.05	0.079
Patriotism and Citizenship	Malay	Chinese	-0.13	0.04	0.005
		Indian	-0.01	0.04	0.946
	Chinese	Malay	0.13	0.04	0.005
		Indian	0.11	0.05	0.070
	Indian	Malay	0.01	0.04	0.946
		Chinese	-0.11	0.05	0.070
Democratic Practice	Malay	Chinese	-0.19	0.04	0.000
		Indian	-0.15	0.04	0.002
	Chinese	Malay	0.19	0.04	0.000
		Indian	0.04	0.05	0.664
	Indian	Malay	0.15	0.04	0.002
		Chinese	-0.04	0.05	0.664

Table 6 shows a significant difference in understanding human behavior between Malays and Chinese. In addition, there are also significant differences in the causes and consequences in history between Malays and Chinese as well as Indian and Chinese. However, the uniqueness of the country found significant differences between ethnic Malays and Chinese and Malay with Indian. Next there is a significant difference between Patriotism and Citizenship of Malays in Chinese. As for the practice of democracy, it was found that there were significant differences between Malays and Chinese and Malay with Indian. The results of the analysis of

the effects of the interaction between gender and ethnicity on aspects of Malaysian citizenship are as follows .

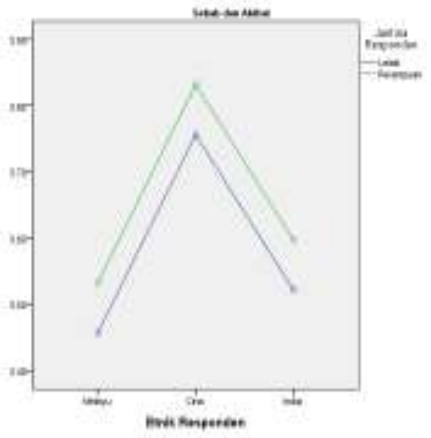

Figure 1a

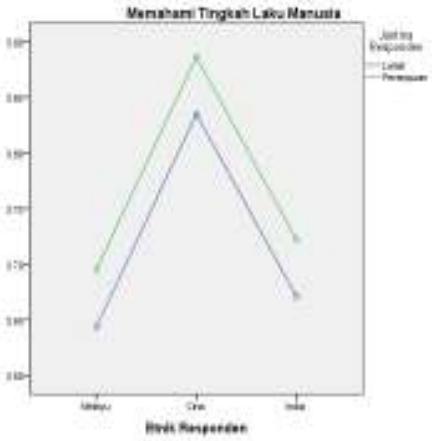

Figure 1b

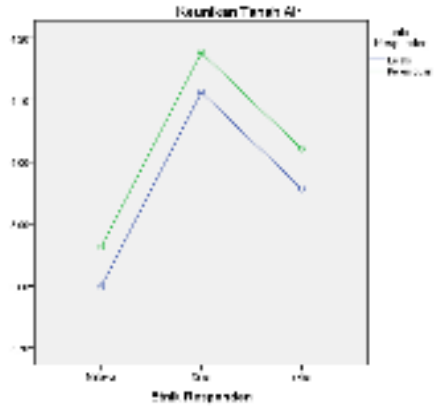

Figure 1c

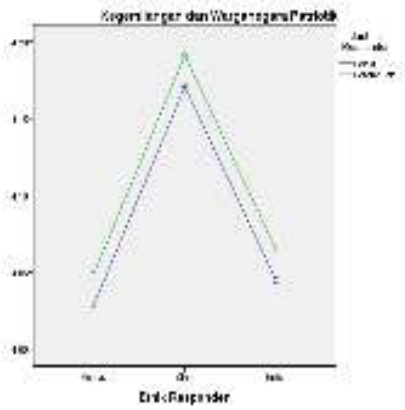

Figure 1d

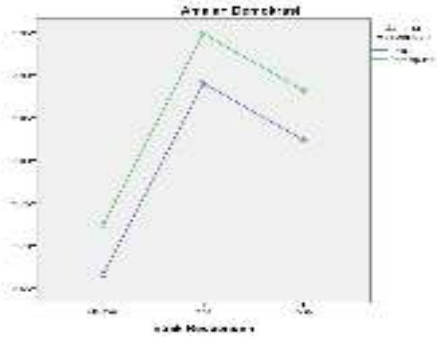

Figure 1e

Figure 1 (ae) Effects of Gender and Ethnic Interaction on Aspects of Understanding Human Behavior, Causes and Consequences in History, Homeland Uniqueness, Patriotism and Citizenship and Democracy Practice

From Figure 1 (ae) it is found that there is no significant interaction between gender and ethnicity in understanding human behavior, causes and consequences in history, the uniqueness of homeland, patriotism and citizenship and the practice of democracy. Female have higher

mean and vary significantly as compared to meles of Malays, Chinese and Indians ethnicities in understanding the aspects of human behavior, cause and effect in history, the uniqueness of the homeland, patriotism and citizenship as well as democracy practice.

D. DISCUSSION

Self-identity practices of Malaysian citizenship based on gender show that both male and females have the same level of self-identity. The results of this study are in line with the study of Li et al ., (2011) who found that students' self-identity in men and women was similar. However, this practice of identity is different from time to time as students gain influence from outside that will affect their practice. However, Wineburg (2001) stated that the purpose and goals of education History need to be focused on explaining the current situation, developing an understanding of current issues, enhancing inter-racial understanding and deepening the cultural and human heritage of humanity.

History subjects should also be taught to assist in knowledge building rather than knowledge transfer. It aims to help producing students who can appreciate the history of a nation. Indirectly, it also reinforces the student's self-identity and loyalty to the country. Meanwhile, Anuar et al., (2009) also stated that almost all countries in the world recommend history education as a medium to tell their country's history to the younger generation . The importance of being a citizen of Malaysia, understanding the state of society and the country and a shared memory of historical events is crucial in ensuring the continuation of true citizenship in a real context. This is also acknowledged by Teo Kok Seong (2011) who emphasized that today's students need to be given the proper meaning of national identity. This is also seen in line with Davies and John's (1999) view; Tate (1994) and Haydn (1999).

This study further found that there is a significant difference in the practice of Malaysian citizenship based on ethnicity. Based on the findings, all aspects measured in citizenship practices show that there are differences in perceptions between ethnic groups. Chinese students are seen to give lower meanings to the aspects studied in their practice than other students. This explains that all constructs in this practice have positive feedback from Chinese students compared to non-Chinese students. It also illustrates that the goals of History Education are now in line with Chinese students' tastes. Non-Chinese students are less likely to understand the goals of History Education as outlined in the Historical Lesson Syllabus. This causes them to misunderstand and appreciate this subject in the classroom.

IMPLICATION AND SUGGESTION

This study has implications towards the goal of the Ministry of Education . An effective teaching and learning process is essential to ensure that the goals of History Education are outlined. Teachers need to implement the teaching and learning planning carefully and take into account the student's ability to set achive the desired learning objective. Teachers need to come up with a variety of approaches, methods or techniques that make teaching and learning more fresh and motivated for the students to follow. Thus, the practice of the student's self-identity can be cultivated and well nurtured.

Self-identity is an important aspect of the national education system as it will give lead to the younger generation who are the pillars of the country. The findings of this study can be used to help the school administration to plan more efficient strategy and to use advantages to ensure that students are actively involved in the teaching and learning process comfortably as well as with high levels of motivation. This effort will strengthen the function of a school in line with the mission of the Ministry of Education Malaysia and the country.

E. CONCLUSION

Learning history is very important in order to produce students with high Malysian identity. History reflects the aspirations and ideologies of the country. The practice of Malaysian citizens self –identity can be realized by students based on content standards and learning standards which clearly expressing the government's commitment in ensuring today's generation who are intellectually, spiritually, emotionally, physically and prepared to face globalization based on 21st century knowledge .

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RELATIONSHIP BETWEEN HISTORY TEACHERS' TEACHING STYLE AND CREATIVITY TOWARDS STUDENTS' ATTITUDE IN HISTORY SUBJECT

Annisa Ulhusna Hamden[1] & Mohd Mahzan Awang[2]
[12]Faculty of Education, The National University of Malaysia, MALAYSIA

E-mail: madamhusna@gmail.com

ABSTRACT

This study was done to determine the relation between the practice of teachers' teaching style and teacher's creativity towards the students' behaviour in learning History subject. A set of questionnaire was used to measure students' perception towards History subject based on their teachers' teaching style and creativity when teaching them History in class at school. Respondents of this study consists of year 6 students of the year of 2018 from a cluster school which is also undergoing the trust school programme in Sepang district, Selangor. The method used in this study is quantitative research. From the study done, it shows that there is a significant relation between history teachers' teaching practice and creativity with the behaviour of students towards History subject. Implication of this study is to help teachers to realize the need of improving teaching style in teaching practice besides teaching creativity, making sure History teachers to teach relevantly according to the current era and current generation. It is also important to ensure positive thoughts towards History subject besides carrying effective History lesson by having proper updated teaching style being practiced and to have creativity in teaching to suit the process of globalization.

Keywords: Practice, teaching style, creativity, behaviour, history

A. INTRODUCTION

Ministry of Education Malaysia (Kementerian Pendidikan Malaysia) had revised the History curriculum and the main objective of History subject at school is to bring up patriotic values among Malaysian students. According to Norrizan binti Seman (2013), new History curriculum is a combination of knowledge, History thinking skills, and also patriotism values. Focus of the new History curriculum is to deliver knowledge and understanding about Malaysia local History so that students will know about their origin and heritage and be proud of it. Therefore, it is a challenge for History teachers to deliver knowledge of Malaysians' local origin and heritage while ensuring the students to feel proud of their heritage and origin by learning History at school.

The content of History subject at primary school is made to educate students to understand the national background. This matter is being carried out by observing changes that happen from time to time among Malaysians despite the practice of some maintained heritage cultures among Malaysians. Besides that, content of History knowledge was arranged chronologically to discuss early History of Malaysia and also about the harmony and sovereignty of the nation.

Furthermore, through Kurikulum Standard Sejarah Sekolah Rendah or KSSR, learning History will help students to understand the past with the attitude of having curiosity, understanding idea and concept, and also applying the elements of reasoning and thinking about the consequences of things happened in the past. Besides that, students can also recognize the sources of History and information in life from learning History at school. The importance of History in life can be realized by learning the lesson from the past to strengthen the harmony among diverse Malaysians. Through KSSR, students can also understand the process of building civilization among human which give significant impact in human's life. According to KSSR, by learning History, students can also value national heritage at local area, across nation, and globally. Even though there are many objectives wanted to be achieved by teaching History in Malaysia, the challenges must be taken seriously by the History teachers.

Therefore, reaching 22nd century, History teachers should always be creative in delivering and applying History knowledge at school. This is important in order to help students to be able to understand and remember Historical facts while building national identity more effectively. This study is carried out to research about the relationship between History teachers' teaching style and year 6 students' behaviour towards History subject.

B. Teaching Elements in History Education

The effectiveness of teaching and learning depends on the style of teaching that teachers chose to practice. The ability of making students to be interested to study and get involved in the activities being carried out in the classroom is very important. A good, creative, and skillful History teacher can use variety of teaching skills and techniques to suit the students' level (Osman Muamat, 2016). Students' achievement is also influenced by their teachers' teaching style practice.

Effectiveness of delivering knowledge depends on the History teacher's creativity and History teacher should empower their historical knowledge and make sure students are involved in all skills of learning History (Bahari Md Shah, 2011, in Mohamad Fadzil dan Abdul Jaleel 2013). Besides that, Osman Muamat (2016) stated that teaching practice is a process of delivering knowledge and skill which can help to change the student's behaviour. Rohizani et al. (2005) and Ab. Halim et al. (2004) define teaching practice as a habit in teaching including planning activities, carrying out the teaching, evaluating, and also feedback.

Curriculum Development Center (1999) in Malaysia define creativity as the ability of producing new original ideas and synthesizing it when the idea is gained by inspiration. There is a lot of attempts being done by researchers to define creativity. Creativity is making something that never exist to be existed and it is a new thing which have value (De Bono 1992). Based on the definitions of creativity, creativity is clearly the ability to create something new and original, and the new original idea must be valueable. Therefore, History teachers should be creative in thinking about new ideas of how to help students to understand and learn History lessons in the class. The most challenging job for a teacher is to ensure students have high interest and have fun while studying (Abdul Rahim 2001). Students tend to not be interested in History subject if the teacher do not have creative teaching style practice

There are 5 Historical Thinking Skills in Malaysia Historical study at school. The first one is to explore complex and abstract ideas with teachers' guidance. The first Historical thinking skill is to understand chronology. Students should be able to understand the historical things that happened in the past based on the timeline. The second Historical thinking skill is to explore evidence. Students should be able to recognize primer and scunder evidence of History. Students should also be able to make comparison between the evidences to determine the significance, date, the location, and the persons involved.

In this study, certain teaching styles being practiced by History teachers are being analyzed to see its relationship with students' behaviour towards History subject. There are 6 teaching styles being analyzed and studied on in this study. The first teaching style analyzed was the usage of technology in teaching History. The second teaching style is teaching History with teacher centered style, such as teacher reading the factual notes out loud and students write down the notes based on teacher's reading. The third teaching style being studied on is about homework being given to students to strengthen students' knowledge. The fourth teaching style analyzed in this study is teachers teaching students outside the classroom. The fifth teaching style being studied on is fun learning in teaching History such as learning by acting historical drama. The sixth and last teaching style among History teachers being studied on in this study is developing patriotic values among students.

C. Research Objectives

i. To recognize the level of teaching styles being practiced by History teachers in the classroom.

ii. To recognize the level of students' behaviour towards History subject outside school after learning History subject inside the classroom at school.

iii. To find out the relationship between History teachers' teaching style and the attitude of year 6 students towards History subject.

iv. To determine the difference of students' attitude towards History subject based on demographical factor which is gender.

D. Research Methodology

This study used descriptive quantitative research method. The research was conducted at a primary school located in Sepang district in Selangor, Malaysia. Respondents of this research are year 6 students aged 12 by the year of 2018. Data was collected from a set of survey questionnaire. This research also used 5 point likert scale. The interpretation mean score of this study was done based on Nunnaly dan Bernstein (1994) scale model. There are three sections in the questionnaire, which are section A which determines demography of respondents, section B which recognize teachers' teaching style and section C to discover students' behaviour towards History subject.

The survey questionnaire used in this study was referring the Alpha model; Cronbach's alpha to measure the reliability to make sure its reliable. According to Cronbach (1946), Cronbach's alpha value is suitable to be used as reference of reliability in certain construct. Wiersma and Jurs (2005) stated that inference statistic is a statistic that used sample data from a population to make inference about the population. Besides that, inference statistic can also be used to interpret relationship of different variables in details (Chua 2006). Inference statistic used in this study are Anova, Pearson Correlation, and T-test.

E. Findings and Discussion

Timetable 1: Respondents' demography profile

Demography		Total (persons)	Percentage (%)
Gender	Boys	33	22
	Girls	117	78
Year	6	150	100

From Timetable 1, only 22% of respondents were boys while the other 78% out of the respondents were girls. All the respondents were year 6 students of a primary school in Sepang district, Selangor, Malaysia.

The data to interpreted the level of teachers' teaching style practice in this study was referring to Timetable 2. The timetable below shows interpretation of scale range sourced of Jamil Ahmad (2002).

Timetable 2: Mean score interpretation reference

Scale range	Mean score interpretation
1.00- 2.33	Low
2.34-3.67	Medium
3.68-5.00	High

The first question of the study which questions the level of teacher's teaching style and creativity in teaching History at the school is based on the following Timetable 3.

Teachers' teaching style	Mean score	Standard deviation	Interpretation
Using technological teaching aids	1.68	0.72	Low
Teacher centered learning	1.30	0.53	Low
Homework	1.23	0.46	Low
Learning outside classroom	2.20	0.71	Low
Fun learning like Historical drama	2.02	0.81	Low
Embrace patriotism by celebrating national day	1.70	0.83	Low

Based on Timetable 3, first research question to know about the level of teachers' teaching style and creativity in teaching History is answered. It's found out from the data of Timetable 3 that the highest level of teachers' teaching style in teaching History from students' view is learning outside the classroom; such as visiting museum or Historical places which have the mean score of 2.20. Its followed by fun learning teaching style such as Historical drama in the classroom that also shows teachers' creativity which have the mean score of 2.02. The third highest level of teaching style found out among the History teachers is to embrace patriotism by celebrating National day with 1.70 mean score. The lower level of teaching style practiced by History teachers was found out as traditional teachers centered learning which scored mean of 1.30. Finally, the lowest level of teachers' teaching style being practiced by the History teachers was found is to be giving homework to students with 1.23 mean score.

Timetable 4: Students' behaviour towards History subject based on teachers' teaching style practice and creativity

Students' behaviour towards History subject	Mean score	Standard deviation	Interpretation
I love to watch films about the historical past such as "Leftenan Adnan"	2.62	1.12	Medium
I like to read any notes about History on any of the school walls	2.03	0.78	Low
I will decorate my bicycle with Malaysia flag during the national month	3.02	1.27	Medium
My family and I will decorate the car with Malaysia flag during the national month	3.02	1.11	Medium
I love to watch videos about History using the Youtube	2.32	0.99	Medium
I love to watch History channel at the television	2.32	1.08	Medium

through Astro			

The second research question to know level of students' behaviour towards History subject based on teachers' learning style practice is anwered with data based on Timetable 4. Finding shows that the level of students' behaviour towards History subject is highest with mean score 3.02 referring to the behaviour of them liking to decorate their bicycle with Malaysia flag during national month which represents patriotism related to History subject. The second highest level behaviour of students towards History subject is the behaviour of decorating family car with their family with Malaysia flag during the national month and the mean score is 3.02. The mean scores of both highest and second highest level of students' behaviour towards History subject are on medium level based on the interpretation of mean score by Jamil Ahmad (2002).

The third highest level of students' behaviour towards History subject is liking to watch historical film such as Leftenan Adnan with the mean score of 2.62. The fourth highest level of students' behaviour towards History subject is liking to watch historical video using Youtube with mean score 2.32 which is at medium level. The lowest level of students' behaviour towards History subject is liking to read historical notes on the school walls with mean score of 2.03 which is also interpreted as low level. Second research question on what is the level of students' behaviour towards History subject is therefore answered with students' behaviour towards History subject is overall at medium level.

Timetable 5: Pearson Correlation result of teachers' teaching style with students' behaviour towards History subject.

Teachers' teaching style	Students' behaviour towards History subject		Interpretation
	R	Sig	
Using technology	0.141	0.283	Weak
Fun learning	0.608	0.000	Medium

Based on Timetable 5, the third research question which is to know the relationship between teachers' teaching style and students' behaviour towards History subject will be answered. From the data in Timetable 5, it is proven there is significant relationship between teachers' teaching style and students' behaviour in History subject where as $r = 0.608$ and $sig.= 0.000 (p<0.05)$ when teachers carry out fun learning such as historical drama in teaching History. There is also no significant level between teachers' teaching style when using technology with students' behaviour towards History subject whereas the $r = 0.141$ and $sig = 0.283$ $(p>0.05)$.

Timetable 6: Relationship between teachers' creativity with students'behaviour towards History subject.

Teachers' creativity	Students' behaviour towards History subject		Interpretation
	R	Sig	
Using technology	0.141	0.283	Weak
Learning outside classroom	0.536	0.002	Medium
Fun learning like drama	0.608	0.000	Medium

Based on Pearson correlation test conducted, History teacher's creativity using technology like playing video towards year 6 students is not significant whereas $r=0.141$ and $sig.=0.283$ $(p>0.05)$. When History teachers do some teaching outside classroom such as visiting historical sites or museum, there is significant level of students' attitude towards History subject whereas $r=0.536$ and $sig.=0.002$ $(p<0.05)$. However, the significant level of students' attitude towards fun learning such as drama in learning History is higher whereas $r=0.608$ and $sig.=0.000$.

Timetable 7: Level difference based on students' attitude towards History based on gender

Gender	Total	Mean	Standard deviation	t-value	Sig.

Male	33	2.85	1.19	-0.621	0.537
Female	17	3.06	1.26		

Based on Timetable 7, t-value for both male and female students in learning History is t = -0.621and the significant level is p=0.537. The significant level is bigger than 0.05 whereas (p>0.05). Therefore, it is clear there is no significant level between students' gender and their attitude towards History subject and this answered the fourth research question.

F. Conclusion

To conclude, students' behaviour towards History subject is significantly related with teachers' teaching style and practice. Therefore, History teachers should practice proper teaching style to deliver factual historical knowledge with creativity so that students do not just learn History subject only to pass the test but also learn History to gain knowledge and enjoy it. There is also no significant difference in students' behaviour towards History subject based on gender meaning that both male and female students behave the same towards History subject based on teachers' teaching style and practice. Further researches should be done more creatively like using experimental method and mixed method for stronger data reliability and to discover more in helping students to learn History more effectively.

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USING THE HUMAN GRAPHING METHOD AMONG FORM 3 STUDENTS IN MASTERING LOCUS

Fatimah Haji Uyub[1]
[1]SMK Seri Tualang, Pahang, MALAYSIA

E-mail: fatimahhajjuyub@gmail.com

ABSTRACT

The research was done to overcome the problem of students in understanding locus. A total of 30 students were selected and literature review was done through classroom observation, checklist & pre-test. Findings shows that a majority of students fail to get the gist of the topic to exceed teacher's expectation. The work plan which had completed 6 months earlier was focused on techniques in pushing the student's skills in solving any locus related questions. The Human Graphing method involved the kinesthetic of the students and the post-test results shows promising productivity. Several interviews with students do reveal students are more confident in solving locus.

Keywords: Human graphing method, locus, Mathematics

A. INTRODUCTION

Locus often be a problem for Pentaksiran Tingkatan 3 (PT3) candidates. Although this is a topic in the form two KBSM syllabus, but around 60% - 70% of candidates have not yet to master it when they are in form three. Researcher note that most students are not able to see the differences in each locus correctly and accurately. They often answer questions by trying and guessing. In this regard, the approach that teachers have chosen while teaching may not yet be appropriate to help students solve the locus problem.

B. Research Purpose

In this study, the researcher will propose the use of Human Graphing techniques to teach the locus of a moving object from a fixed point, the locus of points that are equidistant from two fixed points, the locus of points that are of constant distance from a straight line, locus of points that are equidistant from two parallel lines and a locus of points that are equidistant from two intersecting lines. In any PT3 questions, a locus question consists of 4 marks altogether. In our daily lives, locus were used to identify the track of every moving being.

C. Research Objectives

3.1 General Objectives

i. To educate students' comprehension about locus
ii. To build students' interest of mathematics

3.2 Specific Objectives

i. Students are able to demonstrate the 5-locus movement
ii. Students are competent in drawing all of the 5-locus
iii. Students are capable to answer correctly any locus questions

D. Research Methodology

This study was done through classroom observation, checklist and pre-test.

4.1 Observation

I have made a distinct observation on students' behaviours during the lesson, before and after the research were conducted. I have also made a few cross-check on the students's handbook to identify their level of command about locus.

4.2 Checklist

A checlist form was prepared and distributed to the students for identifying the root of problems surrounding those 5 types of locus.

4.3 Pre-test

A pre-test were given to the target group to detect how far is their level of understanding about locus. All of the items in the pre-test are suitable for PT3 level. After completing marking students' work, without returing the pre-test nor ask the students to do emendation, I immediately introduce the Human Graphing method.

E. Findings

This study involves 30 students of 3 Khawarizmi (KWZ) and 3 Ibnu Rushd (IBR). Students were randomly selected based on their performances in a few series, yet controlled, test in class.

Table 1: Total respondents

Class	3 KWZ	3 IBR
Male	7	4
Female	10	9
Total	**17**	**13**

Table 2: Result

Achievement	3 KWZ	3 IBR
Weak	9	9
Moderate	3	2
Good	5	2
Total	**17**	**13**

5.1 Observation

Before the test even started, students shows lack of enthusiasm in learning locus. A brief check on their handbooks revealed their confusion in answering locus questions.

5.2 Checklist

It came to my knowledge that a greater part of the students are having trouble in differentiating each locus. For example, 25 out of 30 studetns agreed that they are not fully master on how to determine the locus of two fixed points.

5.3 Pre-test

Students' grasp of the concept are still weak. The pie chart shows the locus pre-test results.

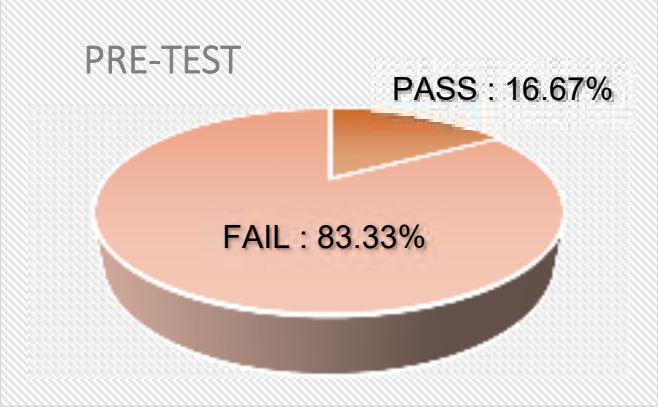

Figure 1: Locus pre-test results

F. Suggestion of Intervention Study

I'm using the Human Graphing method to boost student's understading about locus. This method requires students to move around.

6.1 Activity 1: Locus of a moving object from a fixed point

I had explained to the students about the use of locus in our daily lives as well as its significance in PT3. Then, students were divided into groups of 10 members. Student "A" was asked to stay still whilst the other 9 students had to move in a circle, 3 steps apart from student "A". This activity is considered as successful if the students do accordingly as in instructed.

Figure 1: Student showing locus movement around a centre

6.2 Activity 2: Locus of points that are equidistant from two fixed points

Students were divided into groups of 10. Student "A" & "B" were instructed to stand apart from each other, meanwhile the other 8 students have to move with the same distance in between student "A" & "B". This activity is considered as successful if the 8 students moved in straight line.

Figure 2

6.3 Activity 3: Locus of points that are of constant distance from a straight line

Students were divided into groups of 6 members. Each group were given a 3 metres long rope and 2 students must hold the rope to perform a straight line. The other 4 students required to move always 2 steps apart from the rope. This activity is considered as successful if the 4 students moved in 2 straight lines as the rope.

Figure 3: The male student is moving as locus

Figure 4: The female students are holding a rope representing a straight line

6.4 Activity 4: Locus of points that are equidistant from two parallel lines

Students were divided into groups of 10. Each group was given 2 sets of a 3 meter long rope and 4 students should hold the rope to perform 2 straight line. The other 6 students required to move in parallel between the ropes. This activity is considered as successful if the 6 students moved in a straight line as the rope.

Figure 5: The male students are holding a rope in a parallel manner

6.5 Activity 5: Locus of points that are equidistant from two intersecting lines

Students were divided into groups of 10. Each group was given 2 sets of a 3 meter long rope and 4 students should hold the rope to perform 2 crossed line. The other 6 students ought to walk with the same distance from the center of the ropes. This activity is considered as successful if the 6 students moved in a way that equally divides the angle of both ropes.

Figure 6: Locus of points that are equidistant from two intersecting lines

Figure 7: The female students are forming the angle bisector

6.6 Outcomes and Implications

This action research was completed in 6 weeks where the first 4 weeks were spent on implementing the 5 activities. On the earlier stage of the research, student had completed a checklist about their passion in Mathematics especially about locus. Both pre-test and post-test are vital for this research. During the pre-test, a greater number of students guessed for the answers, this can be proven when similar questions were given to them.

Using the Human Graphing method, students show signs of awkwardness for the first activity, but after a few attempts by themselves and with teacher's encouragement, students show favorable feedback as well as positive attitude.

6.7 Reflection

The post-test results for 26 out of 30 students display a noticeably upturn. While a student shows no changes, the other 3 students resulted in devaluation (though still pass the test) owing to them sensing that they are in a comfort zone as they had achieve quite good in pre-test.

The Human Graphing method helped the students understand the topic better. They are more focus while answering any locus related questions. A small number of students propose the teacher to keep on finding creative ways in comprehending other topic.

G. Suggestion and Conclusion

A particular ideas for next action research are as follow :

i. The execution of Human Graphing method in lines and angles.

ii. The expansion of Human Graphing method in other subjects such as Geography (cardinal directions).

Based on this study, all students are actively involved, showing conclusive attitude towards Mathematics as teacher make them as the main focus in the class. The Human Graphing method evidently benefits the students to figure out and solve any locus questions. As a conclusion, I hope the Human Graphing method will profit all secondary Mathematic teachers

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THE SOCIO – ENVIRONMENTAL SUPPORT AND SOCIO – EDUCATIONAL PARTICIPATIONS TOWARDS EDUCATIONAL WELLBEING AMONG SECONDARY SCHOOL CHILDREN IN SRI LANKA: A CONCEPTUAL PAPER

J.D. Careemdeen[1], Mohd Mahzan Awang[1] & Abdul Razaq Ahmad[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA

E-mail: p94548@siswa.ukm.edu.my

ABSTRACT

The objective of this paper is to conceptualize several concepts on socio-environmental support, socio-educational participation and students' educational well-being in Sri Lankan context. Conceptualization of this study is entirely developed based on secondary data but incorporating current literature reviews collected from different perspectives and sources. Different definitions and interpretations have been developed in conceptualizing socio-environmental support, socio-participation and wellbeing by different scholars and organizations based on their different thematic motivations. In this study, home environmental support, school environmental support and community environmental support are conceptualized in terms of socio-environmental support while parental participation, teacher participation, peer participation and student participation are conceptualized in terms of socio-educational participation. Based on the well-being conceptual framework of Sri Lanka, educational well-being is achieved when a student experiences educational wellbeing and when they can access educational resources; experience educational competence and self-worth; exercise educational participation; build educational social connections; and enhance educational (physical and psychological) wellness.

Keywords: Conceptualization, socio-educational support, socio-educational participation, student educational well-being

A. INTRODUCTION

Student educational well-being is considered a very important aspect of the development of pupils in every nation. The socio educational environment plays a main role in learners' educational well-being. The socio educational environment provides the platform where learners acquire knowledge, attitudes and skills which lead for lifelong learning. One's educational well-being state most probably is determined by his/her socio educational environment. So, achievement of students' educational wellbeing most probably is influenced by external environmental factors and social context where a student lives. Education begins at home and continue in school through communication with one's parents, teachers, peers and other adults. Parental educational support, teacher educational support, peer educational support and other adults educational support as well as socio educational participation in a child's education affect a child's educational well-being. Thus, parents, siblings, teachers, peers and other social and community agents are the pedestal of any society, community and nation. It is the duty of parents, siblings, teachers, peers and other social and community agents to assist and give the children all the necessary educational support so that they will be able to achieve well-being, and success in their education. Students are the labour pool of the nation. Consequently, they can also develop the nation with their talents; if they have been furnished with useful information and skills, they would be able to contribute to develop the country economically and socially (Daniyal et.al, 2011).

Empirical studies have shown that there is relationship between social support and students' wellbeing. For instance. Lopez-Zafra et al. (2019) found that social support is directly related to students' well-being. Moreover, Nirmala et al. (2018) found that support from parents, siblings, peers and teachers leads to stronger wellbeing of students. Moreover, Yamaguchi (2013) Buijs et al. (2016) and Lau et al. (2011) reveal that, social capital has an impact on students' well-being.

Thus, this paper conceptualizes several concepts on socio-environmental support, socio-educational participation and students' educational well-being in Sri Lankan context.

2. Socio-Environmental Support

Socio environmental support is conceptualized by various scholars. Ahmad et al. (2016). Define environmental support as an educational activity that is organized and conducted at the school or community level and has a direct impact on student achievement and learning. It is an initiative of the school or local community towards the school. On the other hand, Demaray (2005) conceptualizes 'socio environmental support' as "transpiring from multiple sources (parents, teachers, close friends, classmates, and school) and consisting of multiple types (emotional, informational, appraisal, and instrumental), which may serve to improve a student's adjustment and outcomes (p. 691)". Malecki and Demaray (2002) refers to socio environmental support as an individual's perception or reception of emotional, informational, appraisal, and tangible support from people in their social network". On the other hand, Cohen (2004) defined social support as the provision of both psychological and material resources with the intention of helping the recipients to cope with stress. Callaghan & Morrissey, (1993) defined social support as a process in which resources are delivered or substituted between at least two individuals with an aim to enhance the well-being of the recipient.

Wherever, Awang et al. (2014) divided social support into three categories namely enacted social support, perceived social support and social integration. According to them enacted social support stresses on a person's specific actions and perceived social support stresses on a person's action whereby perceived social support refers to subjective judgements of the assistance quality provided by close friends and family members. Social integration focuses on social relations and kinship. Even though, all three types of social support possess close link, the supportive orientations are different.

Based on empirical studies as well as Bronfenbrenner (1979) ecological theory, home, school and community environment can be conceptualized where students-environment or multifaceted interactions occur at environmental, organizational and individual levels (Dooris, 2009; John-Akinola, and Nic Gabhainn 2015) along with the effect of these different levels of interactions on students' educational wellbeing.

In terms of home environment, parents and siblings can provide their educational support for school children. Parents are close to the student, aware of the student's wishes and aspirations, always provide encouragement and support to the student's desire to excel in education (Rozita Abdul Latif 2009). Parental involvement in student learning has a significant impact on student achievement. Parents who often talk to students about learning at school will make them more confident in pursuing their learning goals. Positive relationships between parents and students significantly enhance students' intellectual and personal development (Anisa Saleha 2015). For instance, Gordon et al. (2012) found that three dimensions of parental support such as general parental support, school specific involvement, and parental expectations had a significant impact on adolescents' students' academic success. Moreover, Žukauskienė et al. (2014) study revealed that parents' psychological control was positively, and emotional warmth was negatively related to students' depressive symptoms and delinquent behavior. Further, Boonk et al. (2018) reviewed the research literature on the relationship between parental involvement and students' academic achievement. The study revealed that parental involvement variables such as reading at home, parents that are holding high expectations/aspirations for their children's academic achievement and schooling, communication between parents and children regarding school, parental encouragement and support for learning that show promises according to their correlations with academic achievement.

On the other hand, in terms of home environment, there rare studies on siblings' support, for instance, Pajoluk (2013) indicated that old siblings support for young siblings' academic plans in terms of goal settings, involvement, encouragement and old siblings' engagement. Moreover, Moguérou & Santelli (2015) highlights that considering siblings and the dynamics between siblings is also productive in terms of educational support.

In terms of school environmental support, it refers to teacher and peer support for students' learning. Teachers will build strong relationships with students. Tian et al. (2015) revealed that both social contextual factors (teacher support and classmate support) and are crucial for adolescents' subjective well-being in school. Lei et al. (2018) identified that there is strong correlation between teacher support and students' academic emotions. Likewise, Pilkauskaite-Valickiene et al. (2015) revealed that adolescent students differ in line with attachment to teacher support, school and open classroom climate for discussions – six groups with distinct patterns of school context perception can be identified. When teacher-student interactions take place, teachers need to be fair, honest and concern of students' views and ideas as they give their opinions or views. In addition, teachers should always be prepared with the content of the lessons, activities and ways of thinking that also affect student engagement in the classroom (Anisa Saleha 2015).. In the context of this study, teacher support is seen from the students' perspective of the teacher's efforts by taking care of the students, developing positive interactions with the students and being a listener to the problems faced by the students.

Relationship between peers and classmates also influences the student's wellbeing (Ratnik & Rüüte, 2017; OECD, 2017; Liu et al., 2016; Tian et al., 2015). Child's peers become increasingly important to him as he moves away from his parents toward independence. From his peers he learns many of the things he needs to know in order to become an adult (1971, Brembeck). Meanwhile, Bariyyah (2015) revealed that peer-helping is effective to reduce students; academic-stress individually and collaboratively. For instance, Kiefer et al. (2015) highlighted that teacher and peer support in terms of academic and social, may foster a responsive learning environment, and have unique implications for supporting adolescents' academic motivation, classroom engagement, and school belonging. Similarly, Din et al. (2016) indicated that the overall peer support for student learning (students who stay in boarding) had a higher mean compared to family involvement.

Likewise, many empirical studies in the past found that there is close relationship between, socio-environmental support and student well-being. Several studies focused on teacher support, parents support, and class mates support in a same study and how its effect on student learning. For instance, Newland et al. (2014) found that the strongest predictors of both life satisfaction and mental health were school satisfaction and teacher, family, and peer relationships. The strongest predictors of self-image were school satisfaction, gender, teacher and peer relationships and number of residences. Results of the study discussed in the context of ecological, relationship-based interventions from early childhood through school-age years.

Parental and siblings support in this study is viewed as assistance, guidance, contribution, and encouragement that the parents and siblings provide to the students. Parents and siblings will ask questions about student development, encourage students to study hard to achieve excellence and help students when they have difficulty completing school assignments. In the context of this study, teacher support is seen from the students' perspective of the teacher's efforts by taking care of the students, developing positive interactions with the students and being a listener to the problems faced by the students. Peer support in this study was viewed from the perspective of caring students, providing assistance, guidance, contribution and encouragement. In the context of this study, community environmental support refers to relatives, neighbors and various local agents support for student learning. Community environmental support in this study was viewed from the perspective of caring students, providing assistance, guidance, contribution, encouragement and encouragement.

3. Socio Educational Participation

As conceptualized, the socio environmental support, and conceptualizing socio educational participation is not an easy task. However, efforts are made to conceptualize socio educational participation as it has immense effect on student educational wellbeing. Putnam (1993) explains that social capital is very important for social integration. In his study of communities in the United States, he found that social cohesion among community members was crucial to the development, security, prosperity, and sustainability of harmony. Putnam (1993) states that social networks have value. He emphasized that there are three forms of social networks that need to be strengthened: social capital bonding, bridging social capital and linking social capital. Bonding social capital means to trusting and cooperative relations among members of a network who see themselves as sharing an identity. An example would be interpersonal relationship among family members, friends and neighbors (Poortinga, 2006; Putnam, 2002; Yamaguchi, 2013). Bridging social capital pertain to relations of mutual respect between people who know that they are not socio-demographically alike (differing by class, ethno cultural group, age, etc) (Poortinga, 2006; Putnam, 2002; Szeter & Woolcock, 2004; Yamaguchi, 2013). Linking social capital refers to individuals' overall portfolio of social relationship and it is central to the ability to shape well-being, welfare and health (Poortinga, 2006; Putnam, 2002; Szeter & Woolcock, 2004; Yamaguchi, 2013).

Requena (2003) suggested that importance of social capital lies in that it brings together several important sociological concepts such as social support, participation, integration and social cohesion. From an individual perspective, social capital is seen to consist of people's social relations (e.g., egocentric networks) and whether they believe others can be trusted; these link to resources individuals can draw on to help them meet their needs (Giordano & Lindstrom, 2010; Oksanen et al., 2010). Linking social capital relates to persons' overall portfolio of social relationships; it is central to the ability to shape well-being, welfare and health, and also denotes to the capacity of existing community resources (Poortinga, 2006; Putnam, 2002; Szeter & Woolcock, 2004). Putnam (2002) is often cited as defining the key constructs of social capital as norms, networks, and trust, which seem to provide a sufficient framework for organizing the research conducted to date, regardless of conceptual approach. Putnam (2002) identified a strong linear relationship between the public health index and the social capital index, particularly based on social integration and social support.

Several researchers highlighted that there is positive relationship between social capital and wellbeing (Buijs, 2016). Yamaguchi (2013) revealed that social capital has an impact on university students' health and well-being. They also suggest that differences in health status and well-being can be plausibly attributed to processes associated with socio-environmental circumstances and situations. Aziz et al. (2018) carried out a study on factors behind classroom participation of secondary school students (a gender-based analysis). The study concluded that teachers, parents and peers and curriculum are important external factors which supported boys classroom participation more than girls who in turn more influenced by classroom environment.

Based on the literature and selected past researches, it can be concluded that parental participation in student learning will warrants the effectiveness of the learning process. For instance, Maina (2016) found that parental participation in boys education at a very low level to influence above average academic performance. Moreover, it was revealed that while fathers participated more in financial activities mothers were involved actively in all educational activities. Fathers' participation was a major predictor in boys' education even though mothers were more active.

Thus, it can be concluded that student's participation in the classroom will warrants the effectiveness of the learning process. For instance Abdullah et al. (2012) concluded that there should be an understanding on the behavior of the students in the classroom will help the lecturers identify the passive students and plan ways to encourage them to actively participate in the classroom. Both lecturers and students must actively engage in the classroom to create a more fun and meaningful learning experiences.

Social participation is based on the Social Capital Theory by Putnam (2001) which looks at the behavior or participation in various activities in society either directly or indirectly. Social participation in this study focused on Parental participation, teacher participation, peer participation and student participation from the perspective of cooperation and working together with student learning.

4. Educational Well-Being

Wellbeing' is a complex term that encompasses many dimensions of psycho-social life. Wellbeing means a positive state of being. It frequently refers to a person's overall sense of wellness and health; it can also refer to a person's feelings of general satisfaction or happiness with his/her quality of life; it also points to the experience of fulfilment and contentment with one's life circumstances (Abesekara et al. 2009). The social indicators research gives insight to the general question what makes people feel having a good live (Andrew & Withey, 1976). Empirical evidence can show that the so-called objective life circumstances and living conditions (like the social-economic status) only have s small effect on well-being (Diener et al., 1995). Studies on the influence of subjects' personality confirm the possibility that some people feel happier than others) Costa & McCrae, 1980) but also illustrate the necessity to take person-environment interaction (e.g. social integration) into account (e.g. Hotard, McFatter, McWhirter & Stegall, 1989). Relic theories on well-being stress the relevance of goals and personal striving for individuals' satisfaction (Diener, 1984) and point out the importance of psychological processes of mediation in evaluating one's life (e.g. Brunstein, 1993). Social comparison theories discuss the point of reference with people evaluate their life (e.g. Michalos, 1985) and demonstrate the difficulties in finding an inter and intra-invidual consensus for these subjective reflections (e.g. Averill & More 1993).

Noble et al., (2008) define student wellbeing based on an international literature review carried out for the Australian Federal Government as follows;

"Student wellbeing is strongly linked to learning. A student's level of wellbeing at school is indicated by their satisfaction with life at school, their engagement with learning and their social-emotional behaviour. It is enhanced when evidence-informed practices are adopted by schools in partnership with families and community. Optimal student wellbeing is a sustainable state, characterized by predominantly positive feelings and attitude, positive relationships at school, resilience, self-optimisation and a high level of satisfaction with learning experiences". (p.30).

Well-being defined by latest scholars and literature considering dimensions/ themes of wellbeing.

For instance, OECD (2016) described wellbeing in the study of framework for the analysis of student well-being in the PISA 2015 as "a dynamic state characterized by students experiencing the ability and opportunity to fulfil their personal and social goals. It encompasses multiple dimensions of students' lives, including:

cognitive, psychological, physical, social and material. It can be measured through subjective and objective indicators of competencies, perceptions, expectations and life conditions".

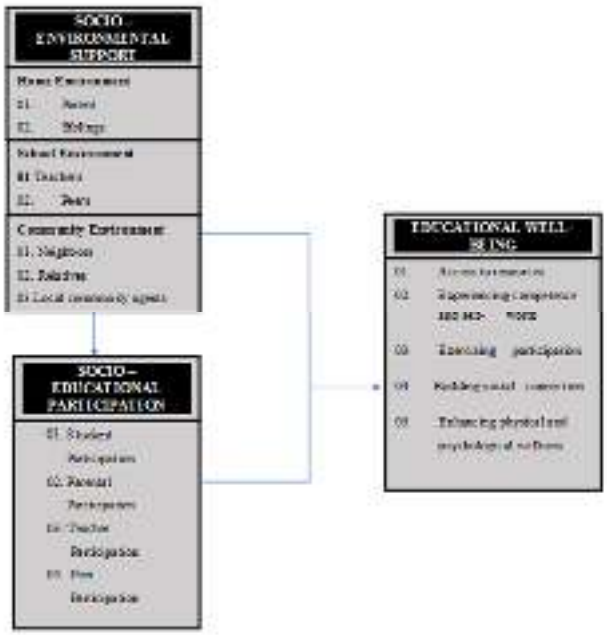
Likewise, definitions of Psychosocial Assessment of Development and Humanitarian Interventions (PADHI, 2009) program which was developed a well-being conceptual framework for Sri Lankan context considered five dimensions. An individual or community experiences wellbeing when they can access physical, material, and intellectual resources; to experience competence and self-worth; to exercise participation; to build social connections; and to enhance physical and psychological wellness. Moreover, Sri Lankan conceptual well-being framework stress that existence of resources competencies, or opportunities to participate does not define the domains of wellbeing but it emphasizes the active role persons, students, families and even communities must play to achieve these characteristics. Communities or individuals must be able to access to resources, experiencing competence and self-worth, exercising participation and building social connection if they are needed to experience wellbeing (PADHI, 2009).

Empirical student wellbeing studies taken place based on themes/dimensions such as emotional wellbeing, physical wellbeing, intellectual wellbeing, spiritual wellbeing, social wellbeing and environmental wellbeing and so on. Students' well-being is the result of interactions among several distinct but closely related domains. For instance, PISA (2015) student wellbeing study focuses on wellbeing dimensions such as psychological, social, cognitive and physical. Ramli et al. (2016) focused their student well-being study based on the dimensions such as having dimension, loving dimension, being dimension and health condition. They carried out a study on Students' Well-Being Assessment at two private secondary schools in Indonesia. Furthermore, Nirmala et al. (2018) illustrated their findings of the well-being study in terms of main six dimensions such as emotional wellbeing, physical wellbeing, intellectual wellbeing, spiritual wellbeing, social wellbeing and environmental wellbeing. They carried out the study to explore the factors influencing the general wellbeing of adolescents with health problems in Government schools, Chennai, India.

However, this well-being study considered definitions of Psychosocial Assessment of Development and Humanitarian Interventions (PADHI, 2009) program which was developed a well-being conceptual framework for Sri Lankan context. As an individual or community experiences wellbeing when they are able to access to educational resources, experiencing educational competence and self-worth, exercising educational participation, building educational social connection and enhancing educational wellness in terms of physical and psychological dimensions.

B. Conclusion

Based on the conceptualization of the concepts which were discussed, the conceptual framework for the existing study is developed to cater for the Sri Lankan context as follows:



The conceptual framework of the study is a combination of two theories named ecological systems theory (Bronfenbrenner 1989), social capital theory (Putnam 1993) and a well-being conceptual framework of the Sri Lanka (2009) to look at the relationship between environmental support and socio educational participation towards students' educational well-being from three types of schools.

In this framework, the educational wellbeing among secondary school students' in Sri Lanka is influenced by the environmental support in terms of family environmental support, school environmental support and community environmental support both directly and indirectly and by the socio educational participation in terms of parental participation, teacher participation, peer participation and student participation both directly and indirectly.

Accordingly, there are three main constructs for this study. The first construct is socio- environmental support, second one is socio- educational participation and third one is educational wellbeing. Socio environmental support (First main construct) comprise of three sub constructs in terms of family environmental support, school environmental support and local community environmental support. In family environmental support the investigation take place how parents and siblings support for secondary school children learning. In school environmental support the investigation take place how teachers, peers and school community support secondary schools' children learning.

Socio- educational participation (second main construct) has four components there are teachers' participation, students' participation, parental participation and peer participation. For this construct the theory posited by Putnam's which is social capital theory (1993) will be used. Moreover, research has not yet clearly identified whether social capital has any effect on well-being in Sri Lankan culture and society specially on secondary school students' well -being.

The researcher used the Sri Lankan well-being framework because this framework was developed by PADHI and tested, validated and used for the research study in Sri Lankan context. Researcher adopted this framework in same context but specifically only for secondary school students in Sri Lanka. Accordingly, the third main construct is educational wellbeing which include five components they are access to educational resources (physical, material and intellectual), experiencing educational competence and self-worth, exercising educational participation, building educational social connection and enhancing educational wellness in terms of physical and psychological

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ENTHNOGRAPHIC STUDY OF INFORMAL LEARNING IN MUSEUMS FOR UNDERSTANDING HISTORICAL LEARNING

Nurul Hidayati Mat Erat[1], Mohd Mahzan Awang[1] & Abdul Razaq Ahmad[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: p98151@siswa.ukm.edu.my

ABSTRACT

This paper is a study cored on reflection towards ethnographic research journal based on activities and exhibition materials found in Malacca Museum. This ethnographic approach requires primary or first-hand involvement of the research in exploring every aspect that can be studied in the museum. Notes obtained in this research are displayed in chronological order to visualised the learning environment in the museum. Finding shows that there are 3 main sections in the museum which are exhibition, visual audio and information. Study also shows that artefact exhibition is the main focus to the visitors compared to those remaining two sections. Thus, reflection from this research is a more creative improvement to ensure a beneficial learning environment in the museum.

Keywords: Ethnographic, museums, historical learning

A. INTRODUCTION

History is one of the critical subjects for upper secondary level students in Malaysia as they are required to must pass this subject to obtain their Certificate of Education (SPM). The History subject is designed to instil a sense of tolerance and community values, as well to help students understand the Malaysian culture so that they are able to instil these values in their everyday lives. Through the history subject, students also earn about the sacrifices of past leaders who fought for the independence and sovereignty of this country. It is hoped that learning the country's history will invoke a sense of patriotism, discipline, obedience and loyalty towards the country among the future generation.

Unfortunately, history is commonly known as a boring and dull subject. This is because students often associate learning history with rote learning, specifically memorisation of events, historical figures, time and places. This makes students lack interest in learning history. M. Kaviza et al. (2018) mentioned that many history teachers still teach using the traditional methods and solely use textbooks as their teaching materials. In this regard, teaching and learning process is a key factor in teachers play an important role in diversifying teaching and learning methods both in and out of the classroom and thus, it is important for teachers to change how they teach to address this issue. According to Bandura's (1986) model of behavioural theory, learning is mostly influenced by a learner's environment. Thus, adopting a learner's centred approach could help increase students' interest in learning History.

Informal learning is a teaching and learning approach that could attract students to learn History. Visiting historical sites such as museums is an example of the learners' centred that it could prove the existence of history and in turn, increase learners' appreciation of history. In the meantime, until now, museums have often been regarded solely as a place to store ancient artefacts, rather than a place for learning. Due to its importance, Hudson's (1976) argued in New Museum of Jargon article, as cited in S. Azman Ligun et al (2017), museums can no longer be considered places for storing antiques, but also an effective instrument for education.

The use of museums as part of the informal teaching process is still not appealing to the public as there are assumptions that what displayed in museums could be propagandas that contradict the reality of past events. Falk and Discrking (2011), as cited in S.Azman Ligun, et el (2017) argued that there is inconclusive evidence on whether learning could occur, as well as doubts scholars over the benefit learning in museums. Thus, In Malaysia, informal learning in museums is not a popular teaching approach as is there is an assumption that visiting museums does not adhere to the actual concept of learning.

B. RESEARCH OBJECTIVE

This study aims to examine the situation in museums and visitors' behaviour during museum visits.

C. RESEARCH METHODOLOGY

This study adopted the qualitative method, specifically the ethnographic study approach, where researchers use observations in the study area to observe the behaviour and activities of visitors. In this study, the study was conducted in the Museum of the Malacca Sultanate, Malacca. This method allows a researcher to informally collect data and achieve the objective of the study. Here, the researcher will make direct observations on the behaviours and activities of the museum's visitors throughout their visit. It is believed that these behaviours can reflect the informal teaching and learning process in the museum.

D. FINDINGS

The observation was conducted at the Museum of the Malacca Sultanate, on Saturday, November 2nd, 2019. At 2.05 pm, the researcher purchased a ticket to enter the museum which costs RM5.00 for each adult visitor. Upon arriving at the study site, it was found that there was a poor number of visitors in the museum at that time. It was also observed that there were no curator or museum staff on duty at the time. As the researcher entered the museum, it was noticed that some of the visitors were visiting the museum just to take selfies in a specific corner in the museum.

There were also some visitors inside the museum who were only passing through the artefacts at a glance without reading any of the information displayed. Only a handful of visitors seemed to be reading the descriptions displayed on the lighting board and examining the replica of the artefacts from the era of the Malacca Sultanate. It was observed that overseas visitors were keener to read the descriptions displayed in the museum.

Visitors over the age of 30 were more focused towards reading the descriptions displayed. There were some foreign visitors who seemed to be in deep discussions about the artefacts. In the meantime, it was observed that only two visitors were in the audio visual section but they were more focused on their mobile phone rather than watching a video on 'Hang Tuah' . The video presents a story of a local hero who willingly sacrificed himself to proof his loyalty to the Malacca sultanate. Another significant observation is that male visitors were more likely to read the descriptions displayed.

At 2.20 pm, there was a very excited 5 year old child who showed a great interest towards the replica of the Malacca palace. There were also some female visitors taking photos of replica of each attire worn during the Malacca sultanate era. There was also a family with small children and the parents were enthusiastically explaining the events that occurred in the Malacca Sultanate era to their children.

At 2.35 pm, the number of visitors increased and at this time, there was a group of primary school students who came for a stud. The researcher noted that there are students who diligently read the descriptions for every artefact and replica and some students were discussing with their peers about the events being depicted in the museum. The school teacher also took part in discussion by explaining the situation while the other students listened observantly to their teacher's explanation.

The museum became quite chaotic as some of the students were running around the museum and this was a little disruptive to other visitors. It was observed that the absence of museum staff has made it difficult of the students to get detailed information about the artefact replicas on display. The students only read the descriptions provided and were more interested in artefact exhibitions compared to the audio-visual presentations. In the meantime, there were parents who explained the events to the children and the children seemed to be participate actively the discussion. The researcher also observed that most of the students brought their own mobile phones and they were more focused on the gadgets rather than the museum exhibits.

E. DISCUSSION AND RECOMMENDATIONS

There are three constructs that make up a museum, which are artefact exhibits, audio visuals and descriptions or information.

5.1 Attractive artefact exhibits

A museum contains variety of historical items that serve as a source of reference for today's society. However, it is difficult to ensure everyone can appreciate and cherish the values that lie behind the legacy of historical events. In this regard, the artefact exhibits attract the attention of visitors who seemed to have little knowledge of history. Most visitors tend to be interested on replicas of the situation of during the Malay sultanate era in Malacca, which is the focus of almost every visitor. Some of them even had discussions among themselves about the artefacts.

However, the absence of museum staff or curators has made it difficult for them to obtain accurate information and detail explanation about the historical artefacts.

Based on the observation, one of the most popular exhibits is the replica of the daily lives and the attire of the common people and the aristocrats during the Malacca Sultanate era. It was apparent that the visitors show profound interest towards these replicas compared to other exhibits. Mohd Azmi & Miti Fateema (2017) mentioned that humans are more interested to look at the artefacts, as we are more visually oriented.

5.2 Audio Visual Display

Video presentation is one element used by the Museum of Malacca Malay sultanate Malacca to attract visitors to the museum. At the that time of the observation, the museum was displaying a video entitled 'Hang Tuah'. The video tells the story of the adherence of Hang Tuah, who is considered as a hero due to this loyalty to the Sultan. However, during the observation, the visitors seemed to pay little attention to the video. It was noted that the visitors only spent only 2 minutes watching the video and were not bothered to watch it until the end.

It was found that the visitors only visited the video display area to sit and relax. At the same time, they gave little attention on the video and were more focused on their gadgets. In this regard, there is no detailed description of the video being displayed and there is no screening timetable for the video, which makes it hard for the visitors to know when the video presentation will start.

5.3 Comprehensive and comprehensible information

In a museum, each artefact and replica being displayed should be accompanied by detailed information to help visitors understand the history behind the artefacts on display. In this light, almost all of the exhibits displayed in the museum have a clear description to make it easier for visitors to understand past events. However, there are some artefacts that do not have detailed descriptions, such as the replica exhibit of jewellery used by the Malay women during the Malacca sultanate. In this case, for local visitors, they might be aware of the use of these jewellery but overseas visitors might have difficulty to understand the importance of the artefacts and the might be confused regarding these artefacts. Furthermore, it was found that some of the illuminated displays or information that accompany the artefacts replicas are relatively small in size. This makes it difficult for older people to read the information, and it was observed that older people have to wear glasses when they want to read the information. To improve the quality of the display, the museum should consider using larger text size for the descriptions displayed.

Another important observation is that the chronological layout of the descriptions and drawings on display in the museum could be confusing for visitors. Thus, it is suggested that the museum display the artefacts in a chronological order to make it easier for the visitors to understand the beginning of a story or event. As chronology is one of the learning approaches commonly used in the teaching and in the classroom, it can also be used as part of the informal learning in museums to help visitors understand historical events.

F. CONCLUSION

In all, compared to overseas, there is still little practice of informal learning at museums in Malaysia. In the western world, museums have a higher number of visitors compared museums in Malaysia and have become the main platform for an effective teaching and learning processes. They also have become a role model for informal learning systems (Ab Samad Kechot et al, 2012). Museums should play their role as a source of reference for the learning of history as the artefacts displayed in the museum can become a main reference in the research process (Mohd Azmi & Miti Fateema, 2017).

Based on the findings above, to attract more visitors to museums, careful planning should be made by all parties to diversify museum activities. Activities such as seminars and dialogues with historians could attract visitors and provide such useful information to the public. These activities could also facilitate indirect learning to help visitors increase their knowledge and provide the opportunity to express their thoughts and share their knowledge with each other. Such programs are not only aimed at Malaysians, but also to attract foreign visitors. This could indirectly increase the knowledge of foreign visitors about the historical events and the Malay heritage. Examples of these activities include the seminars on Malaysian historical development being held in the National Museum.

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PETA: INCREASE STUDENT GRAMMAR FORM 6A4 SMK DATUK SYED AHMAD KEDAH

Syakirah Abdul Rahman
[1]Sekolah Menengah Kebangsaan Datuk Syed Ahmad Kuala Nerang, Kedah, MALAYSIA
E-mail: cikgusyakirah@gmail.com

ABSTRACT

This action research aims to increase the passing percentage for the 6A4 students for their second semester Bahasa Melayu Malaysian Higher Education Certificate (STPM) exam. Hoping that that they are able to overcome their problems in mastering their grammatical formulation in morphology and syntaxis. Through early observation during the learning and teaching process, the teacher has noticed that the students could not master language formulation. Multiple ways have been tried by the teacher such as using pocket notes. However the problems remained. Thus engaging activities have been carried by the teacher which involve the element of fun and movement such as group presentation and Grammar Business or "Perniagaan Tatabahasa" (PETA) with the aspect of the grammatical formulation in the class. The "PETA" activity has been conducted with the assistance of four assistants or traders. Each session carried out for three weeks and has resulted more students mastering and recalling the language formulation. This has proven by their improved achievement in their post exam.

Keywords: PETA, grammatical business, grammatical formulation, Bahasa Melayu

A. INTRODUCTION

The Reflection of Previous Teaching and Learning

The Bahasa Melayu 2nd Semester (BMS2) is divided into 2 parts, namely morphology and syntaxes, which are parts of the grammatical structures. The questions posed consist of questions related to the field of morphology which is its definition, morphemes, derivative verbs, compound words, prepositions , countable, adjectival phrases, prefixes and suffixes, verbs, word formation, types of compound words, words of frequency and functions of prefixes and suffixes. On the other hand, the questions posed in the field of syntaxes are related to its meanings, sentence forms, clauses, subject and predicate, types of sentences, phrases and clauses, basic sentence patterns, reversed sentences, compound sentences, sentence variables, the passive and active sentences, sentence constituents, the subject or predicates and the process of sentence formation. After analysing the questions posed, it is found that outstanding skills on the grammatical structures is highly required.

Therefore, based on Test 1 consisted of 18 students from class 6A4, only 55.60% passed (10 students), and the remaining 44.40% failed (8 students). However in Test 2, a percentage of 66.7% passed (11 students) and 33.33% (6 students) failed. Based on both tests, no one scored an A, but only one got A-. I have tried to improve the teaching and learning methods including the use of "pocket notes". Nonetheless, the problem remained as it is resulted from the students' present weaknesses of comprehending and mastering the grammatical structures. Therefore if the problems persists, the students may be bored easily as they could not focussed fully during the process of teaching and learning in the classroom which did not involve any activities. Indirectly it disturbed the students' performance and eventually led to a drop in the subject due to the weightage of BMS2 at 20%

For that reason after I attended the Action Research Workshop, I was exposed to a few models of action studies among them, the action research model developed by Kemmis & McTaggart (1988), (KPM, 2008). The Model has suggested four steps of action based on four retroflex (cycle), namely Mereflek or reactions after every activity, planning, acting, and observing. Such measures can be formulated as shown in Figure 1.

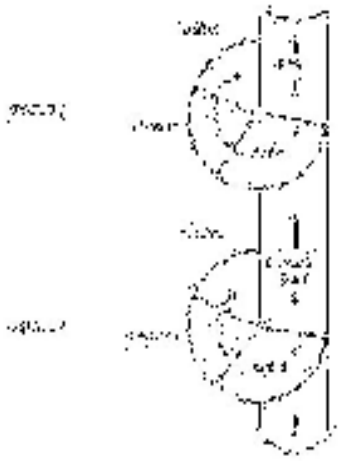

Figure 1: The Kemmis and McTaggart (1988) Action Research Spiral/Cycle.

Based on Figure 1 above, I have started a reflex review in advance of the students ' achievement in exam 1 and exam 2. After I found their achievement unsatisfactory, I had planned to act on activities that could help students easily remember the grammatical formula.

B. FOCUS RESEARCH / ISSUES

This research was only focused on enhancing the student's mastery of Form 6A4 (2018) through transaction trading activities dealing or "perniagaan tatabahasa" (PETA) involving assistants or traders. The salespersons or facilitator of 4 persons are selected based on the highest performance in test 1 and Test 2.

C. RESEARCH OBJECTIVES

After the research it is hoped:

3.1 General Objectives

To increase the number of students passes in the STPM Bahasa Melayu for the second semester.

3.2 Specific Objectives

i. To enhance the mastery of morphology among 6A4 students
ii. To differentiate the functions of morphology in sentences
iii. The " PETA" activity will change the students perceptions towards the level of difficulties in morphology.

D. RESEARCH ISSUES

i. Will "PETA" be effective enough for Form 6A4 students to grasp the idea of morphology?
ii. How could "PETA" assist students in understanding the morphology formula?
iii. What is the students view towards using "PETA" for morphology?

E. GROUP TARGET

This research only involved 13 Form 6A4 students (2018). Every student will perform an activity applying the "PETA" method with the help of 4 facilitators. Each students was selected from the highest, average, and lowest achievement groups.

F. RESEARCH METHODOLOGY

The whole research reviewed are based on the observation and interviews.

6.1 Observation

Upon my research and analysis from test 1 and 2, I have gotten unsatisfying results. In addition, the students' incapability of grammar in the course on morphology. This matter happens due to lack of revision done by students and in the fact that the preference of inquiring their peers instead of the teacher, that shows the students dependency on their peers. If the students continue to struggle with the formula in morphology, then results in STPM examination Semester 2 will worsen. For that I will have to find solutions to overcome these issues.

6.2 Interview

I have orally interviewed a few representatives from 6A4 students regarding the roots of the problem, before they had done the "PETA" activity. It is said among them that grammar formulae specifically word form (bentuk kata) and word group (golongan kata) are confusing. The built in attitude of the students is to ask their peers instead of the teacher.

G. FINDINGS

7.1 Review and problem recognition

All the problems that happened during the educational activities and grammar researched and analyzed, that is through observation done in class, whilst checking grammar exercise, and analyzing test 1 and 2 marks. Based on the marking of test 1 and 2, it is found that skills on grammar formulae among the students are not consistent. The following table shows a comparison of test 1 and 2 marks.

Table 1: Student Score

	TEST 1		**TEST 2**	
Student 1	37	C-	43	C
Student 2	28	D	13	F
Student 3	37	C-	22	F
Student 4	62	B+	60	B+
Student 5	32	D+	48	C+
Student 6	33	D+	27	D
Student 7	33	D+	13	F
Student 8	52	B-	35	C-
Student 9	48	C+	48	C+
Student 10	57	B	73	A-
Student 11	45	C+	55	B
Student 12	65	A-	40	C
Student 13	63	B+	52	B-
Student 14	40	C	52	B-
Student 15	45	C+	40	C
Student 16	57	B	47	C+
Student 17	37	C-	45	C+
Student 18	30	D+	27	D

Table 2: Score Analysis Test 1 & Test 2

	NO.	**PERCENT**	**NO.**	**PERCENT**
Passed	10	55.6	12	66.7
Fail	8	44.4	6	33.3

The above Table shows Form 6A4 students achievements prior to "PETA" activity. Therefore, 4 facilitators are chosen based on the highest performance in test 1 and 2.

7.2 Pre- Test

Pretest is done to obtain information about the effectiveness at the early stages of teaching that emphasizes conventional method and explanations made by teachers not centered on the students. Students would also answer

25 objective questions based on their knowledge without performing the "PETA" activity. The following Table 2 shows the pretest result.

Table 3: Pre-test Result

No.	Respondent	Score /25
1	Student 1	12
2	Student 2	7
3	Student 3	9
4	Student 4	14
5	Student 5	15
6	Student 6	8
7	Student 7	0
8	Student 8	12
9	Student 9	17
10	Student 10	16
11	Student 11	10
12	Student 12	13
13	Student 13	10
14	Student 14	17
15	Student 15	12
16	Student 16	9
17	Student 17	7
18	Student 18	9

7.3 Peta Activity

Teaching and learning activities using the "PETA" activity were conducted for 3 weeks beginning with a pretest. After the pretest, Students activity is required to present 1 topic of grammar formulas, students need to discuss with friends in their group or Activity partner teaching friends. I will ensure that discussions and presentations are carried out smoothly and I provide guidance to them. After all three Activity is executed, the Activity "PETA" is executed three times. After the "PETA" activity, I did a post-test. A total of two sessions are allocated for each lesson session to perform the Activity. The following included activies that I have implemented in class.

Table 4: Implementation Activities

No.	Activity	Implementation Activities
1	Activity 1: Pretest (28 Mac 2018)	To detect weakness in students' grammar (focus: morphology)
2	Activity 2: 80 minute individual presentation (29 Mac 2018)	3-5 minute for presentation – Q&A I asked the presenter
3	Activity 3: (3 - 5 April 2018) Group discussion	• 5 student facilitators / group leaders guide 3 or 4 people
4	Activity 4: Peta Day 1: 17April2018 * Activity in 3 days for three week	Activities: 1. 2 people are appointed as facilitators in charge of 2 booths 2. Booth 1: 6 objective questions and Booth 2: 2 objective questions and 4 subjective questions (14m) 3. Total score of 22 score = RM22.00
5	Activity 5: Peta Day 2: 26 April2018	2 facilitators = 2 booths. Booth 1: 6 objective questions dan Booth 2: 5 subjective questions (7m) Total score 13 score = RM13.00

6	Activity 6: Peta Day 2: 30 April2018	4 facilitators = 4 booth Booth 1: 2 objective questions (2m), 2 subjective questions (2m) Booth 2: 2 objective questions (2m), 2 subjective questions (2m) Booth 3: 2 objective questions (2m), 2 subjective questions (2m) Booth 4: 2 objective questions (2m), 2 subjective questions (3m) Total score 17 score = RM17.00
7	Post-test 3 Mei 2018	To know 6A4 students achievement after the "PETA" activity is carried out.

H. Suggestion of Intervention Study

8.1 Conducting Activity 1: Pretest

25 multiple choice questions STPM Bahasa Melayu Semester 2 were as pretest questions.

Reflection: After the pre-test, it is concluded that the students have not mastered the grammar aspects especially regarding grammar rules & formula. Therefore, students are given a task to produce slides of morphological topics in order to assist the students understanding.

8.2 Conducting Activity 2: Individual Presentation

After producing the slides, students are to present their respective slides for 3 to 5 minutes and the teacher will conduct a Q&A session after that.


Reflection: After this activity, some students are more confident whereas there are some who lack the understanding of the topics. Teacher assists them by further explaining, guiding them for a deeper understanding through Q&A session and also peer guidance.

8.3 Conducting Activity 3: Discussion (Peer guidance)

Students are divided into 4 groups of four to five members. Each group will consist of a facilitator and mentee. The facilitator will facilitate the mentee in grammar through discussion.


Reflection: After the activity, the students are happy but some need to be further guide by teachers and peers. Thus, they need to be tested in grammar games, PETA or Grammar Business.

8.4 Conducting Activity 4: PETA (Perniagaan Tatabahasa)

i. Steps for PETA activity:
ii. 2 facilitators (seller) are placed at two kiosks. The second and the third will have 4 kiosks.
iii. Seller will sell MCQ's and subjective questions.
iv. After getting the question from the seller, they (the buyers) will answer the question.
v. Buyers will revisit the booths for answers. Here the seller will give the answer and assist the buyers by correcting their wrong answers.
vi. 1 correct answer will be given 1 mark which equals to RM 1.00
vii. Therefore if they want more points they would have to prepare in advance.
viii. Marks or money are equally dependent on the Q&A session.

ix. The three highest marks collectors are the winners.




Reflection Activity: Students are very active and competitive in the activity. But, there is 1 absentee in every activity conducted that makes the target of 18 students cannot be achieved. After the activity an interview session is conducted. Here are among the recorded answers:

a. Seller

- I am happy to help my friends and in turn can improve myself in grammar.
- I feel appreciated.
- I gained knowledge.
- The activity is time consuming and more time is needed.

b. Buyer

- I gain knowledge in morphology especially verbs.
- I can compete with my friends.
- I am very happy because there are a lot of movements.
- I hope this activity can be done in Semester 3.

8.5 Conducting activity 5: Post Test

Post-test is conducted using the same questions as pre-test.

Reflection Activity: After these activities there are still a few students who cannot master the grammatical aspects. However, the others have improved tremendously.

Table 5: Analysis Post-test Result

Pre-test (Rm25.00)	Post-Test (Rm25.00)	Difference
12	13	1
7	11	4
9	10	1
14	16	2
15	13	-2
8	14	6
0	8	8
12	12	0
17	17	0
16	16	0
10	12	2
13	13	0
10	17	7
17	16	-1
12	11	-1
9	14	5
7	11	4
9	15	6

8.6 Research Reflection

After this activity, questions have been asked to the students who participated. Most of them reflected their cheerfulness competing with each other, helping each other to better understand grammar. The PETA activity involved a lot of movement that these students find very fun. As for the cons, the activity consumes a lot of time and absentees also hindered the optimum achievement.

I. Conclusion

From the feedback, it is concluded that students view this activity as very entertaining and fun due to a lot movement and communication involved. I will further improve the PETA Activity in the third semester.

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MENTORING TECHNIQUE USING "WE CARE" MODULE TO INCREASE STUDENTS ABILITY IN ENGLISH GRAMMAR

Hairunisah Roslan
[1]SK Convent (M) Kajang, Selangor, MALAYSIA

E-mail: nisahrazif0505@gmail.com

ABSTRACT

The study is titled "We Care", a reflection of the teachers concerns with the pupils' weakness in the English Language grammar. The cardinal purpose of the study is to uplift the pupils' enthusiasm and interest of the language. The pupils' background contributed to the proficiency and interest in reading of the English Language. Pupils whose communication language is English at home are usually more proficient in the English grammar compared to those who communicate less in the language. Hence, this research was conducted. The total respondents are 15 pupils from class 4 Kekwa and involving 5 teachers. The study duration is 3 months. Every session was conducted on Mondays, Tuesdays and Wednesdays. The first step in the study is the formation of 5 small groups. Every group is headed by a 'Champion', guiding the 'average' pupils while the 'Sweet - weak' pupils are assisted by teachers tagged as mentor and mentee system. The teachers and 'Champions' will act as mentors for the weaker pupils individually, guiding them in reading known as 'Smart Reader' for 15 minutes. This study aims to improve the English proficiency in reading and to instil interest in the English grammar. From my observation, the "We Care" module can be used for overall improvement of other pupils who are weak in the language.

Keywords: "We Care" module, grammar, English

A. INTRODUCTION

The main objective of the programme for Year 4 Kekwa is to increase the pupils' proficiency of the English Language particularly in grammar. Based on my observation, it was unfortunate that the pupils are unable to understand grammar satisfactorily during the allotted time. This is proven in the examination result conducted in March where 40% of the pupils did not meet the minimum requirement in the subject. It is also observed that the pupils who are not proficient in English grammar are usually weak in reading.

Since the pupils' achievement in the March test is not commendable, hence forcing me to do this research to ensure the pupils to at least meet the minimum requirement in English subject and maintain or improve year by year until Year 6. It is worth mentioning that the "We Care" programme is undertaken with the help of dedicated teachers and the 'Champions' to help the weaker pupils.

B. RESEARCH ISSUES

Issues for this study to be conducted:

i. The pupils are unable to read smoothly in English language
ii. The pupils' poor grasp of the English grammar.

C. LITERATURE REVIEW

An early study of the organization's mentoring system largely debate on the attributes of the internal features of the mentoring programme which is the origin of concepts, goals, interests, practices and mentoring models exist in the society and organization. (Hawkey 1997, Irving, Moore & Hamilton 2003)

The implementation of the concept systematically will stimulate the mentee to improve their skill and ability for better psychology and study performance. (Oliver & Aggleton 2002, Kleinman Siegel & Eckstein 2002).

D. RESEARCH METHODOLOGY

Data collection tools indicating the existence of the problem:

i. March test marks
ii. Classroom Assessment data
iii. Questionnaires and observation

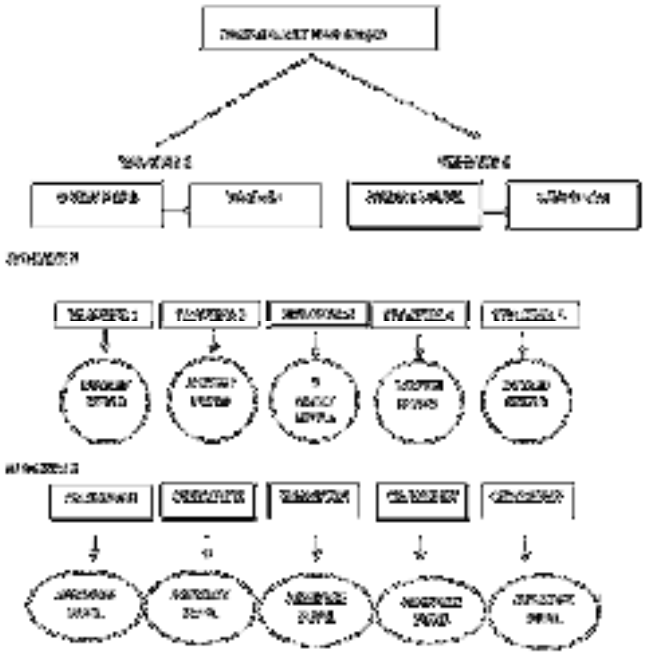
E. PLANNING AND CHOICE OF INTERVENTION: METHODS TO OVERCOME THE PROBLEMS

Mentor-Mentee Method

The outstanding pupils (Champions) lead the moderate pupils and the weak pupils (Sweet pupils) are guided by teachers.

The "We Care" module uses the Smart Reader method for a duration of 15 minutes on Mondays, Tuesdays and Wednesdays.

Figure 1: Intervention Implementation



6. Findings

6.1 Implementation of We Care 1 (Mentoring: Teacher > Sweet pupil)

A teacher, as mentor, will lead 2 Sweet pupils, as mentees and will assist the pupils in reading known as 'Smart Reader' for 15 minutes on Mondays, Tuesdays and Wednesdays.

6.2 Implementation of We Care 2 (Mentoring: Champion > Moderate pupil)

The moderate pupils will be led by 5 Champion from Year 6, who are proficient in English and achieved 90% of examination marks.

Every session will take 15 minutes on every Monday, Tuesday and Wednesday. One page per day, if the pupil surpasses the 1-page assignment, it will be marked with double tick (//). This mentoring technique will be tested after 2 weeks. In the third week, a grammar test will be conducted to gauge the pupils' understanding of the grammar solely through reading exercise. The grammar foundation will be tested and will not exceed 10 questions. The study will be conducted in April and May.

The pupils will read the prepared module and data will be collected to gauge the pupils' reading ability and grammar competency. Only 10 questions will be given.

Below is the data collected and the (/) sign denotes number of pages read by the pupils according to the modules.

Table 1: Result of grammar foundation for April

15 PUPILS	WEEK 3			WEEK 4			MARKS
DAY	M	T	W	M	T	W	
Sweet 1	/	/	//	/	//	TEST	6/10
Sweet 2	/	/	/	/	/	TEST	4/10
Sweet 3		/	//	/	/	TEST	5/10
Sweet 4	/	//	//	/	//	TEST	6/10
Sweet 5	/	//	//	/	//	TEST	7/10
Sweet 6		/	//	/	/	TEST	4/10
Sweet 7	/	/	/	/	/	TEST	3/10

Sweet 8		/	//	/	/	TEST		3/10
Sweet 9	/	/	/	/	/	TEST		2/10
Sweet 10	/	/	//	/	/	TEST		4/10
Sweet 11		/	//	/	/	TEST		4/10
Sweet 12	/	/	/	/	/	TEST		3/10
Sweet 13		/	//	/	//	TEST		5/10
Sweet 14	/	/	/	/	//	TEST		6/10
Sweet 15		/	/	/	/	TEST		5/10

Table 2: Result of grammar foundation for May

15 PUPILS	WEEK 1			WEEK 2			MARKS
DAY	I	S	R	I	S	R	
Sweet 1	/	//	///	///	////	TEST	8/10
Sweet 2	/	/	//	//	///	TEST	8/10
Sweet 3	/	/	//	//	///	TEST	7/10
Sweet 4	/	//	//	//	//	TEST	6/10
Sweet 5	/	//	//	//	//	TEST	7/10
Sweet 6	/	/	//	//	//	TEST	7/10
Sweet 7	/	/	//	//	///	TEST	8/10
Sweet 8	/	/	/	/	//	TEST	6/10
Sweet 9	/	/	//	//	//	TEST	6/10
Sweet 10	/	/	//	//	//	TEST	7/10
Sweet 11	/	/	//	//	//	TEST	7/10
Sweet 12	/	/	/	/	//	TEST	6/10
Sweet 13	/	//	//	//	//	TEST	6/10
Sweet 14	/	//	//	//	//	TEST	6/10
Sweet 15	/	/	/	/	//	TEST	5/10

The third week of May is mid-term examination. The marks are used to ensure the effectiveness of 'We Care' module.

F. DISCUSSIONS

7.1 We Care 1

The implementation of 'Smart Reader' result in overall improvement in reading. Focussing on reading for 15 minutes is effective and the pupils can read smoothly. The main focus is concentrating on 'one to one' guidance without external disturbances and it helps to improve the pupils' reading ability. Indirectly, the pupils are able to identify grammatical errors.

7.2 2. We Care 2

The implementation of this method enables the Sweet pupils to improve their reading ability with the guidance from the Champion pupils. The Champion is akin to a sister guiding a younger sibling in lessons. Only 15 minutes is required for the mentor to help the mentee.

G. REFLECTION

Overall, the We Care 1 and We Care 2 techniques were effective tools because the teachers were able to focus on small groups. This study also shows that the Sweet pupils were able to uplift their confidence in reading, increase their memory and understanding of the reading material besides improving their grammar. Despite of the study done in 2 months' time, there is an improvement even though only slight improvement.

My observation from this study is that it enables the weaker pupils to transform positively. This is due to the fact that they are closed to the teachers and are not shy with the teacher because they are in small group.

The Champion pupils also play an important role in helping the average pupils. This method can be used in teaching and learning to make it more effective, attractive and enjoyable.

H. CONCLUSION & SUGGESTION

I hope to continue the study using android MP3 to strengthen the mentor and mentee method, using various reading techniques. The Listening and Reading skills will be continued. Colourful books will be used since pupils are more attracted to them. I hope this method is acceptable and be used for all subjects.

References

[1] English teachers
[2] Mid-term examination marks

A SURVEY TO INCREASE SKILLS IN WRITING PAPER 1 SECTION B MALAY ESSAYS USING A SHORTCUT TECHNIQUE FOR 24 STUDENTS OF 5 CEKAL

Siti Sarah Baharuddin
[1]SMK Alor Akar, Pahang, MALAYSIA
E-mail: sarahbaruddin@gmail.com

ABSTRACT

This study conducted to help the weak students in writing essays and mastering the usage of proverbs when writing essays which is one of the components in the *Bahasa Melayu* of SPM paper 2. This survey involves 24 students and 1 teacher. This study focusing on essays writing because the weakness is becoming serious day by day. Through early observation found that students who having grave trouble in using proverbs when writing essays according to the topics given during formal learning. In addition, this *pintas and kosaka* technique was introduced to the students as a method to overcome their problem in essay writing. After this technique has been introduced to the students the survey showed that the students' mastery in writing essays has improved. The students showed a more positive attitude by being more active to master writing skills and having more confidence in learning activities during classes to achieve excellent result in *Bahasa Melayu* in SPM.

Keywords: *Bahasa Melayu, kosaka* and *pintas* technique, SPM

A. INTRODUCTION

When it comes to the Malay subject the school is often affected when the students are not able to master the language effectively. This subject is a vital subject and a must pass subject for all the students to determine their future ironically, this subject often becomes the hot topic in academic evaluation whenever there is an after-exam meeting. This 100 percent must pass subject has become the centre of attraction and the percentage required to achieve the maximum level is very much emphasized. Even though Malay language is said to be easy to pass but that is not the main topic whereas achieving excellent results is. This scenario has become a terrifying and heart palpitating problem amongst the language teachers as it is what determines the school's overall grade. *Bahasa Melayu* is a core subject in SPM. Subjects *Bahasa Melayu* in SPM level has two parts, namely the *Bahasa Melayu* paper 1(1103/1) and paper 2(1103/2). The assessment format for this subject has undergone a format change since 2004. The assessment instruments for *Bahasa Melayu* paper 1 is essay. Essay are important component with a budget allocation of 130 percent. Aspect that are emphasized in essay writing are introductory skills, content statement and closing. Writing essays requires students to master these skills effectively. Therefore, essay writing requires high level skills.

SPM introductory skills, content statements, and general essay writing skills need to be mastered by SPM students to enable students to earn high marks. Therefore, mastering on essay writing skills requires a comprehensive focused approach to provide students with a clear and concise understanding.

In this regard, the project preparation and selection of teaching aids with a short-form approach was intended to assist students at school (SMKAA) in solving the problems faced by the students in the general essay writing field. These include issues in mastery of essay writing format, technique in writing paragraphs, problem developing ideas and inability to have good appropriate reference sources.

B. RESEARCH PURPOSE

Based on the *Bahasa Melayu* pre-test in March, Form 5 Cekal found that the most students still did not master the art of writing well as the score was around 56 to 64 marks only and this indicates that the students failed to master the writing. Expose to the issue of student failure in their learning, especially in essay writing should be done immediately. This situation cannot be prolonged as this student will face SPM 2018 in November. If they do not master the skill of writing a good probability, they will not get good results in subjects *Bahasa Melayu* for SPM level as the question covers 130 marks out of 240 marks for *Bahasa Melayu* paper 1. Therefore, brief action must be taken to enhance the mastery of essay writing in a systematic way. Therefore, to enhance the skills of essay writing, 'a short-term' approach adopted in the teaching and learning process (P&P) in the classroom.

C. RESEARCH OBJECTIVES

3.1 General Objective

The purpose of this study is to improve students' skills in answering part 1 B papers that allow students to master the essay well and obtain excellent marks.

3.2 Specific Objectives

i. Simplifying the teaching and learning process by using appropriate, simple and correct techniques.

ii. Facilitating a drill session or rehearsal training

iii. Improve mastery of essay writing skills

iv. Instilling awareness in themselves and value, or grade a+ in the achievement of the *Bahasa Melayu* paper 1, the general arrangement

D. RESEARCH METHODOLOGY

This study focuses on 24 students who have the potential 5 Cekal weaknesses in writing the *Bahasa Melayu* paper 1 and has a relatively low mark. Most of the students are more focused on science elective subjects and treat *Bahasa Melayu* as an easy subject to pass. Problems also arose when half of the classes were Chinese and Indian students who used English as their intermediate language. Therefore, it has little effect on essay writing when it comes to blending two languages.

E. PLANNING AND CHOICE OF INTERVENTION: METHODS TO OVERCOME THE PROBLEMS

5.1 Problem Review

Preliminary research on research issues related to identifying students 'learning problems and subsequently identifying the causes of students' lack of mastery of essay writing especially the introduction to essay writing skills. Observations are made on student learning behavior in terms of student attitude and readiness during the student teaching and learning process. Students 'attitude towards teacher teaching and the culture of literacy have been identified as factors that influence students' writing skills. As well as some students doing the training provided by the teachers on a regular basis and of poor quality. The problems students have with writing essays can be observed through teaching and learning activities in the classroom.

5.2 Problem Analysis

Based on the training provided and the review of the student handbook to review the problems that caused the students to fail to master the writing skills as presented in table 2.

Bil.	Problem	Total (%)
1.	do not understand the question	35%
2.	poor content description	68%
3.	weak sentence construction	57%
4.	there is no self-confidence	45%

5.3 Action Performed

Based on the observation analysis and the student training review report mentioned above, one action has been taken. The first step is carried out to expose answering techniques SPM Malay real, especially on essay writing and scoring system.

Students who have learning difficulties and lack of focus on teaching and are weak in essay writing should be noted among the target students. therefore, the action is taken by introducing a "short-term approach" in essay-writing. the action was to expose the students' writing skills and to emphasize the practice of reviewing students based on the "short approach" strategies introduced.

5.4 Observation and Evaluation Results

Every time the subject was conducted in the in class, essay writing training activities will be also conducted. The activity requires students to write essays based on stimulus materials provided by the teacher. The teacher makes the activity appropriate to the topic of the essay being taught. Before writing an essay, teachers provide information on how to write an essay based on the writing tips shown in the "short approach". Essay questions are given to students to discuss what is contained in the "short approach". The question is as a stimulus for students to guide the development of student ideas in essay writing. The teacher also describes the technique of essay writing using the methodology shown in the "short approach":

How to write a solid introductory essay:

a) Quality essay introduction using method PINTAS.

P - opinions on statement of questions

I - stick with the evidence

N - state the cause / cause

T - add an introductory type (type of question, history, ambience, definition, etc.)

A - take the appropriate proverb

S - state the question

Example question: Thoughtful practices are very important in today's economic crisis. Describe your opinion on **the role of family in fostering good saving practices**.

P: Careful saving practices are commendable practices.

I: Unfortunately, society today does not save money because it is not aware of its importance.

N: This noble practice ought to be practiced for its many benefits.

T: The question is why is this positive practice difficult to become a family culture?

A: In this case we should not embrace the body by allowing this commendable practice to erode within each individual.

S: In fact, families play a very important role in fostering good family practices.

b) Develops the content of the essay

Skeletal material develops the content of the essay using the question method.

Example question: Thoughtful practices are very important in today's economic crisis. Explain what you think about **the role of nursing in fostering good saving practices**.

Description				
What	Who	How	Why	The impact
One of the roles of family in fostering good saving practices is by saving	Parents need to educate their children to save them from childhood	Learn to save money using pocket money to save money every week	Practices that have been sown since childhood have been able to promote good prudence to adulthood	As a result, we can create a thriving society and help not only the economy of the household but also strengthen the economy

				of the country

c) Cover essay

Excellent students can use the KOSAKA method.

K - the conclusion, (modify the final sentence)

O - after all, (giving co-operation, encouragement, encouragement, etc.)

S - indirectly, (write an impression on the subject)

A - take a proverb

K - the effect, (write down the effect on the people in general)

A - finally, (impact on the country / world)

Example question: Thoughtful practices are very important in today's economic crisis. Explain what you think about **the role of nursing in fostering good saving practices**.

	Description
K	In conclusion, careful saving practices can be nurtured through the role that families play
O	Should work together and encourage family members to practice good saving habits from an early age
S	Indirectly this can be appreciated and rooted in the self
A	The thrift is in line with the Malay proverb day long piece of yarn into cloth
K	As a result, this practice not only frees the family out of financial trouble but it can be used in times of emergency
A	In the end, we can give birth to a wise and economically sound Malaysia that will strengthen the economy of our beloved country

F. REFLECTION OF THE STUDY

6.1 Student Achievement Assessment

Planned teaching steps have been implemented and are running smoothly. As learning activities are implemented, students' confidence to answer their math questions increases. Students have made self-exploration through a variety of resources explored to enhance their mastery of essay writing. Each time the essay is given a lesson it can provide content based on the shortcut and vocabulary approach implemented. As a result, student achievement in practice and a variety of questions have led to impressive growth. In fact, students' weaknesses in writing essays can be minimized and overcome gradually and gradually. Past essay questions are provided and taken from actual SPM questions and some reference books.

Attitudes are also noticeable when students are no longer in the classroom and are ready for the next topic and ready to take lessons in the classroom. Students are more motivated to continue their studies and to carry out their assigned tasks.

6.2 Formative Observation

The problems of student learning reflected in the passive student learning behavior can also be overcome. Students' attitudes to talk, lack of concentration, and lack of practice began to diminish and focus more on teaching

and learning. Indirectly indicates ICT writing techniques (Themes, Issues, Keywords) in the introduction, use of AT (Topic Verse), AH (Explanatory Verse), AC (Example Verse), and AP (Concluding Verse) in the content, as well as CHK (Suggestions, Expectations, Effects) in the cover adopted in this Short and Short Approach can guide students in enhancing student learning and active focus on excellence in essay writing.

Group learning methods also enhance students' ideas for developing essays based on their ideas. The convergence of several ideas makes these students more open and able to stimulate their thinking and focus. the overall use of ideas in this group can help any student who is poor in content production. Therefore, as a teacher of *Bahasa Melayu*, essay writing student achievement in general is expected to help increase the overall percentage marks Paper 1 *Bahasa Melayu* especially at the SPM level in the future.

6.3 A Reflection of Teacher Teaching

After some training was given to the students and the end of the student study showed good mastery of the essay writing skills. This situation responds positively to the students' learning so that they have the confidence to answer the essay questions so that they are able to become independent learners and write well. Teachers have also asked students in the class if they are still having trouble writing essays. Students respond positively that the teacher's guidance in the essay writing approach and important essay writing tips greatly help students to develop their writing skills. This is evident when the two-way communication between teacher and student is established and the learning environment is livelier and fun. The positive response from the students' performance 'approach PINTAS and KOSAKA' means a lot to researchers in the excellence of students in *Bahasa Melayu* at SPM.

G. CONCLUSION & SUGGESTION

The activities carried out have much to do with the success and improvement of the students' achievement in essay writing. However, there are other aspects that pay particular attention to grammar teaching. Therefore, it is proposed to increase the student's ability to use the word in the sentence. In addition, students also need to master the grammatical skills to produce good essay writing. Students can also learn something new and improve their learning performance. In addition, they will be more confident to write essays better.

References

[1] *Bahasa Melayu* teachers
[2] Pre-test March

PATRIOTIC KNOWLEDGE AMONG MULTI-ETHNIC YOUTHS IN MALAYSIA

Abdul Aziz Abdul Rahman[1], Mohd Mahzan Awang[1], Abdul Razaq Ahmad[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: mahzan@ukm.edu.my

ABSTRACT

The purpose of this study was to identify the levels of patriotic knowledge among the three largest ethnic youth in Malaysia that are the Malay, Chinese and Indians. This paper also discusses differences of patriotic knowledge among them based on ethnicities and gender. This study utilised a survey research method involving number a total of 1200 multi-ethnic youth (aged between 19 and 29 years old) from Peninsular Malaysia. There are five indicators of patriotic knowledge measured: pride of being Malaysian, loyalty to king and the nation, Sense of Belonging (a sense of belonging), disciplines and compliance as well as competitive and productive character. Data of descriptive statistics were analysed using SPSS version 22.0, which is focusing on the mean scores and standard deviation. Inferential statistics was also calculated to analyse differences of their knowledge on patriotism based on gender and ethnicities. Results revealed that the level of patriotic knowledge among multi-ethnic youths is at moderately high. Detailed findings show that the highest score mean is Discipline and Compliance (5.026), followed by loyalty to king and country (4.485), competitive and productive character (4.481), proud of being Malaysians (4.811) and a sense of belonging (4.767). Using ANOVA analysis, results revealed that there is a significant difference on patriotic knowledge based on ethnicities. Based on this study, we suggest the establishment of an academy for to promote patriotism among young generations.

Keywords: *patriotism, pride, loyalty to the king, multi-ethnic youth, rukun negara Research Grant Codes: GG-2019-015 & GG-2018-013*

A. INTRODUCTION

Patriotism is a manifestation of feelings, attitudes, world-views and values towards a country or country own state, such as feelings of love, mutual respect or love for the country. It creates a positive attitude and character among the citizens as it stands making sacrifices to the nation, always contributing to the progress of the nation, defending the image and its sovereignty as well as instilling and nurturing positive values that can drive national excellence. According to Gomberg (2002) and Maclntyre (1995), the term patriot means the spirit of defending rights, liberties and homeland. In other words, defending the sovereignty of the country. According to Mohamad Khairi and Asmawati Suhid (2010), education and application of values cannot be separated because the education agenda is to give birth to a generation which abides by the principles of the Rukun Negara and possesses a sense of pride as Malaysians who always contribute to the harmony of the people and the progress of the nation. Therefore, education will not be meaningful and perfect if it is not integrated with the application of pure values. Values will affect the way one thinks (world view), acts in the form of culture and norms of a society.

World-view is based on the principles and doctrines that have been passed on to generations by families, schools and societies thus shaping our lives and notions of constitution, sovereign institutions, democratic practices and one's rights. Citizens are naturally drawn to positive and uplifting values and attitudes to bring good instead of bad. The measurement of patriotism in terms of value is high and positive consideration of all matters relating to the homeland and community development (harmony, well-being and progress).

The values of patriotism such as loyalty, bravery, willingness to sacrifice, volunteering, love for the nation and needs to be enhanced to form patriotic Malaysians who are responsible to the nation. Therefore, a framework for developing the spirit of patriotism must be done through the foundations of human development, economics, politics, sports, diplomatic relations and Malaysian involvement in the context of globalism.

B. PATRIOTIC CITIZEN'S FRAMEWORK

The existence of a model or framework of patriotism emerged as a push after the May 13 tragedy in 1969 that has sparked multi-ethnic conflicts in the country. This urges the formation of the National Philosophy *(Rukun Negara)* which contains five key principles that hold and guide the identity of children regardless of ethnicities and religion backgrounds. According to Abdul Aziz Abdul Rahman (2009), the five principles of *Rukun Negara* was created based on the multiracial and multi-religious Malaysian societal common beliefs and values where it

is enable to be practiced by all Malaysian regardless of their social classes and status. The fourth Prime Minister of Malaysia in the Malaysian Chamber of Commerce (1991) developed the second framework of patriotism. This second framework contains short-term and futuristic long-term models that are aiming at developing Malaysians as developed scientific and progressive nation. Nine challenges to be a patriotic nation of Malaysian are establishing a united Malaysian nation made up of one *Bangsa Malaysia* and creating a psychologically liberated, secure and developed Malaysian society. Fostering and developing a mature democratic society and establishing a fully moral and ethical society are other challenges to be faced by all Malaysian. All Malaysians are required to establish a matured liberal and tolerant society as well as a scientific and progressive society. In addition, it is important for all Malaysian to establish a fully caring society, ensure an economically just society (in which there is a fair and equitable distribution of the wealth of the nation) and establishing a prosperous society with an economy that is fully competitive, dynamic, robust and resilient. Based on these two model, we formulate a framework model for developed nations of Malaysia (Figure 1).

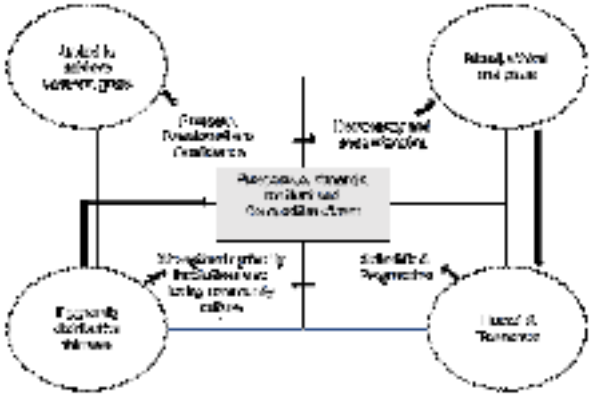


Figure 1: Developed Nations of Malaysia

In line with the model of patriotism in education that has been embedded and integrated in a variety of programs and activities at the school level, understanding and appreciation of each elements are necessaries.

Figure 1 explains the importance of Malaysian to have self-reliance, competitive attitudes, and patient, proactive, productive, the desire to succeed. These are important for all Malaysians. Other than fostering a positive attitude in society, Malaysian citizens need to gain knowledge, various life skills, etc. According to Chua Kheng Hoe (2007), a disciplined community is the one with the characteristics for civilised society. This includes attitudes to obey the law, obey the rules, to act decently, to be honest, and to act fair, responsible, sincere, trustworthy, and considerate.

Passionate in doing positive things is important for all citizens. It refers to overt individual behaviour to foster a sense of belongings. Good citizens do not create any prejudice and do not deny others rights. Every single citizen is required to know each other, easy to adapt and assimilate with others. Looking at a common aspect of multi-ethnic beliefs may be able to create a sense of belonging and promote citizenship values. Mutual respect and cherish one another would be other important elements as Malaysians.

In Malaysia, Royal institutions are symbols of state sovereignty. It is the backbone of the preservation of Islamic institutions as an official religion without denying others people rights to practice their own religions. Loyalty to tke Kings, rulers and the states are the main pillars for national identity of every Malaysian citizens. Being proud to be a Malaysian means being grateful for what we have, contribute to achievement of self, community and nation and use all its potential owned to enhance the image and dignity of the country. Every citizen must always uphold the Constitution, honour the king, respect the nation's leaders, respect the national symbols such as the flags and national anthems. All Malaysians are upposed to exhibit good manners, positive as well as appreciate the local cultural heritage. Feeling proud of the country is vital for fostering a passion for the nation. The fostering of the spirit of patriotism can change the way individuals or society think especially the students. According to Ahmad Ali Seman (2011), in fostering the spirit of patriotism, the elements of loyalty to the country must be rooted in the soul of the nation and its people. The concept of patriotism requires the proper preparation of the soul, which is not constraint to just about ideology and spirit. This is because the concept of patriotism is shaped beyond continuity between spirit and ideology; indeed it requires understanding various aspects of life.

C. RESEARCH OBJECTIVES

This study aims at identifying the level of patriotic knowledge among multi-ethnic youth i.e. are Malay, Chinese and Indian. The study also strives at analysing the differences on patriotic knowledge based on ethnicities and genders.

D. METHODOLOGY

This study utilised a survey research design using a set of 7-type Likert scales questionnaire. This questionnaire has 22 items that are based on five indicators with reference to the Model of Patriotism in Education as follows: Proud as A Malaysian (5 items), Loyalty to King and Country (4 items), Sense of belongings (4 items), Discipline and Legal Compliance (4 items), and Competitive and Productive (5 items). The items presented in this survey are in line with the studies on social environment and racial tolerance by Doganay (1990), Shamsul Amri (2012), and Najmuddin (2014).

Table 1. Respondent's Distribution

Gender		Etnicities)		
Male	Female	Malay	Chinese	Indian
800 (50%)	800 (50%)	844 (27.8%)	508 (24.9%)	248 (15.5%)

E. FINDINGS & DISCUSSIONS

The overall findings of patriotic knowledge among multi-ethnic youth was at a moderate level with the mean score of 4.786 (SD=0.668). The elements of disciplined character and compliance with the law were the highest mean scores; meanwhile the elements of competitive and productive characters were the lowest mean scores. Table 2 shows that **Table 2.** The Levels of Patriotic Knowledge

No	Aspect	Mean Score & Percentage					Mean	SD	Interpretation
		1.00-2.20 (Low)	2.21-3.40 (Moderately Low)	3.41-4.60 (Moderate)	4.61-5.80 (Moderately High)	5.81-7.00 (High)			
1	Proud as a Malaysian	20 (1.3%)	56 (3.5%)	572 (35.8%)	786 (49.1%)	166 (10.4%)	4.811	0.843	Moderately High
2	Loyalty to King and Country	18 (1.1%)	66 (4.1%)	550 (34.4%)	742 (46.4%)	224 (14.0%)	4.845	0.908	Moderately High
3	Sense of belongings	16 (1.0%)	41 (2.6%)	651 (40.7%)	684 (42.8%)	208 (13.0%)	4.767	0.835	Moderately High
4	Discipline and Legal Compliance	10 (0.6%)	56 (3.5%)	420 (26.3%)	872 (54.5%)	242 (15.1%)	5.026	0.884	Moderately High
5	Competitive and Productive	58 (3.6%)	216 (13.5%)	618 (38.6%)	568 (35.5%)	140 (8.8%)	4.481	0.957	Moderately High
Levels		10 (0.6%)	37 (2.3%)	495 (30.9%)	976 (61.0%)	82 (5.1%)	4.786	0.668	Moderately High

61.0% of respondents have a moderate level of knowledge on patriotism. Only 5.1% of the respondents declared a higher level of knowledge on patriotism. Nearly one-third of the respondents (30.9%) stated that they have a moderate level of knowledge on patriotism. Results indicating that the ability to compete and increase productivity among Malaysian youths was the lowest level (mean = 4.81). This is something need to be given attention as it is in line with the previous study of productivity and competitiveness among carried out by Mansor Mohd Noor et al. (2006). In that study, results revealed that youth competitiveness and productivity required a lot of actions and interventions. Results from the current study demonstrated that four aspects at the levels of moderately high i.e. Proud to be a Malaysia (mean = 4.811), loyalty to the king and nation (min = 4.845), sense of belonging (min = 4.767), discipline and obedience (min = 5.026). These aspects are relatively good.

Differences on Patriotic Knowledge between Gender and Ethnicity

A MANOVA test was carried out to analyse the differences between genders and ethnicities. A Box's M test is a pre-requisite for MANOVA test to check the covariance among dependent/across all variables (Hair et al. 1995; Green et al. 1997). The Box's M test (Table 3) reveals that there were significant covariance differences among the dependent variables for all independent variable levels (F = 420,097, p = 0.000) (p <0.05). This means that

the dependent variable-covariance are not homogenous across all independent variables. In this study, the sample size is large and almost identical, so testing the hypothesis is suitable for MANOVA test. Therefore, *Wilks 'Lambda (Wilks' λ*) statistical test is used in this study (Table 4).

Table 3. Box's M test

Box's M	Nilai-F	df1	df2	Sig.
420.097	5.543	75	1038363.110	0.000

Table 4. *Wilks 'Lambda (Wilks' λ)*

Effect	Wilks' Lambda	F	df between	df within	Sig
Male	0.990	3.096	5	1594	0.009
Ethnicities	0.892	18.758	5	1594	0.000
Gender*Ethnicities	0.969	5.098	5	1594	0.000

The Wilks 'Lambda (Wilks' λ) compares the mean scores of patriotic knowledge among Malaysian youth based on ethnic groups. Results showed that there was a significant difference in patriotic knowledge (in terms of pride to be a Malaysian, loyalty to the king and nation, sense of belonging, disciplines and obedience, as well as youth competitiveness and productivity of Malaysian) (Wilks' $\lambda = 0.969$, $F(5, 1594) = 5.098$ and $p = 0.000$ ($p < 0.05$) based on genders and ethnicity. Detailed results of two-way MANOVA analysis regarding the differences between genders and ethnicities with regard to patriotic knowledge are displayed in Table 5.

Table 5. MANOVA Results

Constructs	Gender	Ethnic	N	Mean	SD
Proud as Malaysians	Male	Malay	420	5.30	0.97
		Chinese	230	4.66	1.13
		Indiann	150	4.72	1.04
		Total	800	5.01	1.07
	Female	Malay	424	5.46	1.02
		Chinese	278	4.94	1.04
		Indiann	98	4.88	1.03
		Total	800	5.21	1.06
	Total	Malay	844	5.38	1.00
		Chinese	508	4.81	1.09
		Indiann	248	4.78	1.03
		Total	1600	5.11	1.07
Loyal to the King & Country	Male	Malay	420	5.18	0.93
		Chinese	230	4.66	1.07
		Indiann	150	4.57	1.02
		Total	800	4.92	1.03
	Female	Malay	424	5.17	0.95
		Chinese	278	5.01	1.10
		Indiann	98	4.66	1.07
		Total	800	5.05	1.03
	Total	Malay	844	5.18	0.94
		Chinese	508	4.85	1.10
		Indiann	248	4.61	1.04
		Total	1600	4.98	1.03
Sense of Belonging	Male	Malay	420	5.35	0.96
		Chinese	230	4.69	1.18
		Indiann	150	5.06	0.95
		Total	800	5.11	1.06
	Female	Malay	424	5.33	1.04
		Chinese	278	5.20	1.00
		Indiann	98	4.98	0.86
		Total	800	5.24	1.01
	Total	Malay	844	5.34	1.00
		Chinese	508	4.97	1.11
		Indiann	248	5.03	0.91
		Total	1600	5.17	1.04
Disciplines & Compliance	Male	Malay	420	5.47	0.98
		Chinese	230	4.76	1.26
		Indiann	150	4.96	1.14
		Total	800	5.17	1.14
	Female	Malay	424	5.65	0.99
		Chinese	278	5.17	1.14
		Indiann	98	5.01	0.83
		Total	800	5.40	1.06
	Total	Malay	844	5.56	0.99

		Chinese	508	4.98	1.21
		Indiann	248	4.98	1.03
		Total	1600	5.28	1.11
Competitive & Productive	Male	Malay	420	5.25	0.96
		Chinese	230	4.76	1.18
		Indiann	150	4.85	0.96
		Total	800	5.04	1.05
	Female	Malay	424	5.37	0.94
		Chinese	278	5.02	0.99
		Indiann	98	4.91	0.94
		Total	800	5.20	0.98
	Total	Malay	844	5.31	0.95
		Chinese	508	4.91	1.09
		Indiann	248	4.88	0.95
		Total	1600	5.12	1.02

Table 5 shows that there is a significant difference between genders regarding the patriotic knowledge. This means that males and females have different levels of knowledge on citizenship feelings, loyalty to the king and nation, a sense of belonging, disciplinary aspects, obedience behaviour, competitiveness and productivity aspects.

The analysis also revealed that there is a significant difference between ethnicities about their knowledge on patriotism. Post-Hoc Test (Table 6) shows that Malay youth has the higher level of patriotic knowledge than Chinese and Indian youth. Indeed, there is a significant difference between Malay, Chinese and Indian youth about their levels of knowledge on citizenship feelings, loyalty to the king and nation, a sense of belonging, disciplinary aspects, obedience behaviour, competitiveness and productivity aspects.

Table 6. Post-Hoc Test Results

Patriotic Knowledge	(I) Ethnic	(J) Ethnic	Mean Diff. (I-J)	Error	Sig.
Proud as Malaysians	Malay	Chinese	0.57	0.06	0.000
		Indian	0.60	0.07	0.000
	Chinese	Malay	-0.57	0.06	0.000
		Indian	0.03	0.08	0.950
	Indian	Malay	-0.60	0.07	0.000
		Chinese	-0.03	0.08	0.950
Loyal to the King & Country	Malay	Chinese	0.33	0.06	0.000
		Indian	0.57	0.07	0.000
	Chinese	Malay	-0.33	0.06	0.000
		Indian	0.24	0.08	0.008
	Indian	Malay	-0.57	0.07	0.000
		Chinese	-0.24	0.08	0.008
Sense of Belonging	Malay	Chinese	0.37	0.06	0.000
		Indian	0.31	0.07	0.000
	Chinese	Malay	-0.37	0.06	0.000
		Indian	-0.06	0.08	0.749
	Indian	Malay	-0.31	0.07	0.000
		Chinese	0.06	0.08	0.749
Disciplines & Compliance	Malay	Chinese	0.57	0.06	0.000
		Indian	0.58	0.08	0.000
	Chinese	Malay	-0.57	0.06	0.000
		Indian	0.00	0.08	0.999
	Indian	Malay	-0.58	0.08	0.000
		Chinese	0.00	0.08	0.999
Competitiveness & Productivity	Malay	Chinese	0.41	0.06	0.000
		Indian	0.44	0.07	0.000
	Chinese	Malay	-0.41	0.06	0.000
		Indian	0.03	0.08	0.936
	Indian	Malay	-0.44	0.07	0.000
		Chinese	-0.03	0.08	0.936

Detailed differences based on Table 6 reveals that there are significant differences between Malays and Chinese regarding the aspects of a pride as a Malaysian, loyalty to the king and nation, a sense of belonging, disciplinary aspects, obedience behaviour, competitiveness and productivity aspects ($p < 0.05$). However, there is no significant difference in the knowledge of patriotic between Indian and Chinese about their knowledge on Pride to be Malaysians, sense of belonging, discipline and compliance with the law, and the competitiveness and productivity ($p > 0.05$). There was a significant difference in loyalty to the king and country between Malay, Chinese and Indian ($p < 0.05$). Figure 2 visualises the differences of patriotic knowledge based on gender and ethnicity.

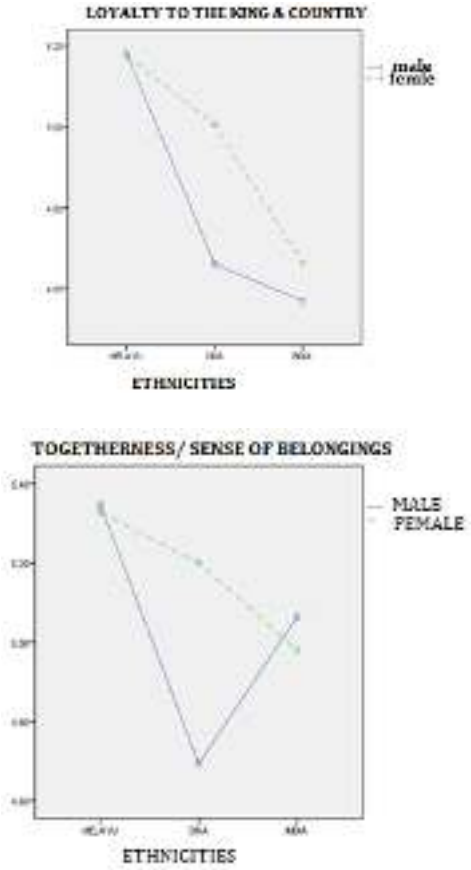


Figure 2. Interaction between Gender and Ethnicities about Loyalty to King and Country and Sense of Belonging

Figure 2 visualises a significant interaction effect between gender and ethnic groups on the aspects of loyalty to king and country. Malay youth regardless of gender has a high level of knowledge on Loyalty to the king; and it is significantly different with Indian youth. Whereas, Chinese female has a higher knowledge on the Loyalty to the king and Country if compared to Chinese male.

F. Implications &Suggestions

Implications for Policymakers

The findings of this study have implications for public policy-making process related to patriotism among youth. This is due the unsatisfactory level of patriotic knowledge among Malaysian youth. Regardless of various initiatives and programs have been carried out nationwide, there is still low level of patriotic knowledge among youth. The findings of this study also have implications on national integration policies and racial unity especially on National Service Training Program (PLKN). This program is no longer carrying out in Malaysia nowadays. We suggest strengthening the school curriculum in order to make a great impact on the levels of patriotism and ethnic tolerance among multi-ethnic youths in Malaysia.

Implications for the Appreciation of the Rukun Negara

The current study suggests the importance of Rukun Negara value appreciation. A good practice in Indonesia on how Pancasila values are instilled for young people should be a benchmarking. The Institute of Pancasila in Indonesia plays an integral role for promoting patriotic values among all Indonesian. It is suggested to form an institute in Malaysia for promoting patriotic values of Malaysians.

G. Conclusion

Overall, the patriotic knowledge among multi-ethnic youth in Malaysia is at a moderate level. There are some discrepancies of patriotic knowledge based on gender and ethnic backgrounds, so it requires specific strategies to

enhance their knowledge on patriotic elements. Community centres that integrate multi-ethnic youth may be able one of the strategies to enhance their knowledge on patriotism. We believe that the formation of institute on *Rukun Negara* is required as it focuses mainly on how to promote patriotic knowledge and tolerance skills for multi-ethnic youth in Malaysia.

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ENHANCING READING INTEREST THROUGH DIFFERENT TYPES OF READING TEXTS

Sharuliza Saad
[1]SMK Ibrahim, Kedah, MALAYSIA
E-mail: sharuliza_saad@yahoo.com

ABSTRACT

This research is to investigate the students' perceptions and interest in reading English books. It is also to investigate if voluntary reading can be made as a motivational tool in enhancing students' interest in reading English books. To achieve the aim of the study, the mixed-method approach was used to collect the required data. Therefore, 15 students (7 boys and 8 girls) from class 1A6 in SMK Ibrahim, Sungai Petani, Kedah were selected. All of the respondents were also randomly selected to answer a questionnaire. The analysis of the data indicated that the majority of the students are highly motivated if they were to read and respond to different types of literature. The use of different reading types of literature texts enables the students to engage the students to read. This aspect is crucial as reading helps to intensify students' vocabulary and writing skills. Although the students had positive attitudes towards the use of different reading types of literature, the study suggests that it will be more engaging and definite if it includes a larger number of students.

Keywords: *English, reading interest, reading types,*

A. INTRODUCTION

Reading is a core skill of English Language. It refers to the ability to understand written text. The development of this skill is of the essence at early age of schooling. When students master reading skills, they can understand written text better. When combine their understanding with their schemata, they are able to perform better in writing.

There are researches that showed a link between competency in reading and overall school performance. According to OCED's report on reading for change, program for International Student Assessment (PISA): "Reading for pleasure is more important for children's educational success than their family's socioeconomic status."

Other than that, there are other advantages of making children read since they are young. When students read since they are young, they will be successful in their school performance and in life.

1.1 Background of the Study

The area of the focus for my action research is enhancing students' reading interest through different types of reading texts. Without the solid base of reading skill, the researcher believes that students will have to clamber during their school life and later in their adult life. Although their school examination result has exceeded the district and state expectation, still the researcher believes that students' reading interest must be upgraded. Compared to the students who read English books for pleasure, the students who didn't read did not do well in their examination. The students who read for pleasure since young, did not only performed excellently in their English Language subject, but also excelled academically in general. The researcher concludes that the students who lack reading skills did poorly in their English Language examination and thus, they have to be encouraged to read.

1.2 Reflection

Among my students in 1A6 class, I found out that many students do not read English books for leisure. Based on my initial survey which I did during a lesson in class. When asked, the girls told me they read one or two books during end-of-the-year school holiday and their favourite writer is Ain Maisarah – a Malay writer. As for the boys, they either read comics or don't read at all. From here I concluded that when they read, it would be a Malay novel and a comic book or they didn't read anything at all.

Consequently, when they didn't read, they didn't perform excellently in their writing task. This is because reading is the first skill that a student needs to acquire before they can learn other skills. This aspect is crucial as reading helps to intensify students' vocabulary and writing skills. Reading should be experienced by the students themselves in order to improve their academic performance.

However, the researcher had another issue with my 1A6, i.e. they needed to have motivation and at the same time, they found reading materials supplied by the school, not interesting and not challenging enough. Experiencing this problem, the researcher came up with an idea to make reading more engaging, fun and at the same time beneficial academically. Therefore, to encourage my students to read, I come up with different types of reading text.

B. LITERATURE REVIEW

According to Particia L. Carrell of Southern Illinois University (2004) "…reading is the main reason why the students learn the language." She also added "the ability to read the written language at a reasonable rate and with good comprehension has long been recognised to as important as oral skills, if not more important." However, in my case, my students don't read because they don't understand words in books and thus it takes so much of their time to look up for words. As a result, for them reading is burdensome instead of enjoyable.

My methods are influenced by J. David Cooper (1998) who wrote Using Different Types of Texts for Effective Reading Instruction. I used his ideas as a basis of my action research. However, instead of using different reading types of literature text like Cooper (using scaffolding techniques), I used different types of reading materials.

C. RESEARCH QUESTIONS

This study determined the effectiveness of introducing different reading materials to 1A6 students. Specifically, it answered the following.

i. Would the students' interest in reading increase when they were given different types of reading texts?
ii. After being given different types of reading texts, would it improve the students' English Language examination result?

D. RESEARCH PURPOSE

Reading different types of reading materials voluntarily should be encouraged. In schools, teachers have been using a generalised reading method. Teachers normally use a book that they used for most or even all their students. This can be seen when a teacher teaches a literature reading text. However, as the researcher has gained new knowledge it has become much more definite that the students need to learn to read different types of reading materials so that they can overcome challenges in reading and understanding a text. Therefore, students need a variety types of texts. The use of different types of texts is most significant at the beginning levels of reading. Nevertheless, there is a need to rationalize why the researcher was using reading texts instead of books. It is due to time constraints and other constraints that this research was facing. Moreover, the researcher didn't want to scare the students by forcing them to read English books. The researcher believes the baby-step of encouraging the students to read is to encourage them to read a text of about one page. The purpose of this paper is to identify and discuss the different types of texts that would encourage reading among 1A6 students.

E. RESEARCH OBJECTIVES

5.1 General Objective

To encourage students of different English proficiency level to read different reading types of texts voluntarily.

3.2 Specific Objectives

i. Read all different types of literature texts prepared by the teacher voluntarily (Bloom Taxonomy, level 1 - knowledge).

ii. Demonstrate understanding of what they have read by answering comprehension questions, giving descriptions and summarizing (Anderson & Krathwohl (2001) Taxonomy, level 3 - application).

F. RESEARCH METHODOLOGY

For this action research purpose, the researcher is using Kurt Lewin Action Research Process Model (1946) below as guide to implement it.

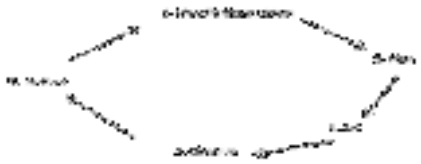

Figure 1: Kurt Lewin Action Research Process Model (1946)

A survey on the problem which has been identified is crucial to decide whether that problem really exists. A few criteria or variables have been set to help in identifying the problems. The following instruments have been used to collect data:

i. Observation on the students' behaviour during the lesson conducted in class

ii. Questionnaire to survey on the problem

iii. Pre-test - consists of reading comprehension questions and two essays of about 100 words. It is to determine the students' level of proficiency before they were given the treatment

iv. Post-test - consists of reading comprehension questions and two essays of about 100 words. It is to determine the students' proficiency level after they had received the treatment.

4.1 Target Group

A group of 15 students from class 1A6 was chosen for this research. There were 7 boys and 8 girls. They were of different levels of achievement in English Language subject. However, many of them had one thing in common, i.e., they did not read English books and if they read, they either choose comics or Malay novels or don't read at all. Therefore, they were chosen because of the very reason.

4.2 Data Collection Method

Date	Method of assessment	No. of students	Objectives
27/2/18	Observation	31 students of 1A6	To survey the problems
		After the observation, the researcher eliminated the students who don't have the problems from the survey	
1/3/18	Questionnaire	15 students of 1A6	To survey the problems
6/3/18	Pre-test	15 students of 1A6	To collect data of students' reading and understanding
7/3/18 - 9/4/18	**<u>Implementation of the intervention methods</u>** A) Briefing B) Activity 1 (Read All You Can) - 2 weeks (to be completed during their free time) C) Activity 2 (Choose Your Love) - 3 weeks (to be completed during their free time) D) Activity 3 (Shared Reading) - 3 weeks (to be completed during their free time simultaneously with Activity 2)		
11/4/18	Post-test	15 students of 1A6	To collect data of students' reading and understanding
17/4/18	Reflection Study		

22/4/18	Writing a research report
1/5/18	Presentation of findings

4.3 Analysis on the Survey Of Problems

To confirm the existence of the problems of students not reading the text, an observation had been done during two single-period lessons. As a result, the teacher concluded that the students did not read and they just read comics or Malay novels. This is because:

i. They were not familiar with reading English books at home

ii. They were unable to identify the main characters

iii. They were not aware of the ending of the story

iv. They hesitated to answer simple questions

Later, a questionnaire was distributed to the students to answer, yet again to collect another data. There were 10 questions in the questionnaire which were to obtain their personal response. Below are the data collected from the questionnaire:

Bil	Question	Options	Number of Students
1	Is Reading Your Hobby?	Yes	7
		No	8
2	When Do You Read?	When I'm free	9
		When my parents ask me to	2
		When I feel like it	4
3	How Often Do You Read?	At least once a week	1
		At least once a month	4
		At least once every three months	6
		At least once a year	4
		Never	0
4	How many books do you read in a year?	0	0
		> 5 books	6
		> 10 books	6
		> 20 books	3
		> 50 books	0
5	Where do you get your books from?	From my parents	6
		School library	15
		Public library	6
		From my friends	8
6	What kind of books do you read?	Comic	8
		Anthology	0
		Science Fiction	6
		Romance	3
		Mystery	10
		Action and adventure	6
7	Who is your favourite writer?	Ain Maisarah (a Malay novelist)	9
		Keith (A cartoonist)	6
8	Which is your preferred language?	*Bahasa Melayu*	14
		English	1
9	Do you read English books?	Yes	1
		No	11
		Sometimes	3

10	If **NO,** why?	I don't understand the words	3
		It takes a lot of my time	6
		It is not interesting	6

Based on the questionnaire before the intervention, there were students who read books. However, it was not good enough as the answer that came from good students. The students' answer of the questionnaire was unsatisfying since they were excellent students who scored 5A's and 6A's in their UPSR examination. They should read more. The answer of the pre-test should be better since they were good students of a premier school.

Reading different types of texts gives the students sense of satisfaction and accomplishment as they could read more and more and compete with their friends. Thus, it simultaneously motivates them to read without teacher having to force it on them.

G. SUGGESTION OF INTERVENTION STUDY

5.1 First Activity: Read All You Can

Each student obtained his/her reading file from the teacher. All students were given same reading text in the files. The files consisted of :

i. A poem
ii. A science-fiction
iii. A fairy tale
iv. A fiction (short story)
v. A romance text
vi. A mystery text
vii. An action and adventure text

After all the subjects had gotten their files, the assignment started. The students were given two weeks to complete their reading and answer a few questions to gauge their comprehension. They wrote all the answers to the questions in the text. Meanings for difficult words were also jotted in the reading texts. The purpose is to make sure they read and understand the texts. Later, after they had completed reading all texts in the files, they returned the files to the teacher.

Observation: Students enjoyed being assigned with the task. They competed with each other to complete the task given to them. All of them managed to finish reading all the texts within two weeks.

Reflection: The specific objective set for the activity was achieved. They read all different types of reading texts prepared by the teacher voluntarily. They also demonstrated understanding of what they had read by answering comprehension questions. Not only that, the students also learned important information, meaning of difficult words and spellings through this activity.

5.2 Second Activity: Choose Your Love

This activity was carried out to determine how different reading texts can enhance the students. It is an activity that requires the students to work voluntarily and independently at home. This activity is done when the students are free, at home. After the students had completed the task for the first activity, they would take reading texts for the second activity every alternate day from the teacher. The reading texts were labelled with the types of texts. The students could choose a reading text from the types that they like. After they have completed the task, they would come back for more reading texts voluntarily. They were given the freedom to choose their love. Then, the students would jot down in a list (Exhibit A) the types of text they had done. This activity is to encourage the students to increase their reading interest by allowing them to select their preferred reading texts.

Observation: The students were excited when doing this activity because they issued challenge to each other who read as many texts as they could. A few students were able to complete the task almost every day.

Reflection: Undeniable, the CHOOSE YOUR LOVE activity was quite simple and straightforward. However, the students loved it as it did not burden them. And I believe, the specific objective had been achieved since the students were 'forced' to read and understand the reading texts subtly. Therefore, it was a success as the students kept on coming back for more texts. Moreover, this activity also encouraged competitiveness and independent learning.

5.3 Activity 3: Shared Reading

Each student was given a task to share what they had read with their teacher, parents and/or classmate/s. This is required because it made them accountable for what they read. Thus, before they shared their reading, they had to make sure they really understood what they had read. The activity was done during their free time in school or at home. After they had shared their reading, their partners would vouch for what the students had presented to them by writing their signature on the students' List of Text Read (Attachment B). Their partners could be the same person or different one.

Observation: Many students were effective in doing their task. They worked willingly to share their reading. The partners were cooperative and helpful in making sure the students do their shared reading. Some students who partnered with their parents received tremendous support and encouragement. Their parents were happy to see their children development.

Reflection: This activity had provided the students the opportunity to present their reading outside their classroom. Besides, they had also learned how to choose their favourite types of reading text. Through this activity, it is expected that the students learned the sense of importance and relevance so that it would encourage them to read and read. By the same token, it will benefit the students in other English Language skills such writing, listening and speaking.

H. FINDINGS AND DISCUSSION

The efficacy and validity of the activities were determined by comparing the students' answers in the questionnaire and the list of their shared reading. The researcher gave then them a post test. Evidently, there was a significant increment between the number of books the students initially wrote in the questionnaire and the number of reading texts they read after the activities carried out by the teacher.

NO.	STUDENTS	NO. OF BOOKS READ BEFORE INTERVENTION (IN A YEAR)	NO. OF TEXTS READ AFTER INTERVENTION (IN A MONTH)
1	Abdut Taiyib bin Qaid-E Johar	3	11
2	Ahmad Aliff bin Mohd Yusoff	5	11
3	Ain Dafina binti Abdul Malik	10	11
4	Alifatul Afidah binti Mohd Zahir	11	11
5	Farah Adriana binti Jeffrey Yeoh	15	12
6	Fashehah Awatif binti Suhaimi	6	8
7	Israq Haiqal Kernain bin Al Amin Kernain	0	5
8	Marsya Munhar binti Salek Munhar	12	15
9	Muhammad Naufal Hakimi bin Zahir	7	11
10	Muhammad Zhalif Ridhwan bin Zahari	3	8
11	Nur Iffa Nadhirah binti Zainal	7	11
12	Nur Syakira binti Khin Maung Kyi	8	11
13	Rabiatul Adawiyah binti Md Razi	8	11
14	Rasyidin Muhammad Lokman bin Raja Salim	2	5
15	Salsyafiera Khauthar binti Mohd Hafiz	6	11

Besides, it is confirmed that the students read more and showed more interest when they voluntarily go back to their teacher to get more reading text. As Brown (2000) states, "By matching text types with their students' reading development, teachers are better able to support students' reading progress" Therefore, the implementation of these activities among those 15 students was considered a success and had achieved their objectives.

No.	Student	Pre-test (100%)	Post-test (100%)	Difference
1	Abdut Taiyib bin Qaid-E Johar	68	71	+3
2	Ahmad Aliff bin Mohd Yusoff	62	66	+4
3	Ain Dafina binti Abdul Malik	86	79	-7
4	Alifatul Afidah binti Mohd Zahir	70	70	0
5	Farah Adriana binti Jeffrey Yeoh	78	83	+5
6	Fashehah Awatif binti Suhaimi	60	70	+10
7	Israq Haiqal Kernain bin Al Amin Kernain	62	63	+1
8	Marsya Munhar binti Salek Munhar	74	85	+11
9	Muhammad Naufal Hakimi bin Zahir	74	72	-2
10	Muhammad Zhalif Ridhwan bin Zahari	68	79	+11
11	Nur Iffa Nadhirah binti Zainal	57	72	+15
12	Nur Syakira binti Khin Maung Kyi	71	81	+10
13	Rabiatul Adawiyah binti Md Razi	72	66	-6
14	Rasyidin Muhammad Lokman bin Raja Salim	62	64	+2
15	Salsyafiera Khauthar binti Mohd Hafiz	74	78	+4

I. REFLECTION OF THE STUDY

The utilization of the activities had reached the objectives that were set initially. Read All You Can, Choose Your Love and Shared Reading helped to encourage the students to read the text. When it was organized and structured for them, they felt obliged to read. However, the teacher believes that the activities could be improved. More students should be involved to encourage reading habit

J. CONCLUSION & SUGGESTION

More students will be exposed in the next cycle of the activities so that no one will feel left out. This is because the researcher found out that having read the texts and sharing them with their friends and family can boost one's motivation and at the same time promote interest in reading. With support from people around them, the researcher believes students will be can read more and more and therefore sharpen their other language skills. Thus, they become skilful and comfortable with English language.

Therefore, in the future, **Read All You Can** and **Choose Your Love** activities will still be put into effect but improved for the betterment. However, the Shared Reading activity can be made more challenging by assigning students with challenging tasks. Hopefully, these activities can be set as a proper module and be used by all Form 1 students in SMK Ibrahim.

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THE ENHANCEMENT ATTENDANCE OF SUBUH PRAYER AT SMK MAK LAGAM, (TESMAL) USING 'D' METHOD

Roslina Seman[1]
[1]SMK Mak Lagam Kemaman Terengganu, MALAYSIA

ABSTRACT

This research generally looks at the student phenomenon of Subuh prayer at SMK Mak Lagam. Specifically, this research was conducted to increase the attendance of hostel student at SMK Mak Lagam known as TESMaL (Terenggan u Elite School Mak Lagam) to perform Subuh prayer together at school hall and not perform at their own room. Research subject were the hostel student. The method for this research is 'D' method, which is Demerit system with the deduction of marks for their sport house. This system will made them feel scared because it can contribute to the defeat of their sport house, while in other side, other member of the sport club tried their best to collect points especially in academic and sport activity. This is a qualitative research which is included interview and deep observation towards the research subject that is 507 students were living at dorm of SMK Mak Lagam. The findings show an increase in attendance at Subuh prayer after the program was implemented compared to the previous week. The findings also show that they are more responsible for their own team as well as having healthy competition among the residents of SMK Mak Lagam.

Keywords: Demerit system, prayer attendance, mark deduction, hostel student, prayer together.

A. INTRODUCTION

SMK Mak Lagam is a rural secondary school located 10 KM from Chukai Town, Kemaman. The school opened in 2004 and requires all students to stay in dormitories. SMK Mak Lagam was established as an Elementary School in Terengganu in 2005 and the selection of students was made by JPNT. Students who entered this school were originally the best and earned all A's in the UPSR. However, this scenario has changed in line with the changing education system of the country introducing the PBS system in which pilot students are Form 1 students in 2017 (terms reduced to 1A only).

For the record, the researcher was among the pioneer teachers at the school which began work at SMK Mak Lagam on January 1, 2004. Later transferred to SMK Geliga in 2012 as Head of Humanities. In April 2016, he returned to the school as Head of Humanities to this day. With 8 years' previous experience, the arrival of the second researcher was staggering as the researchers found that almost no student to perform Subuh prayer at a school hall. This is based on spontaneous interviews with the Leader of School Prefect and TESMaL Hostel Leader year 2017. They are more comfortable and easier to perform Subuh prayers in their dorm rooms alone. While the dorm rules, it is compulsory to perform every prayer at school hall (this rule already pasted at their dorms). This situation is different during the beginning of school opening until the researcher transferred to another school. (during year 2004 until year 2012) where the students adhere to this rule without any problems.

With that, as an Islamic Education teacher and a school expert, it is advisable to take appropriate action to raise awareness among the students about adherence to perform prayer together.

One of the problems that student faced is they slept very late even their light off at 11 pm. Most of them slept at 12 30 am and above every night. This makes it difficult for them to get up so early in the morning that some of them miss their Subuh prayers.

Discussions were made with students found that they are difficult to wake up early even with an assist of alarm clock because there was no monitoring done. It is because of less a string of numbers of hostel warden, relative to the number of student dormitories. Only one male warden had to watch over two blocks that consist of 195 male students there are only 2 female wardens in charge of 2 female's block that consist of 312 female students. Another factor is the practice at home, which they are not used to pray together.

Realising the fact, this study was conducted to solve the problem where the other boarding school also penalised student who are not praying together at the school hall.

B. LITERATURE REVIEW

This study will focus on increasing the attendance of all TESMaL hostel student (507 students) to the school hall to perform Subuh prayer every day during school session.

Prayer comes from word “solla”. In other words, it means as one way of communication that connected between human and God. According to al-Rafi’iy (died 623 H), prayer is an acts and words that begin with ‘takbiratul ihram’ dan finish with salam and any other terms (Muhadir Joll, 2017).

Prayer together is a practice for more than a person to perform a prayer or a practice that following a leader called as imam. This prayer can be done at least two persons, one of them being an imam and another one being a makmum. For this action of prayer together, it is sunat muakkad (supposedly to do so) according to some views and fardu kifayah to any other views while it is compulsory to perform Jumaat prayer together. (Mustafa al-Khin, Mustafa al-Bugha & Ali al-Syarbajiy, 2015).

This practice of perform prayer together has proven to be a source of strength for a Muslim in facing the challenges of contemporary life and avoid any other negative elements. The movement in prayer is also a good exercise for the physical and spiritual. Any other of positive action from this practice is can establish a positive social relationship with each other while also instilling in them values such as respect the leader, keep saying a positive word and following the rules and instruction from the leader.

The perfection of this prayer is they perform the prayer together as how the Messenger of Allah, Rasulullah had done the prayer. He started to perform the prayer together after migrated from Kota Mekah to Madinah. For 13 years in the Kota Mekah, he performs his prayer alone at home due to enemy resistance. (Mustafa al-Khin, Mustafa al-Bugha & Ali al-Syarbajiy, 2015).

Rasulullah always perform his prayer together even during a war and travel, not to mention under s normal circumstances. The reward of prayer together are huge compared to prayer alone. This method are very accurate according to Hadis Riwayat Bukhari and Muslim which is “prayer together is better than perform the prayer alone with 27 times of rewards”.

C. RESEARCH OBJECTIVES

In general, this study aims to find solutions to the problem of students who are prefer to perform prayer in their rooms rather than prayer together while the rules already stated that the student require to perform their prayer at the school hall.

In particular, the objectives of this study are as follows:

i. Identify the problem of the TESMaL hostel student who are not perform their prayer together.

ii. To analyse percent of TESMaL hostel student to go to school hall and perform their Subuh prayer together.

iii. To increase the attendance of the hostel student to perform thier Subuh prayer together usig the ‘D’ method.

iv. Summarize the strengths and effectiveness of the 'D' method in solving student problems that are not perform their Subuh prayer together.

D. RESEARCH METHODOLOGY

The study subjects involved 507 (195 male, 312 female) TESMaL hostel students who were students of SMK Mak Lagam, Kemaman, Terengganu.

Review Of The Problem

In this study the researcher has used five common steps:

i. Identification of Issues and Problem.
ii. Planning.
iii. Implementation of Action.
iv. Observation.
v. Reflection and Assessment

For the purpose of identifying deeper problems faced by students, the researcher held brief interviews with Leader of School Prefect and TESMaL Hostel Leader and some random students. The focus of the interview was to identify the problem they were facing and the reason they did not want to perform Subuh prayer together at the school hall. The main results of the interviews show that most of the students take this practice lightly because they can perform their prayer anywhere. This does not mean they did not pray at all but they perform their Subuh prayer at their own room just for the sake of saving time to get ready for school.

From this observation also, there are lack of enforcement from warden towards student who are not perform their prayer at the school hall. This can encourage student to avoid themselves from perform prayer together.

E. IMPLEMENTATION OF ACTION

The main problem of this issue was student who perform their prayer together during school session not even reach on line. It is only invloved student not more than 20 students (include male and female students) from 507 students, which is only 3.94%. This study was conducted to try out a new method so that with this method, it can increase the attendance of the student to perform Subuh prayer at the school hall. To determine whether this new method works or not, a comparison is needed to evaluate the percentage of attendance before and after the method is implemented.

Here are the steps for implementing the method:

5.1 File Setup (to record attendance)

Provides 8 files according to 4 sports houses (named universities) namely UKM (yellow), USM (red), UM (blue) and UPM (green) homes. These files are colored in the colors of their homes and have the space to mark the attendance of students at the school for prayer throughout the school day.

5.2 Lauching and opening ceremony from school principal

The school is taking the initiative to launch this program so that students can make this program as an important program and hope that all students can committed to this kind of activity for the sake of personal and spiritual excellence in enhancing TESMAL student excellence.

5.3 Briefing to the leader.

A briefing was made after class for the leader of sport house and leader of hostel (male and female) and the management of this programe brief to them how the program will conducted. the demerit system will be implemented for every student who are absent from perform their prayer at school hall except for reason below:

i. Period for female
ii. Sick
iii. Not at the hostel
iv. No water at school hall

7.4 Retrieve daily data

Once they understand what is their roles in this programme, they will record their presence each morning in their dorms and the weekly data will be submitted to the coordinator every Thursday for analysis.

F. FINDINGS AND DISCUSSION

After the launching ceremony was held on 1st March 2018 (Thursday), the data was collected by Head of dorm everyday starting from 4th March 2018 (Sunday), first week of March 2018. Table below shows the percent of the student who perform Subuh prayer for first and second week of March 2018.

Week	First week	Second Week
Present	47.8	48.2
Absent	52.2	51.8

The results from the table above show little difference between the first week and the second week. There was a slight decrease for student who absent as well as an increase for student who present during prayer.

Although the increase was not impressive, the student's awareness of subuh prayer together at the school hall was good. The school was so proud with this programme and hope that it will increase in the future.

Compared to before the implementation of this method, the attendance of students was very disappointing as only 4% (3.94%) of the TESMAL hostel students attended Subh prayer together everyday. More frustatingly, there are days that there was nobody perform Subuh prayer together at the school hall. (a spontaneous iterview with the school prefect).

The table below is a comparison made before and after the 'D' method.

Week	Before	After
Present	4.0	47.8
Absent	96.0	52.2

The increase in attendance was over 10 times (over 1000%).

But there are still weaknesses that need attention. There are at least four key weaknesses identified when using this method to ensure that students perform Subuh prayer together at school hall.

i. The honesty of the of the dorm leaderwhile took the attendance of the students is questionable. Therefore, they should be warned from time to time to carry out their responsibility wisely and assure them that what they did will be evaluated by Allah Taala and Allah will easy your matter to pursuit knowledge and next can achieve success.

ii. There are some student who do not give any response towards this programme and did not want to give any cooperation. They thought this programme just waste time because they need to walk to school prayer while they can perform Subuh at their dorm and can save some times to prepare for school.

iii. There was no punishment implemented until the schools gains benefits from this method. This can causes the students to be fearless and overwhelmed.

iv. Only those with a high level of sportsmanship love their home sports and keep their home scores from being demeritated. They are eager to make their sports home as the winner in 2018. The winner will be announced at the Appreciation Event in November.

G. SUGGESTIONS FOR IMPROVEMENT AND CONCLUSION

Here are some steps to fix these problems:

i. All teacher who are involved with the sport home will cooperate with student in term of morale support and motivation.

ii. Establishing a constantly updated board that displaying the sports points of their respective homes for students to refer.

iii. Create a Personal Review Booklet for each student and they can evaluate their own prayers.

iv. Provide incentives such as awards and certificates to students who achieve excellent attendance (90% and above) each month.

Overall, this method has a positive impact on the total attendance of students for Subuh prayer at the school hall. However, the presence of students is not enough but it must be implemented in terms of understanding and

appreciation in every student especially at SMK Mak Lagam. It is undeniable that law enforcement in schools plays an important role but at the same time internal and external factors need to be emphasized as well.

The findings of this study show that the practice of perform Subuh prayer together at school hall among SMK Mak Lagam students is still in the middle and that it can be further enhanced. Students should have good knowledge of prayer. It needs to be enriched and strengthened either indirectly or through programs specifically designed for this purpose. Spiritual education methods need to be reviewed and emphasized so that they are in line with academic excellence. The responsibilities and roles that must be played must be borne together to form a world-class generation that understands the purpose of their existence on this earth. Hopefully that this 'D' method will be improved so that it will be more effective for TESMaL students to ensure better students in the future.

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AN ANALYSIS OF PAST STUDIES ON 5ES INQUIRY LEARNING MODEL APPLICATION IN HISTORY EDUCATION

Nur Syazana Abdul Mutalib[1], Abdul Razaq Ahmad[1] & Mohd Mahzan Awang[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: syaz_anna95@ymail.com

ABSTRACT

History Education is commonly associated with traditional, or outdated teaching and learning approaches. To address this issue, this study proposes the use of the inquiry method to enhance students' cognitive and academic achievement in History. Among the inquiry models that can be used to teach History is the 5E inquiry learning model. This paper will review recent studies on inquiry-based models, specifically the adoption of the 5E inquiry learning model for teaching history. In this study, 11 academic and journal articles were reviewed. Based on the review, the use of the 5E inquiry learning approach has improved students' thinking skills and increase students' achievement in the history subject. This demonstrates the effectiveness of the 5E Inquiry learning approach for teaching History. However, more in-depth studies should be conducted due to the fact that History is a subject that requires high cognitive skills as students are required to reimagine and evaluate past events. In order for this method to be effective, it must be continuously practiced in schools and teachers should adopt a more creative and innovative approach to teach the History subject. This will make students more focused and interested to learn History in schools.

Keywords: History education, inquiry, 5E inquiry learning model

A. INTRODUCTION

1.1 History Education in Malaysia

In today's age of globalization, we are constantly bombarded with technology and advanced infrastructure. It is no wonder that education is a very important aspect in one's life. As the acquisition of knowledge is an important part of one's growth, the government has put a great effort to facilitates formal or informal lifelong learning. At the same time, the government has not overlooked the importance of the history subject and has made it a compulsory pass subject for the Malaysia Certificate of Education (SPM) since 2013. The History subject contains a significant humanistic value that needs to be instilled among students in schools. The History subjects can also cultivate patriotism among Malaysians (Mohanambal A/L Murugaiah & Anuar Ahmad 2015). This reflects the importance of studying the History subject, as it not only develop citizens who are loyal to the country, but also it can educate students and guide them to make critical judgement to balance materialistic gain and the cultivation of human values in one's everyday life.

1.2 The Adoption of the Inquiry Method for Teaching and Learning in Schools

One of the aspirations for the Malaysian Ministry of Education (MOE) is to produce students who are competitive and participate actively in the classroom. In this regard, inquiry based learning is considered as one of the teaching methods that could increase students' interest to learn History. Inquiry-based learning usually invokes students' curiosity and increases their desire to acquire knowledge and solve problems or issues that arise. As inquiry is also known as a method of discovery, exploration or a heuristic method, teaching and learning activities in the classroom should involve investigation and discovery, as History is a subject that are interpreted and understood differently by each individual. The use of inquiry-based learning can also assist students to understand and evaluate the information they obtained and provide an opportunity for them to discover their own knowledge and apply it in real life (Noriah Ismail & Suhaidi Elias 2006).

1.3 5E Inquiry-Learning M

The 5E Inquiry Model, also known as the 5E Learning Cycle is a model based on the inquiry approach under the constructivist learning theory (CDC, 2016; Norazah & Zanaton 2015). This model was adapted from the Biological Sciences Curriculum Study model (BSCS 1989).

The 5E inquiry model represents the different phases of learning, engagement, Exploration, Explanation, Elaboration and Evaluation. The 5E Inquiry Learning Model is a student-centered model where each student is given the opportunity to participate in investigating or exploring different materials and information, develop the ideas obtained, make detailed explanations and make judgments. According to this model, both teachers and students play an important role in facilitating learning through each learning process.

Bybee (2009) mentioned that in order to encourage students' involvement in the learning process, teachers need to stimulate the students' mind and arouse their curiosity about a particular topic. Apart from creating an attractive learning environment, students' interest and attention in learning can also be increased by can encouraging students to ask questions and provide feedback to students' answers to extend the students' existing knowledge. Question-and-answer sessions will also allow students to express their views or opinions on a particular topic or the topic being taught. In this process, teachers will serve as a guide that steers students to the right direction and prepare them for the next phase of learning. During the lesson, students asking questions such as "Why is this happening?" Or "How can it happen?" is an indication that the teacher has succeeded to attract the students to participate in the learning process. After the Q & A session, students are required to discuss the questions in groups, list down the topics that they should know, work with a partner to complete an assignment and formulate answers to complete the task (CDC, 2016).

B. RESEARCH OBJECTIVES

This paper explains the concept of 5E inquiry-based learning model and to examine how it can be used in teaching History.

C. RESEARCH METHODOLOGY

This study used the document analysis research method. The articles were found from a database search using the keywords, inquiry-based learning and 5E inquiry-based learning method. In total, 11 articles were reviewed for this study

D. FINDINGS AND DISCUSSION

This study reviewed of 11 Malay-language articles that focused on inquiry-based learning in general, the use of 5E inquiry-based model in teaching History, and gaps in the research on the use of 5E inquiry-based learning model in History education. The articles were obtained from the Repository of National University of Malaysia or UKM erep. Using the keyword '*inkuiri*' (inquiry), 15 articles were retrieved but only 6 out of the 15 articles were reviewed. Whereas, using the keyword '5E', 14 articles were retrieved and 5 articles were reviewed for this study.

4.1 The Use of Inquiry Learning Practices

The inquiry-based learning method is widely applicable in many fields. Numerous studies have shown that the inquiry method is effective in developing students' thinking skills. On the other hand, the over-reliance towards conventional methods of teaching have become hindered the implementation of inquiry-based learning in the classroom. Most teachers believe that it is easier for them to use the traditional teaching methods, as they are easier to implement and not time consuming. According to Farah Diana Mohd Senari and Kamisah Osman (2018), teacher readiness is still at a low level, especially in terms of their knowledge and attitude towards inquiry-based learning. Meanwhile, teachers' practice of inquiry-based learning is at moderate level. In general, the relationship between teacher readiness and teacher inquiry teaching practices is at a moderate level and this suggests that teachers have yet to fully implement inquiry based learning skills in schools.

In line with the emphasis on Higher Order Thinking Skills (HOTS) in today's education, the inquiry-based teaching method is an effective strategy in enhancing students' thinking skills in the classroom. Rosnani Binti Abdul Latif and Ruhizan Binti Mohammad Yasin (2017) examined the use of the inquiry method in teaching and learning in the classroom and found a significant, positive relationship between teaching methodology and the cultivation of high-order thinking skills among students. This situation explains that adopting inquiry-based learning could optimize students' learning experiences.

Students' interpersonal skills can be helpful in improving their academic achievement in school. This is is demonstrated by a study by Sia Siew Shing and Zolkepeli Haron (2017) that found that the use of the inquiry-based learning methods can improve students' achievement. The study used a series of pre- and post-tests and reported that after the use of inquiry-based learning method, those in the treatment group can remember facts better than the students in control group. The improvement in the achievement could be due to the fact that the process of inquiry is a process discovering and further understanding specific information, rather than just memorizing it (Lahadisi 2014).

While there is a need for teachers to emphasise inquiry-based learning in the classroom, it cannot be practiced effectively without the active involvement of the students. In this regard, teachers should use creative and innovative ways to increase students' engagement in the classroom. As shown in a study stated that there are still some students who do not master inquiry skills in the classroom because they are not aware of its importance. They are also not well-informed on how to apply these skills in their daily lives. Therefore, teachers play an important role to ensure the effectiveness of teaching and learning process in schools so that students will acquire more knowledge (Hasnira Embong, Kua Bee Hoon and Hafsah Mat Yusof 2017).

Another study by Siva Sankar A / L Mahalingam and Mohd Isa Hamzah (2016) found evidence on the notion of teachers' weaknesses in applying the inquiry methods in the classroom. It was argued that teachers often use traditional teaching methods that hinder students' thinking and active participation in the classroom. It was reported that teachers' knowledge, attitudes and skills in teaching inquiry is still at a moderate level. The lack teachers' readiness to implement inquiry learning has decreased the effectiveness of the approach. Awg Kasmurie et al. (2010) also stated that students who undergo inquiry-based learning will participate more actively in the classroom activities, compared to those taught using the traditional teaching method.

4.2 The Implementation of the 5E Inquiry Learning Method in Learning History

According to the Curriculum Development Centre (2016), the 5E Inquiry Learning Model is a general model that could be used for any subject in the national curriculum. During the learning process, students could improve their thinking skills as they perform specific tasks. This process provides them with the opportunity to find resources, identify and test knowledge and use their minds to provide a reasonable idea or argument on a particular issue, issue or knowledge with the current situation. In this case, teachers need to play an important role to encourage students to participate actively in the learning process.

According to a study by Lim Leh Hong and Zolkepeli Haron (2017), students taught using the 5E inquiry-learning approach demonstrates better ability to answer questions in the classroom, have increased ability to answers explanatory questions, showed positive views during the interviews conducted. The use of inquiry-based learning methods helps students to develop better understanding of the concepts compared to traditional learning practices. Students are also actively involved in the planned activities and they also demonstrated better capability to explain a particular issue. Sapitry (2014) further pointed out that learning comprises of four main components, which are, purpose, measurement, methodology and assessment. In this regard, systematic and detailed planning of engaging activities can increase the effectiveness of teaching and learning in the classroom.

The 5E inquiry learning method can be used in the classroom as it involves activities that involved the active participations of all students and enhance students' attention and interest in the classroom. A study by Felicia May Children of Dizer and Lilia Halim (2017) showed promising results where a majority of the students interviewed noted that they feel are comfortable when their teacher conducted activities based on the 5E inquiry method as the activities help them to better understand the concepts being taught. The activities based on the 5E inquiry method are implemented systematically and promote active learning processes among students. Subsequently, the learning process helps students to create meaning based on their conceptual understanding of the acquired knowledge. Students will also learn by inquiry, making experiences and taking part in the discussions to test students' understanding and by interacting with their peers as they try to achieve the learning objective.

Khairul Hasni Abdul Kadir, Norazah Mohd Nordin and Zanaton Iksan (2016) conducted a study entitled 'The design and development of the e-Smart Model based on the 5E approach'. The study proposed an alternative strategy for cultivate creative thinking skills among students. The study found that learning theories can be used to design and develop the e-SMART module through the 5E approach to optimize students' learning of a particular topic. The expert evaluation also shows that the activities help cultivate creative thinking among the students. This

indicates that designing inquiry-based modules can encourage active in the classroom and help develop thinking skills among students.

This 5E learning approach also enhances students' understanding of the subject being studied as it encourages students to actively participate in the learning process. Polgampala & Hong (2016) study supported that the use of the 5E approach for in-house learning practices provide opportunities for teachers to address certain topic and help students to explore it. The use of this approach also helps student to develop their problem solving skills. The results of the study also show that the use of 5E inquiry learning approach can develop positive attitudes among students. Furthermore, teacher trainees interviewed also expressed their interest of using the 5E inquiry learning approach in their teaching and learning practices.

4.3 Literature Gap on the Adoption of the 5E Inquiry Learning Approach

Previous studies have shown that effectiveness of a particular inquiry-based learning method will be increased if it is being practiced continuously. Most studies reviewed for this paper are focused in the teaching of Science and out of the 11 articles reviewed, only two studies are focused in the teaching of the History subject. This shows that while the 5E Inquiry learning model has been commonly use in the teaching of Science, it can also be implemented to teach other subjects, such as Mathematics, History and Geography. The 5E learning approach should be more widely used in History learning in schools as History is a subject that requires higher thinking or cognitive skills in analysing past events.

E. CONCLUSION

Previous studies have clearly showed that the 5E inquiry learning approach can improve students' achievement and cultivate higher thinking skills in the classroom. Teachers should switch to student-centred methods to encourage active learning and collaboration in completing the tasks given. Although most of these studies have been conducted on the teaching of Science, their effectiveness suggests that this model can be used in the field of History to improve students' cognitive levels. The 5E inquiry learning approach should be practiced in schools to increase students' interest to learn History. Ultimately, the use of the inquiry learning approach can invoke students' curiosity and use their intelligence to solve problems in their everyday lives.

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IMPROVING STUDENTS' ABILITY TO WRITE SIMULTANEOUS EQUATION IN MATHEMATICS SUBJECT WITH CONSTRUCTIVISM APPROACHES

Chin Fah Sing[1]
[1]Kota Kinabalu High School, Sabah MALAYSIA
E-mail: shinnzane@gmail.com

ABSTRACT

This study was conducted to study students' weaknesses and then to discuss the method in improving students' ability in writing simultaneous equation for Math subject. Preliminary surveys were conducted among 4th-form students through student work reviews and interviewing teachers who previously taught target students. Through the teaching and learning method of constructivism, the target student group was separated into small groups and guided by a student mentor. The implementation of the LTA-based (Look-Think-Action) Intervention was used in this study using the Pre-Test, 3 sets of treatment activities and subsequently the Post Test conducted in the effectiveness evaluation process. 3 sets of treatment activities were conducted three times a week. The results of the post-test showed that there was an increase in students' skills in forming simultaneous equations.

Keywords: Simultaneous equation, Mathematics, constructivism approaches

A. INTRODUCTION

Simultaneous equations in two variables consisting of a linear equation and a linear or non-linear equation can be solved by either the substitution method or the elimination method. However, not all students are able to solve the problem as they have failed to translate sentence situations into algebraic expressions.

The problem is even obviously seen when 11th graders (5th-form) who are going to learn the topic of Matrices at the beginning of the year fail to write and identify the variables and operations involved in a simultaneous equation, then solve the problem. The 5th-form students in 2018 have learned the topic of Algebraic Expression I while they were in 1st-form, Algebraic Expression II, in 2nd-form and Algebraic Expression III, and even Simultaneous Equations during 3rd-form should have no problem writing and translating Mathematics sentences into the form of expressions.

Unfortunately, in the age of HOTs and STEM the need of creative and innovative thinking skills is said to have burdened high school students today. These thinking skills are important for every student to gain education throughout life, ways of communicating different knowledge and ways of generating new knowledge (Malaysian Education Development Plan, 2013). These thinking skills aim for every student to gain knowledge throughout their lives by applying curiosity and practicing lifelong learning to enable them to connect with various disciplines and create new knowledge. Each student needs to master a variety of cognitive skills including critical, creative, and innovative reasoning and thinking. This field is less prioritised due to lack of awareness, leaving students unable to apply knowledge and think critically outside of the academic context.

In such cases, obviously the target group of 5th-form students (2018) who were previously in 4th-form (2017) were once again required to solve the simultaneous equations problems. They studied the topic of Straight Line Equations, where they needed their previous knowledge to get the coordinate of intersection point from two straight line equations. The burden is increased when this target group became SPM candidates (Malaysia Certificate of Education) and was routinely asked to solve these types of questions that are asked during the mid-year and end-of-year exams.

Therefore, the method of Constructivism was used in this study to determine the effectiveness of improving students' skills in constructing simultaneous equations. Constructivism is a learning process that describes how knowledge is created in a student's mind and actively developed by the student himself and not passively accepted from the environment. This means that learning is the result of the student's efforts and not transferred from teacher to student. Methods of Constructivism play an important role in teaching and learning Mathematics, especially in high school.

Constructivism methods help students develop new concepts or knowledge. When new information has been adapted and absorbed to form part of their strong hold, knowledge is formed. Since Constructivism argues that learning begins with the existing knowledge or previous experience of students, Nik Azis Nik Pa (1999) explains that Constructivism is nothing more than a commitment to the view that humans build their own knowledge. Thus, the knowledge that an individual possesses is the result of activity performed by the individual and not a piece of information or instruction received passively from the outside.

B. RESEARCH OBJECTIVE

i. Students are able to determine the variables in the sentence situation.
ii. Students are able to write variables into algebraic expressions.
iii. Students are able to translate sentence situations into equations consisting of variables and types of operations.

C. INTRODUCTION REVIEW

During the mid-year exams (2017), it was found that only 1 out of 33 fourth-form students were trying to answer SPM format Simultaneous Equations question. As learning and teaching continued, specifically when reaching Form 4 Mathematics syllabus, the topic of Straight-Line Equations, when students were required to find the intersection coordinates of two straight lines, it was discovered that all students could not solve the problem. This led to various methods being tried only to help students to solve the problem related to Simultaneous Equations through the elimination and substitution methods.

The situation became even worse when the Cluster School of Mathematics Committee ordered that GPMP (Mean Grade) requirement to meet the targets and improve students' quality as City schools are influenced by the culture of the exam-oriented system. The importance of performance achievement forces school teachers to use the "teaching for the test" method indirectly reducing their effectiveness in mathematics subjects (Lim & Hwa, 2006; Yahya Hasan, 2005). More importantly, the instructions given by the teacher were needed to carry out the task and find a solution of a certain task. Teaching and learning the topic of Matrices has a profound impact when students failed to translate sentence situations into daily life situations where they have to write simultaneous equations and solve problem using Matrices method. Such problems continued until 5th-form that students had to take the exam in mid-2018. As a result, the Mathematics Paper 2 reviewed that only 2 out of the 33, class 5 Tekun students were trying to solve the Simultaneous Linear Equation questions and the Matrices question.

Analysis showed that students not only failed to solve Simultaneous Linear equations but were also unable to use the variables from the sentence situation in the question to be written in the form of algebraic expressions which then form a complete equation. Due to the students' failure in constructing algebraic expressions and to use addition or subtraction in relation to the situation, they failed to solve the problems of simultaneous equations. SPM candidates are required to master the topic of Simultaneous Equations because there are formatted questions which they are required to solve at least 4 of the 14 questions in Mathematics Paper 2.

To overcome the above matter, the main cause of the problem must be solved by assisting the student in identifying variables from the sentence. In the process of solving problems, the teaching and learning approach of constructivism was used to carry out this study. The findings of this study can enhance the teaching and learning process, obviously when English is used in Mathematics to an optimal level. In fact, Mathematics subject in school is among the lessons that most students are not interested in thus giving rise to boredom, especially the weaker students. If this phenomenon continues, students will become less motivated and this may cause the development of a negative response towards the Math subject.

In Mathematics lessons, thinking is often related to problem solving (Norini Idris, 2005). The ability to solve a math problem depends on a student's thinking level. Polya (1973) in his book How to Solve It: A New Aspect of Mathematical Methods suggests that in the process of solving mathematical problems, students should be able to think, to understand problems, plan solutions, solve and relate existing problems to the experience and knowledge they have gained before. Through Constructivism method, the teaching and learning of the class of 5 Tekun students will be engaged in meaningful learning that involves understanding scientific ideas such as visualizing, predicting and explaining that is used to interpret intent and purpose. Therefore, the preparation of a set of special activity sheets in the classroom can encourage students by using scientific conceptual scheme (Smith, Blakslee & Anderson, 1993).

D. RESEARCH METHODOLOGY

The approach that is used in this study is quantitative. Tests and questionnaires were used as well as random interview sessions on students targeted. By using Constructivism method in the classroom on the target group of students, the effectiveness of findings can be seen from the students' improvement. Activities and test questions are given to prove students' achievement. The procedure from the beginning to the end of the study is through reference books, surfing the internet and doing research in schools.

4.1 Sample Study

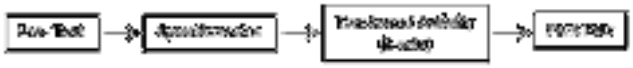
Fifth-form 5 Amanah (Pure Science Stream) and Form 5 Tekun were taken as sample in this study. Form 5 Amanah consisting of 46 students was used as control sample while Form 5 Tekun consisting of 33 students will undergo the treatment and labelled as targeted group of this study.

4.2 Instrument of Study

In this study, a questionnaire on learning Mathematics in English was conducted before treatment was performed.

The Pre-Test Set (Table 1) was given to control group and treatment group after the questionnaire was performed to study the previous knowledge level. The Constructivism method will be used to conduct traditional teaching and learning in the classroom provided that all treatment group are required to sit in six smaller groups which is fixed randomly. The treatment group must sit in the group whenever the treatment activity is carried out. After 3 set treatment activities, Post Test set (Table 1) will be given to both control and treatment group to test the sample level on using variables in writing skills and translating sentence into Simultaneous equations. At the end of the study, a comparison achievement between pre and post-test is conducted.

4.3 Study Procedures



To make this study successful, the Look-Think-Action Model (LTA) of Stringer (1999) is used. The set of Pre and Post Test questions are the same questions. The questions consist of HOTs questions that relate to daily life experience and of 5 SPM formatted questions. Students only need to translate or interpret sentences into forms of Algebraic expressions without solving problems.

The questions asked during the questionnaire focused more on student's interest in Math subjects, teaching and learning of Math subjects in English language.

The intervention was conducted with three sets of treatment activity consisting of different sets of activity level to build skills using existing algebraic expression concepts.

Activity Set 1: Construct and write algebraic expressions using one variable from sentences.

Activity Set 2: Construct and write algebraic expressions using two variables by using suitable operations.

Activity Set 3: Write and form a complete Simultaneous Equation by using algebraic expression (including variables and operations).

Instructions to guide students are given before the activity set is carried out. The first question will be taken as an example in showing correct steps. The discussion will be held after the activity ends. The same methods are repeated for 3 sets treatment activity continuously.

E. INTERVENTION

Gagne (1985) states that the purpose of teaching a theory is to establish a relationship between instruction and impact on the learning process and expectations will be produced. Systematic and scheduled planning based on

the learning theory needs to be implemented first so that it can contribute to effective and quality learning. Therefore, a well-planned learning activity is definitely able to create a change in behaviour.

Class 5 Amanah and 5 Tekun are given the Pre-test, and the results will be compared. Class 5 Amanah is the control sample, while Class 5 Tekun is the treatment sample. Students 5 Tekun are required to sit in a six designated group throughout the treatment which involves 3 sets of activities in stages. During the intervention program, the treatment sample sat with a group of 6 students. One of the students from the group is selected as a mentor.

During the treatment activity, teacher acts as the instructor and will only teach the techniques of detecting the variables implied in the sentence situation. Afterwards, the teacher guides the students to form algebraic expressions from the sentences of Question 1 (each Activity Set). The treatment sample that sat in groups will continue the activity after the instruction is given. Meanwhile, student mentors in each group work to help group members to translate Mathematical sentences into algebraic expressions.

Out of the 3 sets of Treatment Activities, the treatment group with previous knowledge builds meaningful learning within themselves as a result of their experiences. Students will act on the sensory experiences by building in their minds a cognitive scheme or structure that will shape their understanding according to their constructivism approach.

Through a constructivism learning approach, students in the treatment group will go through five elements. The five elements (5E) include Engage, Exploration, Explanation, Elaborate and Evaluate. Once the activity is conducted, the students begin to build on existing knowledge. Furthermore, the set of activities planned and provided treatment group is more than a question that is related to daily life activities.

The time taken to complete the activity sheets will be fixed and the discussion will take place when each set of treatment activities is completed. Of the three sets of treatment activities, the discussion will become more effective when the treatment students are required to use red pen to do corrections. Students of treatment groups who are unable to translate mathematical sentences into algebraic expressions will be detected and called by the teacher to detect the variables contained in the questions individually.

F. FINDINGS

6.1 Questionnaire of Treatment Group

Through the survey, 20 out of 33 treatment students stated that they had difficulty in understanding questions as the school used English in teaching of Mathematics and Science. 10 students who are able to speak English fluently said it was okay for them, but are not interested in Math subjects. Meanwhile, 5 students often engaged in discipline problems and did not respond appropriately, consequently showing no interest in Math subjects.

6.2 Observation of Treatment Group

Date	Activity	Observation
16/5/2018	Pre-Test	-The treatment group students did not show any interest in reading the Pre-Test paper. Only a few students were passionate about reading questions and asking what to do next. - 5 students with discipline problems did not show interest and interfered the test.
26/6/2018	**Treatment** Activity Set 1	-Students were requested to sit in groups, discussion is allowed after instructions are given especially with the student mentor. - 5 problematic treatment students moved from group to group, disobeyed commands and did not read questions at all.
4/7/2018	**Treatment** Activity Set 2	-Discussions within students can be seen in the group. Students in Set 2 seemed to be more active compared to Set 1. -There were 4 problem students who did not listen to instruction, were moving from group to group and interrupting the activity. During the discussion, the 4 students copied the answer and did not take it seriously, while the other students made serious corrections with red pen.1 student suspended from school.

10/7/2018	**Treatment** Activity Set 3	-Through observation, obviously students are more self-reliant and able to construct and translate variables into Mathematical sentences. -Without instruction, students showed a sense of normality and as if their minds are ready for the next challenge. -Discussions were conducted smoothly, the treatment group students are satisfied with their achievement when they are able to construct algebraic expression correctly hence simultaneous equation. -4 discipline problem students did even bother. They wrote their names on the question paper and sat down while interrupting their group members.
11/7/2018	Post-Test	-As soon as the test paper is distributed, the students read the question diligently and continued to answer. -Treatment students were able to form and translate Mathematical sentences into simultaneous equation. -A drastic change in attitude can be seen when they are able to write and translate sentence situation. Students requested if they can have a discussion to check their achievement scores the same time. -The change of attitude and mind set after 3 sets of activities is very significant. -Interest in Mathematics increased.

6.3 Comparison of Pre and Post Test

		Treatment Group	Control Group
Pre- Test	**Failed**	63.6% (21 students)	2.3 % (1 students)
	Passed	36.4 % (12 students)	97.7 % (43 students)
Post-Test	**Failed**	9.4 % (3 students)	-
	Passed	90.6 % (29 students)	100%

*1 student was suspended due to disciplinary problem

As a result of the 3 sets treatment activity conducted in the classroom using the method of constructivism learning, there was a significant improvement in Pre and Post Tests which increased by 54.2% from 36.4% to 90.6%. This proves that the method used is effective in enhancing and strengthening the existing knowledge of the treatment students.

Using constructivism learning method, students' skills in forming algebraic expressions and translating mathematical sentences into simultaneous equations proved to be increasing. In addition, the teaching and learning process is more effective as students in the treatment group have previous knowledge of algebraic expressions.

6.4 Reflection of Study

This study actually helps to build students mind set and reinforce existing knowledge. The process in the change of attitude is also significant as the number of students who are engaged increased in every activity that had been planned as a treatment activity. By constructivism method, the effectiveness of the study as well as the change of attitude at the same time help students become more independent and most importantly the objectives of the study are achieved with the aim of improving the skills of writing equations simultaneously.

The impact is not on the teacher actually whereby the teacher plays the role of a facilitator. Teacher prioritised the understanding of concept among students and they also need to understand the steps to be taken in solving problems in Mathematics (Ali and Abu Bakar, 2007). In this study, the real impact was more focused on the treatment group students. The treatment group students are able to develop significant skills and the effectiveness of the method of constructivism also increased their interest in Mathematics subjects regardless of the use of English language.

Through Treatment Activity Set 1, the treatment group students were introduced to the use of a variable and they used it to construct and translate algebraic expressions. At the beginning of the treatment activity, students were unable to master writing expressions. Wong (2009) also states that learning Algebra requires time

for students to master. This is because in Algebraic expressions, there are many representations of numbers using letters that cause students to become confused and less interest.

In Treatment Activity Set 2, treatment students need to construct and translate algebraic expressions using two variables and using appropriate operations. According to Brennan (2002), Algebra is variable in which the letters X, Y or Z are often used to represent unknown values but other letters can also be used to represent. According to Brennan, using the representation of this letter causes a lot of confusion but if students can master algebra it is a great combination of letters and numbers. As students begin to develop strong minds and try challenges, it is not surprising to see more students become more active in the process.

The Treatment Activity Set 3 is a more challenging set, when two simultaneous equations need to be formed and translated directly from the Mathematical sentence that is considered as the HOTs question. HOTs questions are at the highest intellectual ability in Bloom's Taxonomy. The Problems in Algebraic Expression topics involving problems that challenge the interest of students and by mastering this topic it will definitely help to improve student achievement and thinking skills.

G. SUGGESTIONS AND CONCLUSION

The enhancement of the skills of the treatment group students in constructing and translating Mathematical sentences into simultaneous equations can be seen significantly through teaching and learning using constructivism method. Other than being able to attract student's interest in Mathematics subjects, more importantly is the change in attitude towards the subject. The learning process will occur in the conjunction in the change of student's attitude providing there is a set of interesting plan and activities from traditional methods.

The implementation of the intervention is suggested possibly to be in smaller target groups as well as in more convenient times. With the existence of the constraints such as internal and external school activities, discipline problematic students, the implementation of interventions may be limited. In addition, the implementation of the same study is suggested to be carried out on different target groups to increase their effectiveness and reliability.

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COMPARING APPLICATION OF BLENDED LEARNING METHODS IN HISTORICAL THINKING SKILLS IN MALAYSIA AND INDONESIA

Asmahani Muhthar[1], Abdul Razaq Ahmad[1] & Mohd Mahzan Awang[1]
[1] Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: asmahanimuhthar@gmail.com

ABSTRACT

The purpose of this article is to suggest on comparing the application of blended learning in teaching and learning in history curriculum between Malaysia and Indonesia. In blended learning, the learning environment integrates learning elements and processes as well as environments and interaction devices provided by information and communication technologies. Even though there are many definitions for blended learning, typically it is conceived as a combination of face-to-face learning and distance learning. Historical thinking is a set of critical literacy skills for evaluating and analyzing primary source documents to construct a meaningful account of the past. Sometimes called historical reasoning skills, historical thinking skills are frequently described in contrast to history content such as names, dates, and places. The two variables; blended learning and historical thinking skills need to be merged in order to revolutionized the curriculum towards Education 4.0 (Edu4.0). Malaysia and Indonesia in teaching and learning history need to be compared in order to improve both countries application towards blended learning on historical thinking skills.

Keywords: Blended learning, historical thinking skills, education 4.0

A. INTRODUCTION

The rise of personal computing in the eighties and the advent of the worldwide web in the nineties encouraged the development of new models of the learning process at different levels of education (Barbour, 2014). The goal of bridging distance remains a possible motive for using blended learning.

The new technology had the potential not only to bridge space, but also to bridge time (through recording), and to individualise learning (by giving the student control over their path through the material, and over the pace of learning). This quartet of time, place, path and pace meant that different educators could value the new technology for different reasons, and have different conceptions of what the new 'blended learning' might mean (Friesen, 2016).

In this paper is about suggesting to use blended learning to develop historical thinking skills among the student at school. The blended learning is required due to the needs of new generation toward application online during teaching and learning due to their attachment on the gadjets especially handphone and laptops. The contribution of this study is to provide an overview and examples of how the educational model can be developed within the limits of technological development.

B. OPERATIONAL DEFINITION

2.1 Activity Level

Activity level refers to situations where an individual learning activity includes both face-to-face and computer-mediated elements. As an example of this, we can consider a solution where interaction in a face-to-face course has been turned over to a computer to get help in its implementation (Graham, 2006).

2.2 Subject Level

The subject level is the most typical level of blending. In schools, blending often occurs at the level of a program (Graham, 2006).

2.3 Program Level

Typically, in the program (Science stream or arts stream) level blended model, some of the subject are to be implemented as distance study and some as face-to-face study (Graham, 2006). The choice between these may be based either on the decision of the student or that of the education provider.

2.4 School Level

At the school level, the organization has made the decision concerning blending (Graham, 2006). In these kinds of cases, blended parts can be found in all the organization's subjects or, for example at the level of educational institutions, the decision might have been made to require that the graduating students must have experience about online courses (Graham, 2006). When talking about school level blending, there is the realization that the organization must concentrate its attempts to reach a situation where the student can utilize the two extremes in his/her study learning environment.

C. BLENDED LEARNING

History subjects are one of the most important subjects in this Technology is at the centre of blended learning. Learning technologies enable arrangement of education in many different ways. However, typically these technologies themselves do not play the main role in the educational setting; the primary interest is, above all, on the practices formed around them. When developing an education model, the technologies available nevertheless define how far the development of the model can be carried (Graham, 2006; Picciano and Seaman, 2007).

The current education model is based on strong utilization of streaming videos, the central role of the learning management system and reliable and cost-efficient practices formed around the technologies. The education model makes it possible to provide students with education in a way that makes it possible for them, in all organized teaching, to participate either face-to face, from distance with the help of real-time video or by using on-demand recordings during times more suitable for the student (Collis et al., 2003). The students have the freedom to select, for each lecture, the participation mode that is the most suitable for their life situation at the time. Once the accessibility of education has advanced this far, the student can define the degree of blended learning for him/herself (Dziuban et al, 2004).

Blended learning can take place in many different levels. Graham (2006) defines four of them: activity level, subject level, program level and school level. Blending at the school and stream levels is typically left to the discretion of the student. In the subject and activity levels, designers and teacher do have a greater role when prescribing the blend.

3.1 Blended Learning Model

The blended education model can also be categorized according to the way the blending takes place. Blended solutions can be classified into three categories in accordance with the main purpose of the blending (Graham, 2006), i.e., enabling blends, enhancing blends and transforming blends. In enabling blends, the primary focus is on addressing issues of access. This includes blends that are intended to provide additional flexibility to the learners and blends that attempt to provide the same opportunities or learning experience but through a different modality. In enhancing blends, some incremental but not radical changes to the pedagogy take place. For example, in traditional face-to-face environment, some additional resources may be included online. Transforming blends allows a radical transformation of the pedagogy. It should be kept in mind that a blended solution can belong to several categories at the same time. It is just as important to remember that none of these categories is necessarily bad; they just have a different focus (Graham, 2013; Graham and Dziuban, 2008; Graham, 2006).

The dimensions are space, time, fidelity and humanities. At the two extremes of the dimensions are face-to-face learning and distance learning: the interactivity of the traditional face-to-face learning is located on the left-hand side of the dimensions and the interactivity of the distance learning on the right-hand side. The development of information and communication technologies has increasingly moved the interactivity in distance learning closer to the interactivity traditionally regarded as achievable only in face-to-face sessions. For example, on the time and fidelity dimensions, communication technologies such as real-time lecture videos and video conferences today allow real-time communication close to the same levels of fidelity as in the face-to-face environment (Graham, 2006). Virtual solutions and, for example, tools made available in social media enable better team work among people, thus bringing the humanness dimension's extremes closer to each other. Virtual reality environments are striving to do the same with the space dimension.

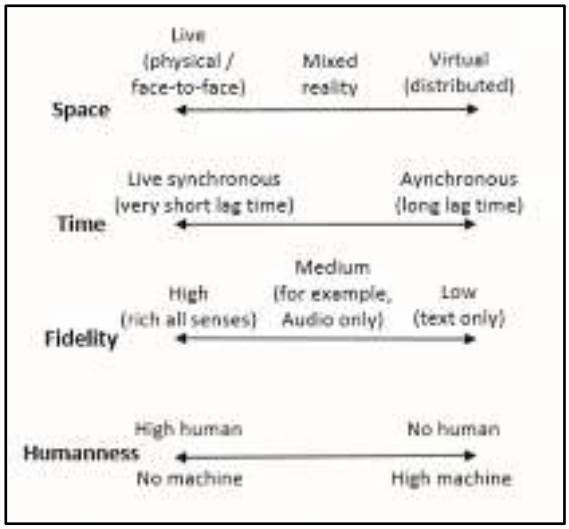

Figure 1: Four dimensions of interaction in face-to-face and distributed learning environments by Graham (2006)

3.2 The Importance of Blended Learning

Blended learning is an innovative concept that embraces the advantages of both traditional teaching in the classroom and ICT supported learning including both offline learning and online learning. It has scope for collaborative learning; constructive learning and computer assisted learning (CAI). Blended learning needs rigorous efforts, right attitude, handsome budget and highly motivated teachers and students for its successful implementation.

Blended learning is the concept that includes framing teaching learning process that incorporates both face to face teaching and teaching supported by ICT. Blended learning incorporates direct instruction, indirect instruction, collaborative teaching, individualized computer assisted learning.

i. Face to face teaching- blended learning provides full scope for traditional classroom teaching where students get ample of time to interact with their teachers and thus get influenced by their personality, behaviour and value system. Face to face interaction helps in synchronous communication. Teachers and students both are able to get immediate feedback that in turns is favourable for teaching learning process. Face to face interaction is highly motivating for both the teachers and students and it gives a human touch to the process.

ii. Student interaction with subject content- traditional mode of teaching and the school campus provides student time to interact directly with their course content through printing material and ICT mediated learning provides them indirect interaction with their subject content in a versatile and diverse interesting way. The videos provide required realism to the content and sharing on blogs and visiting e-books provide new and updated perspectives to the content.

iii. Peer group interaction- inside the school campus students learns by formal means and they also learn informally when they interact with their peer groups. Many needed life skills and social values are practised in non-formal interaction with their peer groups. School campus provides many opportunities for this during playground activities, social exchange during free time

iv. Group discussion and exchange of ideas- classroom teaching not only provides students interaction with teachers but well-designed strategies give students to undergo discussions with their classmates on different aspects of the course and exchange ideas. This helps to develop confidence in students, remove their hesitation and develop the skill of communicating effectively and also develop good listening skill.

v. Accessing e-library- this is a part of ICT supported teaching learning in blended learning. In traditional mode students get access to school library that is limited but digital library gives them access to different

books related to their topic and on diversified areas. This widens their outlook and enriches their knowledge; this helps in meeting the cognitive objectives.

vi. Virtual classroom- this provides student an option to learn anywhere, anytime and from anyone. Students can be a part of a virtual classroom meeting with his co-students and teacher in cyber space irrespective of the geographical boundaries. School can also provide provision for it so that the system gains flexibility and students who cannot attend school regularly can gain advantage from this mode. As well as student can get attach to other experts and enhance his knowledge. With world today turning into a global village, students through this mode will be at par with his counterpart at any other part of the world and will get multicultural experience also.

vii. Online assessment- immediate feedback is a key factor in learning as it motivates the learner and is based on principles of readiness. Online assessment helps to make evaluation system more formative, transparent and faster. It becomes more reliable and objective.

viii. E-tuitions- students have different needs. Few of the students don't get benefits from classroom teaching as they continuously require personal guidance and complete attention. Such students may choose the option of e-tuition that is meeting a private tutor and getting personal guidance in cyber space via video conferencing.

ix. Accessing and maintaining educational blogs- students get less opportunity for nurturing their creativity in traditional classrooms because of rigid time table and lot of pressure of class work, assignments and coping with examination stress but educational blogs provide students a platform to show their creativity and can get feedback also. In addition to it, educational blogs are a good platform to discuss topics of importance that are not the part of syllabus like those related to social problems, political issues, and other issues relevant to youths like drugs addiction, delinquency, population education etc.

x. Webinars- webinar is an also a feature of blended learning that is ICT supported format. It means that students participate in seminars in different topics relevant to them via internet connection. All the participants are connected through different software's available like Skype, Google talk etc. and then present their paper and participate in discussions through video conferencing.

xi. Viewing expert lectures in YouTube- the blended earning provides student to gain advantage of the experts of the course content they are studying as they can easily watch the different lectures by renowned experts from different fields available on you tubes. In addition to it college can also upload video of lecture by its own teachers so that if student is not able to attend the college, he can avail this facility and can gain benefit of the teachers teaching.

xii. Online learning through videos and audios- various recordings, animated videos are available that explain various concepts very easily and in interesting way. They are based on the principle of realism and connecting with life. So, students can get feel of real life while studying and it makes the difficult concepts and phenomenon concrete for the students.

xiii. Virtual laboratories-it can be used in professional courses where the laboratory work is very crucial and sometimes the cost of establishing a well-furnished laboratories is not feasible and in few cases the experiments are dangerous and it is not safe for students to handle those equipment's then in such cases students can access virtual laboratories and can learn need skills by working in this virtual laboratory.

All these important features when blended in one frame it is called blended learning.

D. HISTORICAL THINKING SKILLS CONCEPT

Historical thinking is one of the most important skills in History education. Through History thinking skills, students are encouraged to think more critically and analytically. This can indirectly improve the intellectual achievement of students and make History a living subject and no longer boring. According to (Seixas, 2017) Peter Seixas (1996), he has identified six specific elements in the History discipline to form a framework on History thinking that should be applied to the students.

Seixas and Peck stated that (2008) the Historical Thinking Concept (Figure 2) can be divided into 6 elements which are historical significance, evidence, continuity and change, cause and consequence, historical perspectives, and the ethical dimension.

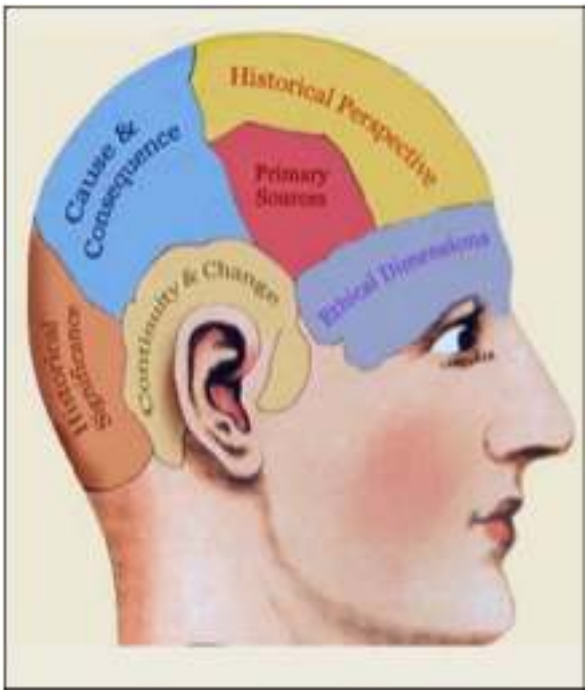

Figure 2: Historical Thinking Concept (Seixas, P., & Peck, C., 2008)

History Education is a subject that can stimulate thinking and critical thinking processes and analytical while studying the subjects of History. Therefore, History teachers play an important role in applying History thinking through teaching and learning activities that encourage students to think. Only meaningful teaching and learning processes can stimulate student thinking.

Therefore, History education should be done as a living force that can relate past events to the present reality (Abd Rahim, 2000). Students need to be applied with the concept of History to give a new perception to the minds of students that History is not a rigid and boring subject. It even reveals to the students how a Historian works through the activities taught by their teachers.

Historical education is able to develop students' knowledge, skills and attitudes to engage with more complex communities. This situation can indirectly instil a patriotic spirit in young generations. The importance of historical education in creating racial unity and harmony as well as strengthening the spirit of patriotism in the context of multi-racial people is emphasized in the Historical Syllabus (KPM: 2000). This subject was formulated to enable "Nurturing and strengthening the spirit of the nation and its identity as a citizen of Malaysia and a citizen of the world". It also aims to create the spirit of solidarity and equality of the nation and nation of Malaysia among the various races. (KPM 2000).

4.1 Historical Significance

In this element of historical importance, students need to have the ability to distinguish between trivial and important events. In this case the choice of historical interest depends on the interests and values found in the community. Therefore, students are advised to study the history of society, life and things that are of interest to them. For example, in the study conducted by Levstik and Linda (2004) Foster et al. (2002). Students are greatly influenced by their national identity in making a selection of important events (Anealka 2018).

4.2 Evidence

It involves understanding how we know the past. What evidence do we have? How far is the evidence reliable? How can we explain the existence of different interpretations of history? For example, children should not be left

with the view that there is only one true story in the past. While in fact the historians make various evidence-based inferences, hence there are various interpretations of a past event.

4.3 Continuity and change

This element suppresses understanding of past changes that constitute the center of thought. Age is a factor in understanding this situation; a person who is older is said to better understand the changes that have occurred in the past such as technological and value changes compared to those younger. However, there are also researchers who reject this opinion. According to them age is not a major factor in understanding past changes. According to the researchers, life experience is also a factor in which young people who experience war, refugees, immigrants and those who have lost their parents or displaced from one area to another have a better understanding of the change in history than those living in a safe environment.

4.4 Cause and consequence

Historians are like detectives; they try to understand what happened in the past, and why it happened. The concepts of cause and consequence address who or what influenced events to occur and what the repercussions of those events were.

Working with cause and consequence involves students identifying, investigating, understanding and making sense of complex, inter-connected processes. Events in history do not have one cause and the past is a tangled web of cause and effect. In order to be able to explain why things happened, and the consequences of events, students need to have a secure sense of chronology, the ability to question sources and historical interpretations, and good analytical skills. Explaining cause and consequence involves students in trying to understand change in past societies. By engaging with cause and consequence students have to develop precision in their explanations of inter-connectedness, and to learn to make well-substantiated judgements about the relative importance of causal factors.

4.5 Historical perspectives

Taking historical perspective means understanding the social, cultural, intellectual, and emotional settings that shaped people's lives and actions in the past. At any one-point, different historical actors may have acted on the basis of conflicting beliefs and ideologies, so understanding diverse perspectives is also a key to historical perspective-taking. Though it is sometimes called "historical empathy," historical perspective is very different from the common-sense notion of identification with another person. Indeed, taking historical perspective demands comprehension of the vast differences between us in the present and those in the past.

Historical perspective means understanding history based on historical thought (diachronic). A more sophisticated perspective relates to the theory or non-historical approach (sociological, anthropological, environment etc).

4.6 Ethical dimension

History as well as with any scientific principle has ethical responsibility. The truth of history (science truth) has a positive and negative impact. If a truth is harmful to the benefits, then there are ethical considerations.

In the Big Six: Historical Thinking Concepts, Peter Sexias and Tom Morton seek to illuminate historical thinking by way of six key concepts: Historical significance, evidence, continuity and change, cause and consequence, historical perspectives, and the ethical dimension. The Historical Thinking Concepts is maintained in the new futuristic instructional design on the history curriculum so that the history education will be achieved on the vision of Education 4.0.

E. CONCLUSION

Education 4.0 is a response to the needs of IR4.0 where human and technology are aligned to enable new possibilities. The new vision of learning promotes learners to learn not only skills and knowledge that are needed but also to identify the source to learn these skills and knowledge.

The paper is about transforming the traditional face-to-face teaching into application of ICT where history subject is the main objective of the research. The paper is about to look at the reality of application of blended learning between two countries namely Malaysia and Indonesia. Here, the historical thinking skills concept need to be adapted and adopted in teacher pedagogy by comparing these two countries.

The outcome of the research can be used to promote teaching history thinking skills through blended learning models. The level of history thinking skills need to be measured and compared.

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ENHANCING UNDERSTANDING OF HUMAN DIGESTIVE SYSTEM THROUGH "BRING IT ON" ACTIVITY USING COPERATIVE LEARNING METHOD AMONG FORM 2 DEDIKASI STUDENTS

Humieaida Yusoff[1]
[1]SMK Seri Bintang Utara, Kuala Lumpur, MALAYSIA
E-mail: 010105moe@gmail.com

ABSTRACT

The human digestive system is one of the subtopics under Nutrition in the Science subject for all Form 2 students (14 years old) in Malaysia. Based on researcher's Teaching and Learning (T&L) experiences, conversations among peers within the Science committee; and during marking of examinations papers, it was observed that students have the difficulties to understand the facts and provide the right answers when tested. Thus, this study focus on testing the ability of the students to remember the digestive system namely the 10 parts of the human digestive system, the name of the enzymes that react specifically to its substrate and the products of the reaction. This study aims to help students understand the human digestive system better and be able to remember it more effectively. The sample of this study involved 31 students from the class of Form 2 Dedikasi, SMK SBU. The intervention session was conducted in a T&L session, where students were divided into 6 main groups and provided with teaching aids that stimulated the 3 main senses which are sight, taste and smell. A Pre-test and Post-test was performed in order to assess the level of knowledge of the participants before and after the research method is applied. From the data obtained, comparable analysis were done and it was discovered that this method is able to help students to understand and remember the content of the lesson more effectively compared to the previous method.

Keywords: Human digestive system, "bring it on" activity, cooperative learning

A. Introduction

Malaysia's national education system promotes the learning of science during primary (7 to 12 years old) and secondary (13 to 17 years old) schools. For secondary school students, the foundation of the science subject is taught during Form 1 to Form 3 (13 to 15 years old) whereas middle to advance topics is taught during Form 4 to Form 5 (16 and 17 years old). At the end of Form 5, all students are obliged to sit for the Malaysian Certificate of Education (MCE) examination, the equivalent of 'O' Level, which results more or less dictate where they are heading with regard to their future college education.

In line with the transformation program on the national education system with the induction of accelerated implementation of 21st Century Education by the Ministry of Education Malaysia (MOE), educators are constantly on the lookout for creative and effective approaches and methods in helping students to better understand facts, concepts and applications of each topic.

In meeting this objective, educators has to be able to devise methods, activities and techniques for students to better understand and utilize their creative and critical problem solving capabilities through correct guidance dan directives.

According to Sidee, every subject has specific techniques where students need to find a suitable method or technique to improve their understanding in that particular subject. He further elaborated that hard work alone is not enough in becoming an excellent student, the right skills and right learning techniques are in fact essential. Therefore, there is no point in learning for hours or days but none sticks to the mind of the students. (Sidee,S. 2014).

Bowlett and Baillie found out that colour is very important tool in teaching small children to better respond and memorise what they are taught. They were taught what toothbrush to use in the morning, how to match favourite color of a t-shirt with the trousers, the colour of their cup or the colour of the ball that can only be played outdoor (Bowkett, W & Baillie, C. 2010).

Thus, this research capitalize the right learning technique by using colours as a learning tool in order to help the Form 2 Dedikasi students to easily memorise and understand what they learn in the subtopic of Human Digestive System.

B. RESEARCH BACKGROUND

The subtopic of the Human Digestive System is actually not a difficult subject to muster as the questions in this subtopic focus more on the level of knowledge and understanding rather than application. Therefore, failures of students to perform well in this subtopic always frustrate the educators. It was found out that the main reason for this problem is that the Form 2 students always found it difficult to memorise the facts which in turn lead them to losing interest in this subtopic.

The educators view this problem seriously that if the students found it difficult at this foundation level (Form 3), the students will find it even more difficult once they enroll the Biology classes in Form 5. This in turn will have severe impact on their Biology grade during their MCE examination.

Sidee pointed out that memorising techniques require the brain to process the data and that memory can be divided into two, namely long-term and short-term. Sidee also highlighted that memory can be preserved in the brain with the usage of acronym, acrostic, visual and interestingly, colour. (Sidee,S. 2014).

Benson stated that the brain sees and remembers colours first, then uses them to help memorizing others. The brain will intrinsically connect what you learn with the colour of what you see and will help us to memorise it longer and recall it faster. (Benson,G. 2014).

Therefore, in order to enhance the effectiveness of this technique, this study opted to involve the three (3) types of sensation with the additional help of colour.

C. ISSUES & FOCUS OF RESEARCH

By analyzing the results from the mid-year examinations and discussion with other science committee members, this study found out that Form 2 students failed to respond appropriately to the subtopics of the Human Digestive System.

Therefore, the focus of this study are as follows:

A. To help students learn more effectively and meaningful by using additional teaching aid.
B. To stimulate students' senses during the teaching and learning process in order to increase the students' interests in this subtopic.
C. To promote students to be actively involved in group activities.

D. RESEARCH OBJECTIVE

Upon completion of this study, students are expected to achieve the following objectives:

4.1 General Objectives

Increase students' understanding on human digestive process.

4.2 Specific Objective

i. Identify the 10 parts involved in the digestive process.
ii. List down the enzymes that specifically react to its' substrates in the digestive process.
iii. List the enzyme reaction products with respective food classes.

E. TARGET GROUPS

The sample of this study involved 31 of 34 students from the class of Form 2 Dedikasi. The composition of students in Form 2 Dedikasi consists of students in three (3) levels of mastery, excellent, medium and lower grade.

According to the preliminary design as outlined in this Proposal of Action Research, this study was initially targeted 34 students, however, since three (3) students were not present during the Pre-Examination, only 31 students were included in the first cycle of the study.

F. RESEARCH METHODOLOGY

The following are the methods used to conduct the study.

6.1 Review of issues

The interview questions were developed and applied to colleagues on the Science and Biological Committee in order to identify the issues. It was agreed that the students failed to perform well due to the difficulties in memorizing the human digestive system, the names of enzymes and the products of the digestion.

6.2 Diagnostic Test - Mid-Year Examination

This study uses questions from the Mid-Year Examinationpaper with regard to the human digestive system as a diagnostic test. Item analysis was conducted on these questions in order to measure the potential problems and issues that might occur in this study.

6.3 Pre-Exam Examination

Pre-test was conducted in order to gauge students' existing knowledge.

6.4 Post-test

Post-test was conducted after the intervention in order to gauge the effectiveness of the new method.

6.5 Group activities

The students were divided into 6 groups. Each group wasprovidedwith an envelope containing worksheets, notes, markers in blue, red, green and black, a set of food samples including drinks for each student. Students' L &t sessions were held outside of the classroom and learning assignments were carried out cooperatively.

G. RESEARCH INTERVENTION

This study was conducted in accordance with the following measures:

7.1 Review of issues

The idea of trying this method came from the experience of teaching and marking the examination paper of Science and Biology subject for 12 years. This factor was also supported by discussions among colleagues in the SMK SBU science committee as well as science and biology teachers from other schools. Below is an example of the interview questions that were presented to the committee member.

i. What is the difficult topic to teach in Form 2?
ii. What are the difficult subtopics of the topics that you mentioned above?
iii. Do you agree that the subtopic of the human digestive system is a subtopic that is hard for your student to master?
iv. What approach have you taken to resolve the problem?
v. How did the student fare in answering questions from this subtopic?
vi. What are your suggestions to improve the teaching of this subtopic?

7.2 Mid-Year Examination Diagnostic Test

This study has chosen to use the questions from the Mid-Year Examination paper as a tool to benchmark this problem. From the item analysis, it was found out that this problem to be handled carefully. Based on the findings obtained from the item analysis, the majority of students scored between 4 and 5 out of the possible 10.

7.3 Pre Exam

Pre-test was conducted in order to gauge students' existing knowledge. The Pre-test questions (see APPENDIX 3) consist of 6 questions with a total of 30 marks.

The scoring system is as follows:

Question	Scoring	Full Mark
1.	Class of food is correctly paired to 2 examples of foods =1 mark	7
2.	Enzyme is correctly paired to final product = 1 mark	9
3.	Able to: draw structure of villi = 1 mark four (3) correct labelling parts (villi, blood capillary, lacteal) = 3 marks	4
4.	Able to list 1 part = 1 mark	8
5.	Able to state correct test for glucose: Benedict test = 1mark	1
6.	Able to state the correct observation	1
	Total	**30**

7.4 Group Activities

The 31 students were divided into 6 groups. Each group was assigned an envelope containing a blue, green and black marker pen; notes and a worksheet (see APPENDIX 4). Each student was provided with a pack of different food samples containing seven (7) food classes and one glass of water. The teacher explained the assignments that need to be conducted and the purpose of the different coloured marker pen to the group leader. The group leader then explained the directives to the group members. Students completed the assignments cooperatively and collaboratively and most of the T&L processes were conducted outside of the classroom. This allows the students to move around freely.

During the last 40 minutes of the session, each group presented their findings to the teacher on a separate piece of paper with a large diagram of human digestive system. Students had to list down the digested foods and the digestive products based on the given food samples on this diagram. After the group presentation, the teacher who acted as a facilitator clarified to the students on the activities that they had just done.

7.5 Post Exam

Post-test was conducted after the intervention in order to gauge the effectiveness of the new method. Post-Test Paper was used the same sheet as the Pre-Test Sheet.

H. RESEARCH FINDING

Based on the activities,the followings are the research finding:

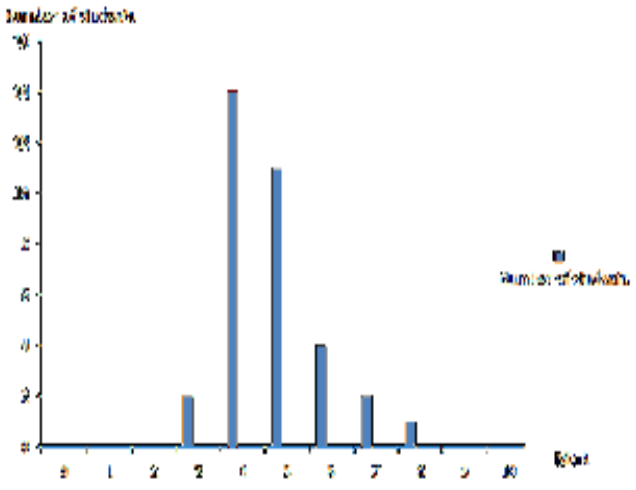
8.1 Problem review

Based on the six (6) short questions that had been submitted to the Science and Biology committee, it was agreed that an action research should beconducted to study the issues with regard to the L&T for this subtopic.

8.2 Analysis of Mid-Year Exam items

Table 1: Item analysis Mid-Term examination

Score											
Mark	**0**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
No. of student	-	-	-	2	14	11	4	2	1	-	-

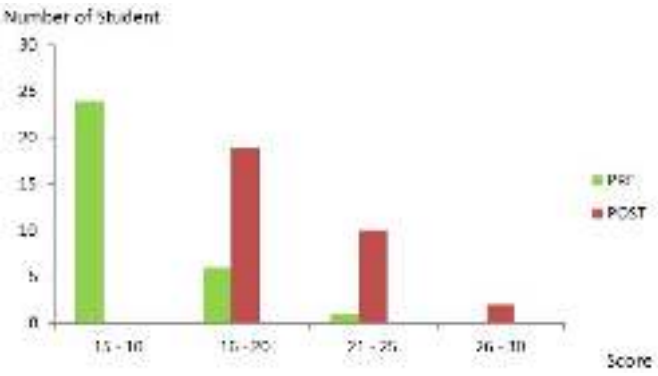


Graph 1: Graph of Item analysis Mid-Term examination

8.3 Comparison Pre-test and Post-test

Table 2: Pre-test and Post-test analysis

Score	Result	
	Pre-test	Post-test
10-15 (Weak)	24	0
16-20 (Satisfactory)	6	19
21-25 (Good)	1	10
26-30 (Excellent)	0	2



Graph 2: Graph of Pre-test and Post-test analysis

Based on Graph 2 above, there was a significant improvement on the performance of the students where there were no more weak students and the number of students who obtained the good and excellent scores increased from 1 student to 12 students.

Table 3: Paired T-test result analysis

Test	n	min	s.p	t	sig
Pre-test	31	13.90	2.57	27.51	.00

Post-test	31	25.61	2.17

*p<0.05

From the raw data of the Pre-Test and the Post-Tests through the T-Test analysis, (see APPENDIX 5), the Post-test scores (mean = 25.6, s.p 2.17) were higher than the pre-test scores (mean = 13.9, s.p 2.57). The data showed that there was a significant difference between the pre and post test scores (t = 27.5, p = 0.00). The Paired-T test was chosen because this study wanted to compare the scores of the Pre-test and Post-test for the same group of students.

8.4 Reflection Of Research

Activities that stimulate the three types of human senses such as sight, taste and smell, can enthuse students to perform well. The group activitiesand the L&T processes which were conducted outside the classroom were organized in a less formal and relaxed manner wherestudents have the abilities to move around freely during the completion of the assignments. Due to this approach, it was observed that the students were able to perform better where there were no more weak students and the numbers of the good to excellent students increased. The only challenge that persists during these activities was the time constraint which could affect the materials preparation and the execution of the activities. Therefore, extra efforts and clinical time management must be given some attention before future cycle of action research is conducted.

I. CONCLUSION & SUGGESTION

This method needs to be pursued as it can help students to improve their understanding of this subtopic. However, since this method is not included in the current syllabus, teachers may need extra time as they have to complete the existing syllabus within the given time frame. Instructional time interruption is also a challenge during the completion of this method. Thus, teachers need to work harder if they want to ensure this method is executed successfully.

The worksheet may need to be refined and it may be better to separate it into two parts: one is to test the knowledge level and another one is to test the understanding level. Therefore, it is highly suggested that this refined method is be tested in the "Lesson Study" activity at the science committee level as the collation of experienced teachers will formulate a more effective methods and approaches. As a conclusion, it is hoped that this effort is continued to be conducted as it can yield better results and at the same time enhance the teaching methodology for the entire science team in every schools in Malaysia.

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A SYSTEMATIC REVIEW OF HISTORICAL THINKING SKILLS ARTICLES RETRIEVED FROM UKM INSTITUTIONAL REPOSITORY

Manoranjini Loganathan[1], Abdul Razaq Ahmad[1] & Mohd Mahzan Awang[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: manoranjini7809@gmail.com

ABSTRACT

This paper aims to summarise previous research articles related to the application of Historical Thinking Skills in the History subject, specifically on teacher's competency and creativity in applying historical thinking skills, and issues and challenges they face in applying historical thinking skills in the teaching and learning process. The studies reviewed in this article were retrieved from the UKM Erep database. The search process used both Malay and English keywords, historical thinking skills and historical thinking, respectively. Only articles published between 2007 and 2019 were considered. In all, 8 English articles were retrieved but only 5 were used for this study. Furthermore, 16 Malay language articles were retrieved but only 8 were used. The articles retrieved were filtered based on the suitably of their contents.

Keywords: Historical thinking skills, teacher's competence, teacher's creativity

A. INTRODUCTION

Teachers play an important role in creating an interactive learning environment. In this light, History teachers need to change how they teach history and there is a call to shift from the traditional teaching and learning approach to approaches that promote 21st century learning skills. This could be done through incorporating the elements of historical thinking into history lessons. Historical thinking skills is an essential element to enhance the quality of history education, and at the same time, help produce students who are not only historically literate but also can think creatively and critically in line with the aspirations of the ministry of Education. In line with the 21st century learning and teaching environment, teachers need to diversify their classroom teaching methods to create a more engaging, interactive and student-centred learning environment that could generate student's understanding of Malaysian history.

B. LITERATURE REVIEW

2.1 History Education in Malaysia

In the context of history education in Malaysia, History is taught formally in schools to help students to understand the Malaysian history, as well as the different cultures in Malaysia and the significance of Malaysia in world history. This is further explained by the (Curriculum Development Center 2002), which described that History Education aims to produce students who not only know the historical facts, but also to stimulate student's thinking through the learning of history.

In reality, the history subject is often considered as a dry, boring subject because teachers often use pone-way teaching approaches, passive learning environment and the high reliance towards rote learning and memorisation (Noria & Anuar, 2016) mentioned that teachers often dominate instructional processes and fail to encourage students to think critically through the use of historical materials.

The aim of history education in Malaysia is to strengthen student's understanding of the nation's history. Thus, according to the primary school history standard document published by the Ministry of Education (2014), history lessons should stimulate students to think critically and creatively through inquiry and exploration activities. The Ministry Of Education Curriculum Transformation policy, as part of the Malaysian Education Development Plan (PPPM) 2013 -2025, has emphasised the concept of higher-order-thinking(HOTS) in the effort to produce a generation of critical and creative thinkers (Ministry of Education Malaysia, 2013).

In the context of the history curriculum, the application of thinking skills are closely related to the skills of historical thinking. This is because History is a field that requires a high intellectual capacity. Thus,

understanding most ideas in the history subjects demand high level of thinking among students (Sharifah Nor, Nooreiny & Elisabeth , 2010).

2.2 Historical Thinking Skills

Historical Thinking Skills is outlined as an important aspect in the Secondary School syllabus document (2002) published by the Curriculum Development Center. It specifies that History subjects aim to help students (i) understand the chronology of historical events, in which students are equipped with skills to increase their understanding of the past, present and prospective events and make connections between the past and the present, (ii) find first and second historical source and apply critical judgement to obtain information and to compare between these two sources (iii) use imagination as a historical thinking skill by taking visual and empathic efforts to evaluate and visualise a historical event according to historical source (iv) use interpretive skills to provide feedback (v) brainstorm and use rationalisation to make reasonable decisions to solve a problem.

C. RESEARCH OBJECTIVE

This paper aims to summarise previous research articles related to the application of historical thinking skills in teaching history, specifically on teacher's readiness to apply historical thinking skills to the teaching and learning process, teacher's creativity in applying historical thinking skills in the teaching and learning processes, as well as the issues and challenges they face to apply historical thinking skills in the teaching of history.

D. RESEARCH METHODOLOGY

This study reviews and identifies the themes of previous studies related to historical thinking skills. The full text of the previous studies reviewed in this article were retrieved from the UKM Erep database. The search involved papers written in English and Bahasa Melayu. The key word used to search for English articles was historical thinking skills and the key words used to search for Bahasa Melayu articles kemahiran pemikiran Sejarah. Only papers and articles published between 2007 and 2019 were considered for the review. In total 8 English articles were retrieved and only 5 articles were used in this study. Furthermore, 16 Bahasa Melayu articles were retrieved and only 8 were used in this study. The articles for their view were filtered by examining their contents.

E. FINDINGS AND DISCUSSIONS

This study reviewed 6 articles that focused on the readiness of history teachers to incorporate historical learning skills in their lessons, 4 articles on teacher's creativity incorporating historical thinking skills and 3 articles discussing issues and challenges in applying historical thinking skills in teaching the History subject. The articles were retrieved from the National University of Malaysia (UKM) Erep database.

5.1 Readiness to Apply Historical Thinking Skills in History Lessons

The competency of history teachers positively impacts the incorporation of historical thinking skills to strengthen student's understanding and mastery of history subjects, which subsequently, could improve student's achievement in the subject. This is supported by the study of Hasbie & Mahzan (2019) which found a positive relationship between teacher's content knowledge and teacher's personality in the application of historical thinking skills to facilitate effective history learning.

Zahara & Nik (2007) examined the readiness to apply history thinking skills among history teachers in Dungun district, Terengganu and found that the application of historical thinking skills in the teaching and learning process is at a moderate level. For this study teacher's readiness was measured through their procedural knowledge, pedagogical knowledge, their knowledge of teaching aids, management of learning activities and their attitude towards the application of historical thinking skills. This means that history teachers need to further improve the development of history thinking skills in their lessons.

Meanwhile, Hasbie & Mahzan (2019) examined the relationship between historical teacher's competency and the application of historical thinking skills in secondary schools in Asajaya, Sarawak. The study found that teachers have the highest personality competency in teaching history, followed by knowledge on contents, knowledge on assessments, diversifying teaching strategies and pedagogical knowledge and lastly, the use of information technology (ICT) skills.

A recent study by Khairunnajwa, Mahzan & Anuar (2017) focused on the readiness of history teachers to incorporate historical thinking skills in their lesson. They found that teachers with more than 10 years teaching experience demonstrated higher readiness compared to teachers with less than 10 years teaching experience. This shows that the teacher's experience enhances their readiness as reflected through their procedural knowledge, pedagogical knowledge, knowledge on the use of appropriate teaching aids, and attitude towards the application of historical thinking skills through history lessons. Another study by Usha (2017) showed that trainee teachers have a positive attitude and are ready to incorporate historical teaching skills into their lessons through activities such as case studies.

5.2 Creativity and Historical Thinking Skills

Creativity is one of the elements emphasised in 21st century learning. Teachers should use creative ways to engage students in the process of teaching and learning history and not rely solely on textbooks. Sarmila & Abdul Razaq (2017), proposed the use of the 5E module to cultivate students historical thinking skills among students. The 5E model comprises of 5 aspects which are engagement, exploration, explanation, elaboration and evaluation. The use of the 5E model can help improve student's historical thinking skills and at the same time, help fulfil the goals of History education in Malaysia.

The elements of the case study in the History syllabus of the Secondary School Standard Curriculum (KSSM) have led to a positive shift towards the application of historical thinking skills among students. Accordingly, Usha & Mahzan (2017), found that case studies could indirectly encourage research activities as it exposes students to the process of searching, collecting and analysing information obtained from primary and secondary sources. In addition, students will need to analyse the data obtained to examine issues or questions they wish to address. Subsequently, this will enhance the student's cognitive, affective and psychomotor abilities and increase student's interest in learning history. In addition, hands on activities such as field trips, such as visiting historical sites, can stimulate student's historical thinking skills as they can explore evidence, examine historical chronology, as well as interpreting historical events based on valid evidence.

In addition, teachers are encouraged to incorporate multimedia elements which combine audio, video, film, animation and interactive computer environment in the teaching and learning of history subject in the classroom. Mean while, a study by Mohd. Johari (2017), on student's perceptions of learning through film and the application of historical thinking skills found that male students showed higher understanding of historical events through applying higher-order historical thinking skills compared to female students, while students from the arts stream showed higher scores compared to science stream students. The findings of this study clearly show the use of digital resources increased student's motivation to better understand historical events compared to traditional methods that rely solely on textbooks.

5.3 Challenges and Issues in applying Historical Thinking Skills

One of the most significant challenges in applying historical thinking skills is teacher's mastery of pedagogical knowledge. Pedagogical knowledge is the most fundamental element that should be mastered by every teacher. The effectiveness of History lessons depends greatly on teacher's knowledge and lesson planning. However, according to Zahara & Nik (2007), there are still several hinderance in the application of different pedagogical methods in the teaching History, this further shows that knowledge is a significant aspect that must be mastered by history teachers as it is a prerequisite for the application of historical thinking skills. Hasbie & Mahzan (2019), also stressed that history teachers should master every topic, concept, content and historical skills prior to the teaching and learning process.

Another challenge in applying historical thinking skills is the lack of history option teachers (Fazila & Mahzan, 2019) and consequently, non-option teachers are forced to teach history. Most of these teachers lack pedagogical knowledge and the content knowledge to teach history and apply historical thinking skills in their lessons.

According to Ikhwan & Anuar (2018), one of the challenges in 21st century teaching and learning is the mastery of media and technology skills. This is because the application of information and communication technologies is an integral aspect of 21st century learning and should be incorporated in the pursuit of historical thinking skills. Fazila & Mahzan (2019), one of the biggest challenges teachers face in implementing creativity

and thinking skills is the time constraint to find appropriate historical resources, especially primary sources as they are burdened with other tasks .On the other hand, while resource-based learning requires students to find appropriate materials from a variety of sources, often times, students have limited access to knowledge resources (Muhammad Zaim, Abdul Razaq & Shakila, 2019). This is especially true in rural schools in Sabah and Sarawak that are still not equipped with ICT infrastructures, like computers and internet access.

F. CONCLUSION

Based on the discussion presented in this paper, it can be concluded that history lessons need to delivered through implementing 21st century learning skills, particularly historical thinking skills in the teaching and learning process. Teachers are important determiners of the student's success. Teacher's willingness to apply historical thinking skills is also an important element to ensure the effectiveness of teaching and learning process.

Thus, history teachers need to master historical thinking skills and apply it in the teaching and learning process. In this regard, history teachers should master the contents of the history curriculum and possess excellent pedagogical knowledge, knowledge of historical thinking skills and skills to manage learning activities to allow them to apply historical thinking skills in the teaching and learning process. This review shows that teachers and students should practice historical thinking skills and the application of historical thinking skills can make the process of teaching and learning history more fun and meaningful to the students.

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HISTORICAL EMPATHY IN 21ST CENTURY LEARNING

Shakila Che Dahalan[1] & Abdul Razaq Ahmad[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: shakila1212ukm@gmail.com

ABSTRACT

This study aims to review the level of historical empathy and to identify the differences in historical empathy based on gender. The study involved a total of 200 respondents, comprising secondary school students in Kuantan, Pahang Malaysia. Data analysis using SPSS version 22.0 to analyze data of descriptive statistics involves the mean and standard deviation. The findings of the study showed that historical empathy levels were at a medium level. The highest mean is 4.22 (sd=0.93) while the lowest mean was 3.77(sd=1.01). MANOVA analysis showed no significant differences in the historical empathy based on gender. This study provides implications that 21st century teaching-based learning related to historical empathy should be given emphasis on learning objectives by teachers to ensure history learning will be more meaningful to students in Digital 5.0 era.

Keywords: 21st century learning, historical empathy

A. INTRODUCTION

The 21st century learning is defined as a learning process that involves four capabilities of ability namely lifelong learning, problem solving, self-management and teamwork which co-relates to the elements of collaboration, communication, and creativity in learning (Ester, Alexander, Jan A.G.M, & Haan, 2017). According to Saucerman, Ruis, & Shaffer (2017) and Osler and Starkey (2018), the 21st century learning needs to form a holistic student from aspects of life, digital literacy and responsible as a good citizen through the application of five skills which are communication skills, collaboration, creativity, critical thinking and information literacy. Therefore, it is concluded that the 21st century learning is a form of learning that requires students to dominate the content of learning through communication, collaborative learning, critical as well as creative thinking, in producing of students in life, career and as a responsible citizen (Shakila Che Dahalan, Abdul Razaq Ahmad, & Mohd Mahzan Awang, 2018).

As such, included in this writing is further discussion regarding several aspects which comprising the history of the emergence of historical empathy, historical empathy concept, followed by student's performance through historical empathy. At the end of this writing the authors make a proposal and a write cover.

B. HISTORICAL EMPATHY

Some of the definition of ' empathy ' are given by researchers. Knight (1989) depicts empathy as an action and skill that can exist separately and together in individuals. Empathy ability can put a person imagination in individual historical figures. Roberts (1972) define empathy as a thinking process involving cognitive domain to understand individual actions to obtain information about situations that differ from the present situation. It is also supported by Boddington, (1980) which adds a cognitive domain and its ability to support in achieving empathy. This definition differs from Hoy's opinion, (2018); Lee & Ashby, (2001); Perrotta & Bohan, (2017); Siti Hawa Abdullah (2007); Sutherland, (1986); Stout & Stout (2019); and Wineburg, (2001) which relate empathy to the same feeling to understanding and justification of historical figure that has an empathy feature which is the ability to know the events and actions of the historical figure, the ability to appreciate historical context, the ability to rationalize the action of historical figures and the ability to assume as a historical figure,

2.1 Ability to know the events and actions of the historical figures

The first empathy feature, the ability to know the events and actions of the historical figure is one of the traits of historical empathy. In achieving this feature, a student must have information related to the events and actions of a historical figure surveyed. Students are able to understand and clarify on an event-appearance basis. Although

the level of understanding is a low level of thought, however this is important for the purpose of delivering students' historical empathy. In understanding level, students should be aware of some basic information involving the events or historical figures' actions. The basic information is:

a. Background of events or historical figures

b. Place of Event

c. Time of Event

d. Reasons for events or actions of historical figures

e. Impact of events or actions from historical figures

2.2 Ability to appreciate historical context

The second empathy feature, the ability to appreciate historical context is the second lowest level in the historical empathy features. In achieving this feature, the students will be able to know the conditions of any event or action as discussed in (i) above. The difference in this feature is that the students receive information on the situation of the event. If the study involves a figure, students will receive information on the actions surveyed. The students' ability in this feature is their ability to put their memory in imagination in the review period.

2.3 The ability to rationalize the action of historical figures

The third level of empathy, the ability to rationalize the action of the historical figure is considered a high-level feature in historical empathy. In this feature, students are able to provide a justification for the rational of human thinking to the actions of the historical figure being studied. Students will combine the features (i) and (ii) above in rationalization of the causes and consequences of any action taken by the historical figures. Students should be natural in rationalization of the action of a historical figure without being influenced by personal views, values and ideology.

2.4 Ability to assume as a historical figure

The fourth empathy feature, the ability to assume itself as historical figure is the highest level of feature in historical empathy. In this feature, the students theoretically be remodeled as research figures. Students imaginatively and hypothetically put themselves in the situation of the people surveyed. They will combine the features (i), (ii), and (iii) above to deepen the feeling of a historical figure with the real character of the student in the normal situation.

This term, reflected in matching the empathy by the Kementerian Pendidikan Malaysia (2001), which defines the historical empathy as the ability of the students to put themselves in the situations of a historical figures or event. However, it also revolves around the level of empathy of history students in Malaysia and whether a female or male student is more of a historical empathy.

C. Research Objective

The objectives of this study are as follows to:

i. Review the level of historical empathy.
ii. Identify differences in historical empathy based on gender.

D. RESEARCH METHODOLOGY

According to Creswell, (2014) a population is a group of individuals with similar characteristics and criteria as the purpose of the study. Meanwhile, samples are sub-groups from target populations that wish to be studied by researchers with the aim of making generalization over the study population.

In this study, the population consists of secondary school students in Kuantan, Pahang. Referring Cohen, Lawrence, & Morrison (2017), 200 respondents to be used were enough for this study. Wiersma dan Jurs (2008)expressing steps in simple random sampling is to acquire random samples and tend to produce samples that actually have the overall characteristics of the population and generalization is more meaningful. In this study,

the sample size of 200 students is to meet the formula standards and the sample size determinable by Cohen (2017).

All information obtained will be processed and analyzed using Statistical Package for Social programming (SPSS) software application 22.00. Analyzing data that uses the SPSS programming converter can produce accurate and error-free calculations (Mohd Majid Konting, 2000). All feedback from the questionnaire will be encoded. This data analyzing involves two types of descriptive statistics and inferential.

Descriptive statistics is the analysis in the form of mean and standard deviation to describe the sample and answer the questions of this study. Researchers employ the mean score performance adapted from Jamil Ahmad (2002) as below table. Quantitative data interpretation is by categorizing the overall mean score into three categories to express high level thinking skills and historical empathy. The mean score derived from the respondents' questionnaire will be compared to the value used as Table 1.0

Table 1: Interpretations mean score

Min Score	Level
1.00 – 2.00	Low
2.01 – 3.00	Medium Low
3.01 – 4.00	Medium High
4.01 – 5.00	High

Source: Jamil Ahmad (2002)

Inferential statistics is a field that discusses how to analyze data from the respondent so that all information obtained is able to accurately match the information of a sample and thus to confirm the theory. In this study, inferential statistics use one-way MANOVA.

E. FINDINGS

5.1 Level of historical empathy among students

Table 2: Level of historical empathy based on event

No	Item	Mean	SD	Interpretation
1.1	*Saya dapat merasai bidang pertanian mampu mengangkat martabat ekonomi sekiranya dijalankan secara komprehensif*	3.82	1.18	Medium-High
1.2	*Saya dapat menghayati kepentingan kemajuan kerajaan maritim dalam pembangunan ekonomi di peringkat antarabangsa*	3.87	0.89	Medium-High
1.3	*Saya dapat mendalami dan memahami pelbagai warisan agama, adat dan budaya terhadap masyarakat Malaysia hari ini*	3.99	0.73	Medium-High
1.4	*Saya dapat menyelami akhlak dan tingkah laku positif masyarakat Arab Jahiliah yang perlu dicontohi*	3.95	1.18	Medium-High
1.5	*Saya dapat merasai hikmah Nabi Muhammad SAW dalam menyelesaikan masalah meletakkan Hajarul Aswad antara puak-puak Arab Quraisy di Kota Makkah*	4.22	0.93	High
1.6	*Saya dapat merasai keikhlasan dan kejujuran orang Ansar memilih Nabi*	4.03	1.18	High

	Muhammad SAW sebagai pemimpin mereka			
1.7	*Saya dapat menjiwai betapa pentingnya peristiwa hijrah dalam perubahan diri kearah kebaikan yang menyeluruh*	4.16	0.91	High
1.8	*Saya dapat menghayati Piagam Madinah sebagai prinsip dalam politik Islam*	3.96	0.97	Medium-High
	Total	**4.00**	**0.91**	**High**

The above table shows the total level of historical empathy based on event at high level with a mean value of 4.00 and standard deviation of 0.91. Items with the highest mean are the items " *Saya dapat merasai hikmah Nabi Muhammad SAW dalam menyelesaikan masalah meletakkan Hajarul Aswad antara puak-puak Arab Quraisy di Kota Makkah* " with a mean value of 4.22 and the standard deviation of 0.93 and being on High levels. While items with the lowest mean are the items "*Saya dapat merasai bidang pertanian mampu mengangkat martabat ekonomi sekiranya dijalankan secara komprehensif* " with a mean value of 3.82 and standard deviation of 1.18 and is at a medium-high level.

Table 2.1 Levels of historical empathy based on historical figures

No	Item	Mean	SD	Interpretation
2.1	*Saya dapat menjiwai sifat-sifat terpuji Nabi Muhammad SAW dalam konteks sifatnya yang pelbagai*	4.01	1.05	High
2.2	*Saya dapat merasai penderitaan Bilal bin Rabah untuk berpegang teguh kepada ajaran Islam*	4.10	0.98	High
2.3	*Saya dapat merasai kehebatan kepimpinan Nabi Muhammad SAW dalam perjanjian Hudaibiyah yang menjadi salah satu strategi semasa menghadapi musuh Islam*	4.02	1.08	High
2.4	*Saya dapat menjiwai kebijaksanaan Uthman bin Affan sebagai perunding dalam perjanjian Hudaibiyah dengan orang Quraisy*	4.04	1.01	High
2.5	*Saya dapat menyelami sikap toleransi dan kepimpinan Khalifah Ali bin Abu Talib dalam konflik sesama Islam*	3.87	1.09	Medium-High
2.6	*Saya dapat merasai kehebatan Khalifah Umar ibn Abdul Aziz (Bani Umaiyah) dalam usaha beliau menjaga kebajikan rakyat*	3.77	1.01	Medium-High
2.7	*Saya dapat menjiwai semangat yang dimiliki Khalifah Harun al-Rasyid (Bani Abbasiyah) dalam usaha memajukan pendidikan negaranya*	3.91	0.89	Medium-High
	Total	**3.96**	**0.97**	**Medium-High**

The above table shows the overall level of a historical empathy based on the historical figures at medium-high level with a mean value of 3.96 and the standard deviation of 0.97 and is at a modest high level. Items with the highest mean are the items " Saya dapat merasai penderitaan Bilal bin Rabah untuk berpegang teguh kepada ajaran Islam " with the mean value of 4.10 and standard deviation of 0.98 and is at a high level. While items with the lowest mean are the items " Saya dapat merasai kehebatan Khalifah Umar ibn Abdul Aziz (Bani Umaiyah) dalam usaha beliau menjaga kebajikan rakyat " with the mean value of 3.77 and the standard deviation of 1.01 and at a medium-high level.

5.2 Differences in Historical Empathy Based on Gender

MANOVA's analysis was conducted to see a difference in history based on gender. Box'M test analysis can be seen as in the following table.

Table 2.2: Box'M Differences in Historical Empathy based on Gender

Box's M	Nilai-F	df1	df2	Sig.
3.112	3.095	1	9594	0.079

The table above shows there is a difference in variants-covarion of a significant variant in a dependent variable for all levels of an independent variable with a level of significant is p = 0.079 (P > 0.01). This means that the variant of the Lean variable variant is not homogenous. MANOVA tests can be carried out to see a difference in historical empathy based on gender because the number of samples is a large amount. Therefore, this study involves a large and balanced sample then the MANOVA analysis can be carried out (Pallant, 2007). The table below shows the results of MANOVA.

Table 2.3: Wlilks ' Lambda Differences in Historical Empathy based on Gender

Value of Wilks' Lambda	F value	DK between group	DK in group	Sig
0.990	3.095	1	198	0.166

The table above shows there is no significant difference in the historical empathy based on gender with the value of Wilks ' = 0.990, F (1, 198) = 3.095 and sig = 0.166 (P > 0.05). The differences in historical empathy are based on gender showing there is no significant difference in male and female students against historical empathy.

F. CONCLUSION

This study was conducted to determine historical empathy among students. The form of analysis used is descriptive which applies the use of mean, standard deviation, and MANOVA. Overall analysis was calculated using the SPSS 22.0 software. There is a wide range of historical empathy and this writing proves that there are no significant differences based on gender among students.

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THE CONCEPT OF PATRIOTISM IN THE HISTORY SUBJECT BASED ON PAST STUDIES AND THE MOE PATRIOTISM MODEL

Afrina Idris[1], Mohd Mahzan Awang[1] & Abdul Razaq Ahmad[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: afrina_idris@ymail.com

ABSTRACT

Instilling the concept of patriotism through the study of history helps create citizens who obey and respect the principles of the *Rukun Negara* and the federal Constitution. This concept highlights the aspects of practice and appreciation among students to produce Malaysians who are aware of their rights, responsibilities and role as citizens. In this regard, this article aims to discuss the concept of patriotism in History Education through two perspectives, from the review of past studies and the Patriotism Model introduced by the Ministry of Education. This article also discusses the development of the History curriculum in Malaysia from the post-Independence era. As a whole, this article further elaborates the concept of patriotism as discussed in past studies and the Ministry of Education (MOE) Patriotism Model.

Keywords: Historical education, past studies, MOE patriotism model

A. INTRODUCTION

Patriotism is derived from two Greek words, 'patriotes', which means fellow countrymen and 'patrices' meaning homeland or country. It refers to the individuals or groups fighting on the forefront to defend their homeland. A patriot is someone who loves his country and will do whatever it takes to defend it. Hence, it refers to the people who fight for the freedom or rights of their homeland (Kamus Dewan and the Oxford English Dictionary). Meanwhile, the New Webster's Dictionary refers to Patriots as people who love their homeland and will do anything for their country.

Patriotism can also refer to the belief that link people with the territories where they reside in. It also involves slogans and symbols that have a powerful influence on human behaviour. It is often associated with loyalty and love for one's country. In this light, a person is considered a patriot when his actions and practices conform to patriotism based on his love and loyalty to the country (Nordin Kardi 2003).

The concept of patriotism the society is important, as the lack of patriotism will lead to political unrest, economic instability, racial tension and the lack of unity. This is especially significant for a nation like Malaysia, which has different ethnic groups, as patriotism is key to achieve unity and harmony.

Calhoun (2004) and Morse (2008) argued that increasing patriotism is a responsibility of all members of the society to preserve the sovereignty of the country. Therefore, patriotism should be instilled starting from schools. In this regard, early exposure towards patriotic value is important and due to this significance, the MOE has incorporated patriotism into the History curriculum in Malaysia. Thus, this article aims to discuss the concept of patriotism in History Education based on two perspectives, the review of past studies and the Patriotism Model introduced by the Ministry of Education.

B. THE DEVELOPMENT OF THE HISTORY CURRICULUM IN MALAYSIA

The development of the history curriculum in Malaysia has been around since before independence, as mentioned in Ahamad and Sidek (2012) in Aini Hassan (2008). In this light, the development of the History curriculum during the pre-independence era in Malaya has been slow and has received little attention. Back then the History curriculum was considered as an additional subject, and was poorly received by the public. Initially, the history subject only aims to help students understand the Malay culture through literature such as Sejarah Melayu and Hikayat Hang Tuah (Khoo Kay Kim 1992). The British never emphasised local History and focused only on national history. According to records, the formal teaching of history started in the 1930s when World and European history was taught in English medium schools. Here, the learning activities were more focused reading and memorising facts contained in the history textbooks. This is largely because the British feared that their

political and superiority will be jeopardised if the public develops a deeper understanding of history (Suffean Husin 1996).

The perception over the importance of learning History curriculum began to change after the Second World War, however, at that time, the curriculum had no clear national goals. For instance, the history being taught in English medium school was largely based on European history, as discussed by Abdul Razaq and Ramli (2007). Furthermore, students in vernacular schools, for example, Chinese-run schools, have their own History curriculum that are based on the history of the Mainland. Norrizan (2003) further described that the history curriculum reflects the propaganda of the colonialists, and this had damper the effort of local social movements.

Local historians have started to pay attention to the development of a national History curriculum in the 1950s. The nationalist movement creates a demand for the History curriculum to be written from the local perspective due to the lack of local content with History curriculum. Accordingly, a discussion was conducted to revisit the History curriculum around the 1970s. This led to several congresses and forums, including the Malaysia I and II History Seminars held in 1973 and 1974 (Siti Zainun Mat 1988). As a result of the discussion, a suggestion was made for the Ministry of Education to create a History Curriculum that is more Malaysia-centric.

In 1986, the History subject became a compulsory subject and one of the core subjects in the implementation of the Secondary Integrated Curriculum (KBSM). In essence, the teaching of this subject aims to foster the spirit of loyalty to the nation and the notion of citizenship. At the same time, the introduction of the history subject Malaysia is aimed to foster a sense of unity and tolerance among people from different races (Ministry of Education 2002).

The development of the History curriculum continues to receive attention from the authorities, such as the move to make History a compulsory pass subject for students sitting for the 2013 Certificate of Education (SPM) and as a core subject for primary schools starting in 2012. This development has put the history subject a position equivalent to other core subjects. The MOE has also taken a proactive step to establish a Special Committee to review the History Curriculum in high school are timely. This is to ensure that the curriculum that is designed will foster a more holistic understanding and appreciation of history among Malaysian students. In recent years, the Malaysian school curriculum has underwent a series of reviews where the Standard Curriculum for Secondary School (KSSM) has been introduced in stages starting in 2017 to replace KBSM.

C. PAST STUDIES ON THE CONCEPT OF PATRIOTISM IN HISTORY EDUCATION

As mentioned, the aim of teaching the history subject is to foster the loyalty to the nation. Moreover, as a multiracial society, history education in Malaysia also aims to foster a sense of unity and love of the nation and nation (Ministry of Education Malaysia 2002). This is supported by Abdul Rahim (1999) who mentioned that patriotism is a key element in History Education as it builds awareness on the struggle of past generations to build the nation, and cultivate love towards the nation. In this light, it is important to emphasise that learning history goes beyond memorising historical facts, but also teaching students about the significance of past events. History education also fosters the value of citizenship as it helps the younger generation to understand and appreciate the nation's history. In this perspective, effective instruction of History can further reinforce the national ideology and help achieve the aspiration to make Malaysia a developed nation.

The National History curriculum was revised in 2000 and the new curriculum was introduced gradually starting in 2003 to improve the quality of History Education. This is to ensure it can fulfil the ambitions of the National Education Philosophy, and help create Malaysians who are ready to face the challenges of the 21st century. The new curriculum has highlighted the importance of patriotism in History Education as a way to educate the students on their roles and responsibilities by imparting knowledge and appreciation of the country’s history (Azwani et al. 2011).

Another study by Anuar and Peter (2010) mentioned that the aim of History Education is to foster a strong sense of loyalty to the nation and a sense of pride as Malaysian citizens. In this light, while effective history teaching can help achieve the goal of fostering patriotic values, at times, students from different ethic backgrounds may have different understandings of the concept of patriotism, which is inevitable in the context of a pluralistic society like in Malaysia.

D. THE CONCEPT OF PATRIOTISM ACCORDING TO THE MINISTRY OF EDUCATION (MOE) MODEL

Past studies argued that in a multi-ethnic society, such as in Malaysia students from different ethnic backgrounds may have different understanding on the concept of patriotism learned through the History subject. For instance, the Malays, who are the biggest race in Peninsular Malaysia (Malaya) understand patriotism as being loyal the Malay rulers (the Sultans) and other community leaders. Thus, the Malay community feels obligated to defend and preserve their rights as written in the Federal Constitution, such as the importance of Malay language as the official language, the position of Islam as the main religion, and the sovereignty of the Malay Sultans and Rulers (Anuar et al. 2015).

The Ministry of Education has designed the Patriotism Model as part of the History curriculum. This model emphasises five elements of patriotism, which are being proud of being Malaysians, being loyal to the country, esprit de corps, discipline, as well as being hardworking and productive (Ministry of Education Malaysia 2002). Consequently, the content of the history curriculum will help develop students' knowledge on the concept of patriotism.

The concepts in the MOE Patriotism Model need to be instilled in the hearts of every student. This is because at this stage, students are teenagers on the verge of their adulthood. Patriotism can teach them to discipline themselves, which in turn, can help them achieve success in their lives. The country needs a disciplined and productive generation to steer the future development and become future leaders of the nation (Saifuddin 2002)..

E. REFLECTION

It was found that the implementation of History Education seems to have little impact on the knowledge or application of values such as citizenship and national unity among students (Norrizan 2003). This is supported by Anuar (2001) who examined teachers' implementation of the patriotism model in several schools in Melaka and Negeri Sembilan. It was found that 76% of the respondents are not ready to incorporate patriotic values into their teaching despite being aware of its importance. Furthermore, the teachers also do not consistently incorporate the value of patriotism when they are teaching. The study also showed that history teachers prefer to incorporate other values compared to patriotism because they think that that it is easier to teach other values than patriotism.

Students' poor acceptance of the history subject has also made it difficult for teachers to apply the value of patriotism through the History subject. Chua (2007) examined the cultivation of patriotism through the History subject and found that the students tend to be 'spoon-fed' and highly rely on teachers during history lessons. It was also observed that students prefer to copy noted and just passively listen to the lessons delivered by the teacher rather than share ideas in the classroom.

Nonetheless, the content of the Standard Curriculum for Secondary School (KSSM) is focused on cultivating the understanding and appreciation of Malaysian history. Students learn history chronologically starting from ancient history, i.e. the Stone Age to the formation of Malaysia according. The MOE has set specific themes from Form 1 to Form 5, as shown in Figure 1 (MOE, 2019).

FORM	THEME
FORM 1	*Sejarah Kita dan Dunia* (Our history and the world)
FORM 2	*Warisan Kita* (Our heritage)
FORM 3	*Kedatangan Kuasa Asing* (The arrival of foreign power)
FORM 4	*Pembinaan Negara* (Nation Building)
FORM 5	*Malaysia dan Masa Depan* (Malaysia and the future)

Table 1: Themes of the KSSM history subject (Ministry of Education, 2019)

The curriculum includes aspects of world history that are relevant to Malaysian history to help students develop better understanding of the country's history to reinforce their pride towards Malaysia's contribution to world history. Besides, the curriculum includes the Civic and Citizenship Elements to cultivate patriotism and

develop Malaysian citizens who adhere to the national principles (Rukunegara) and in line with the Federal Constitution. The application of this concept emphasises the practice and appreciation among students to produce Malaysians who are aware of their rights, responsibilities and role as citizens. To achieve this goal, the concept of patriotism is applied explicitly and implicitly in the revised History curriculum.

F. CONCLUSION

In Malaysia, patriotism can be defined as the love and loyalty to the nation by emphasising unity in all aspects of development. Patriotism produces a civilised society that can endure the challenges and difficulties of this modern era (Abdullah, 2009). According to Muhamad Ali Embi (2009), the love of the country is not merely an oral expression or the respect towards national leaders, songs or flags. One's love for the country can be manifested in many ways, so whatever we do for the sake of our country can be considered as patriotism. They emphasised that history plays a very important role in fostering patriotism in a student's life. Therefore, teachers should teach history in the best way possible by acknowledging that Malaysia is a plural society with different religious beliefs and cultures.

In the context of Malaysia, people from different ethnic backgrounds must be well-versed in the country's history. It is important to know that historical facts should not be just learned for exams, but also to develop a patriotic nation. Thus, to foster the spirit of patriotism, history should be taught to children as young as six years old. The early exposure towards the Malaysian history could produce a generation that is aware of the country's history and strives to protect the country's unity by respecting all ethnic groups and religious belief in Malaysia. This generation will also possess the love and loyalty towards the nation, and strives to defend the sovereignty of the nation as well as work together to develop the country.

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RECALLING METHOD OF AF'AL KHOMSAH (الأفعال الخمسة) USING SUFFIX PRONUNCIATION TECHNIQUE [AANI-UUNA-EENA]

Mohd Khairulzaman Hamjah[1] & Muhammad Suhaimi Sulong[2]
[1]SMK Agama Maahad Muar, Johor, MALAYSIA
[2]Universiti Tun Hussein Onn, MALAYSIA

E-mail: zamanhamjah@gmail.com

ABSTRACT

Students in National Islamic School who undertake the Malaysian Certificate of Education (SPM) are requiring sitting for the Arabic language examination. In Arabic language subject, there is a topic of Nahu and Soraf (grammar) that is difficult to understand and remember. The purpose of this study is to assist Form 5 high school students to recall and identify af'alul Khomsah (Verb 5), and to determine the weakest among them in the teaching of Arabic. The verb is in the topic of Nahu and Soraf of Form 4 Arabic subject. A classroom action research method was implemented in this study. A total of 25 students from Form 5 Mujahid class, Sekolah Menengah Kebangsaan Agama Maahad Muar were participated where each of them has various level of intelligent. The result indicates that by using suffix pronunciation technique of Aani-Uuna-Eena, it helps and guide students in remembering the verb to answer SPM Arabic questions correctly. It focuses on the wazan feel mudhorik ending with Aani-Uuna-Eena where only in this wazan (form) will af'alul khomsah be made.

Keywords: Arabic language, nahu and soraf, classroom action research

A. INTRODUCTION

This action research study involved senior students at the Sekolah Menengah Kebangsaan Agama Mahaad Muar, Johor. The target group consisted of 25 Form 5 Mujahid students. The focus of this study was to solve the problems of students who failed to answer the af'alul khomsah (verb 5) classification questions. By helping students master this concept using suffix pronunciation techniques, students will be able to remember for a long time and answer the questions that are given correctly and with interest.

Our research questions focused were following:

i. How to increase students' understanding in Arabic?
ii. How the students able to classify af'alul khomsah (verb 5) correctly?

B. RESEARCH METHODOLOGY

This study implemented a Classroom Action Research (CAR) introduced by Kurt Lewin model, John Elliot Model, David Hopkins model, Mc Kkernan model, and Kemmis & Taggart model in [1,2]. However, CAR uses the basic concept of action research model which consists of four phases integrated in one cycle by Kemmis & McTaggart, 1988 in [3,4] as illustrated in Figure 1.

Figure 1: Action Research Model

The action research model begins at planning as the first phase and end with reflection. However it involved an initial collection of data to confirm actual issues or problems and identifies the focus of the problem that is of concern. This initial data collection was done at the end of the teaching and learning session where 25 students from Form 5 Mujahid class has been found that they were not able to answer properly for the given exercise especially the af'alul khomsah classification questions. Af'alul khomsah is the basic understanding that students need to master in Arabic. These students have various level of intellectual which are intelligent, moderate and weak.

During the teaching and learning session, the students were asked which part of the topic they found confusing and do not understand; they said they were mistaken in topic of Af'alul khomsah section. Then the self-reflective inquiry [5] continued by asking opinions from other teachers especially teaching Arabic in this school. These teachers believe that the explanation of the topic was misunderstood by students and suggested that these students should be given a lot of exercises and guidance. With that, finding a simple and easy explanation technique for the students in this particular topic of Af'alul khomsah was needed in order to avoid the same problems occur in future which may affect their achievement in the Malaysian Certificate of Education (SPM) Arabic examination

C. RESEARCH PROCESS

3.1 Planning Stage

At the first stage, students' weaknesses had been identified and reviewed in several ways for intervention. The review was through students' exercise book where students' weaknesses can be clearly seen based on the answers and the work done by the students. Other ways was doing observation during the teaching and learning process in the classroom, in response to questions asked, and written exercises. Another ways was conducting interviews informally to the target group students which was indirectly identified the actual cause students cannot master the skills of remembering the topic studied. A simple questionnaire were also prepared and distributed to students for gather information related to Arabic language subjects as shown in Table 1.

Table 1: Questionnaire

No.	Item	Yes	No
1	I do not understand the way teacher teach		
2	I understand الأفعال الخمسة		
3	I understand 5 وزن الأفعال الخمسة		
4	I am interested in learning Arabic		

In addition, pre-tests were conducted to assess the accurate level of students' understanding in classifying af'alul khomsah correctly. Pre-tests were conducted before the guidance session begins. The pre-test questions consisted of 10 subjective questions and the students were required to answer on the test paper. The response time given was 15 minutes. The pre-tests results were listed in Table 2.

Table 2: Pre-test

No. of incorrect questions	No. of students
10	-
9	-
8	-
7	1
6	1
5	2
4	1
3	-
2	-
1	-

According to the Table 2, there were only five students answered incorrectly accordingly to the questions given and they did not understand the meaning of af'alul khomsah itself and how to properly classify af'alul khomsah (Verb 5) correctly. Nevertheless, all of them were still interested in Arabic subject. Hence, finding ways to continue to help these students understand and master the skills to classifying the verb was very encouraging.

3.2 Action Stage

This second stage is to take action in order to address the problem at hand. Once the problem faced by these five weakest students identified, different method of teaching to a simpler and more interesting description of recalling method of af'alul khomsah using suffix pronunciation technique of Aani-Uuna-Eena was designed. The description of the Suffix Pronunciation Technique of "Aani Uuna Eena" is where it indicates the Tasrif Fe'el Mudhorik ending with the term "Aani Uuna Eena". Thus, these students were required to focus on the final word at the end of each word (wazan @ shape fe'el) as shown in Figure 2. Subsequently, the students were asked to undertake the post test to observe how their understanding of the Arabic language has improved.

Figure 2: Suffix pronunciation technique of Aani-Uuna-Eena

3.3 Observe Stage

At this third stage, a post-test was conducted to evaluate the effectiveness of actions. The post-test was conducted after the aid in the Suffix Pronunciation Technique of Aani-Uuna-Eena was completed and could be mastered by the students. A total of 20 exercise questions as shown in Figure 4 were given to the students and they were required to answer them within 30 minutes. The questions given are different from the above questions, but the level of the questions is the same. The results of the test are as shown in Figure 3.

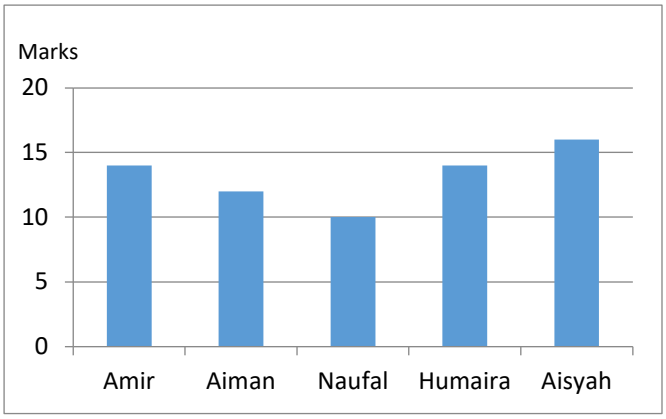

Figure 3: Students achievement according to the post-test

Figure 4: Exercise questions

3.4 Reflect Stage

In this final stage, the researchers were very contented with the results where the intervention had successfully addressed the focus of the study, which is to help improve the students' ability to remember and classify of af'alul khomsah correctly. The difference between pre-test and post-test results as shown in Figure 3 indicates that there is a significant difference.

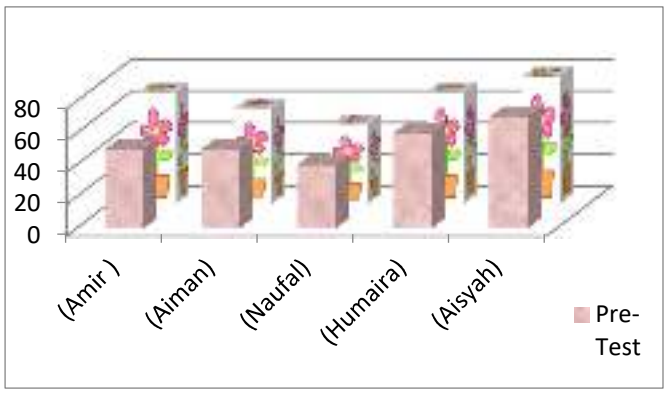

Figure 5: Achievement differences between pre-test and post-test

In addition, the students were also delightful with their achievements where they understand the techniques and be able to make classifications of af'alul khomsah accurately and correctly during the activities and techniques used. The results of the pre-test and post-test are kept and recorded for future sessions.

D. CONCLUSION

This study was to observe how students in Form 5 Mujahid identify 'af'alul Khomsah' as nahu and soraf in their Form 4 topics. Through the suffix pronunciation technique of Aani-Uuna-Eena, these students have successfully identified the classification of af'alul khomsah with precision and accuracy. Therefore, it will assist students to remember this recalling method for answering the Malaysian Certificate of Education questions for the Arabic language subject. Throughout the implementation of this study, there is a need to devise an easy way to memorize and identify jar letters well. This is due to the fact that during teaching and learning Arabic class, there are some

students confused about how to spell a jar in one sentence. Therefore, this effort is hope that it will improve the students' enthusiasm for learning the beautiful language of this Quranic language.

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HOW WILL THE LESSON STUDY DEVELOPING HISTORICAL EMPATHY IN THE TEACHING OF HISTORY?

Noor Izatul Hanim Md Rashadi[1], Abdul Razaq Ahmad[1] & Mohd Mahzan Awang[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: hanimracd@gmail.com

ABSTRACT

This concept paper aims to identify how the Lesson Study developing historical empathy in the teaching of History. In the teaching and learning process, teachers and students are supposed to do all the activities together. To create an effective teaching and learning process, history teachers need to play an important role. Various methods have been used by history teachers including traditional teaching methods that focus on lectures with one-way communication. They used a lot of elements in 21st Century Learning practices, as well as the use of technology, information, and communication (ICT), which are also frequently used by history teachers in implementing the learning process. Because several problems arise among History teachers such as not creative in creating a lesson plan and still tied to traditional patterns of practice, more creative and innovative teaching processes are needed to create effective teaching and learning processes. Therefore, the Lesson Study method is seen as an appropriate approach for improving the teaching skills in the learning process. This collaboration method can be implemented by history teachers through discussions and research group to study and discuss issues that arise in the teaching process of History subjects. This concept paper also discusses various in-service training sessions conducted by the Ministry of Education Malaysia (MOE) for history teachers in light of the changing History curriculum in Malaysia. This article also describes how conducting a Lesson Study can develop the historical empathy of history learning. In the process of understanding people in the past by understanding their actions, historical empathy will be assessed by researchers through several themes found in the Malaysian secondary school history curriculum. It is hoped that the lessons learned will be widely used in History subjects to ensure that historical empathy can be developed in the classroom.

Keywords: Lesson Study, teaching and learning, historical empathy

A. INTRODUCTION

The Integrated Curriculum for Secondary School (KBSM) was introduced in 1989 (Sharipah & Arba'iah 2016). It is based on the National Philosophy of Education, which aimed to develop individuals with holistic intellectual, spiritual, emotional and physical development based on the belief in God (Saharia Ismail 2015). In this regard, schools are responsible for planning, administering, reporting and updating all matters related to student performance. The introduction of KBSM will enable students to master a broader range of skills and knowledge, including History, which is one of a core and compulsory subject in KBSM (Mansor & Khairul 2015). History is also been introduced as a core subject for level 2 primary students since the introduction of the Standard Curriculum for Primary School (KSSR). The KSSR was introduced in 2012 to restructure and improve the existing curriculum to ensure that students in primary schools are provided with the knowledge, skills, and values they need to meet the needs and challenges of the 21st century. The teaching and learning of history are primarily aimed to increase students' knowledge of the country's history (Rafidah Yulo & Abdul Razak 2019). At the same time, the subject of history is laden with values and wisdom that could be instilled among the students. This is evident through the revised history textbooks that are organized to allow the cultivation of political, social, social and intellectual values among students.

In this process, teachers play an important role in ensuring that the teaching and learning process goes smoothly. However, previously, teachers have been accused of using teacher-centered, and out-dated practices in teaching history to the students (Sharipah & Arba'iah 2016). Most teachers use the "Chalk and talk" method to teach the topics in the syllabus. This decreases the students' interest in the subject as they feel that history a monotonous subject (Rafidah Yulo & Abdul Razak 2019). In this light, teachers need to be more creative and diversify their teaching methods and use a variety of techniques, such as actively engaging the students in the teaching and learning sessions and using a variety of unconventional methods to help students achieve the learning objectives. Subsequently, this will make the history subject more interesting for the students. According to M.

Kavinza (2019), History teachers are expected to teach based on the skills in Document-Based Lessons. Students are also like to use hands-on activities, such as presentation, question and answer, Gallery walk, and debates could stimulate students' interest and further improve their achievement in the History subject (Lejah & Rosy 2018).

B. LESSON STUDY

Lesson Study is a model of teacher professional development pioneered and practiced by teachers in Japanese (Zanaton Ikhsan et al. 2014). Lesson Study is collaboratively implemented during the teaching and learning process in the classroom, with a specific focus on students' learning. Lesson Study in Japanese is known as 'Jugyokenkyu'. 'Jugyo' means learning while 'Kenkyu' means study or research (Nur Assyura et al. 2019). Hence, Lesson Study refers to the learning, research or analysis of teacher teaching in the classroom, with a focus on student learning (Zanaton et al. 2017). In this study, Lesson Study is implemented collaboratively in the classroom to review teachers' actions in determining the learning goals and objectives, planning and preparing their daily Lesson Plan, conducting classroom teaching and observation, implementing teacher assessment and reflection, as well as improving their Daily Teaching Plan and teaching practice based on five cycles of Lesson Study (Nur Ain Elzira & Zamri 2019).

The practice of Lesson Study in Malaysia was introduced as part of the Professional Learning Community (PLC) program (BPG 2015). Initially, Lesson Study is often implemented in the teaching and learning of Science and Mathematics subjects (Muzirah & Nurhana 2013), but eventually, Lesson Study is also been used to enhance teachers' understanding, skills, and creativity in designing a more effective History lesson. This collaborative method can be implemented by History teachers through group discussions where teachers analyze and discuss issues that arise in the teaching process (Rohaiza & Norasmah 2017). This indirectly helps students to achieve their learning objectives more effectively. As there is evidence on the effectiveness of Lesson Study practice in several subjects in our country, the Lesson Study approach also is used as an alternative to strengthen the teaching and learning of the History subject.

According to Rohaida & Zamri (2015), the first step in Lesson Study is to form a group of teachers from the History panel and hold a discussion to determine the learning goals to be achieved. A group leader will be appointed to coordinate all related activities (Zanaton et al. 2014). Next, each group member should review the history syllabus and determine the difficult topics. After the discussion, the teachers need to set the learning objectives to be achieved in the Lesson Study process. Next, the daily lesson plan will be developed collaboratively where the teachers will discuss the best teaching activities to each topic and determine the teaching steps, teaching aids and the methods and strategies that will be implemented during the lesson (BPG 2015). A team member will be appointed as the model teacher that will conduct the lesson following the lesson plans designed by the team members. The lesson will also be observed by other members of the panel (BPG 2015). Furthermore, some experts will be invited to take part in the observation to get a clearer idea of the lesson being carried out (Muzirah & Nurhana 2013). All observers will collect data during the teaching session for reflection purposes. In this regard, the primary focus of the observer should be on students' achievement and behavior, rather than the teacher himself (Zanaton et al. 2014).

The next step is to conduct a reflection session. The reflection is made right after the end of the lesson. The model teacher will reflect on the students' achievements and behavior followed by the views, suggestions, criticisms, and criticisms of the group members and the invited experts. Detailed discussions will be made to improve the lesson (BPG 2015). Lastly, the changes discussed will be inserted into the lesson plan. The head of the group will record all the observations, changes that need to be made, and the reflection for future reference. The cycle described is similar to the one discussed in Zanaton et al. (2014). In this light, this collaborative process among history teachers should be implemented as it will further enhance the effectiveness of the History lessons while improving students' achievement. Also, it will help increase the knowledge, skills, and creativity among History teachers (Lejah & Rosy 2018).

C. LITERATURE REVIEW

There are several advantages to Lesson Study implementation. According to Chiew et al. (2016), the implementation of Lesson Study has successfully enhanced teachers' knowledge and improved their pedagogy in the teaching and process as they embark on the cycle of group discussions and teacher observations. Lesson Study is also very effective in fostering collaborative relationships between teachers, promoting lesson planning practices, motivating teacher development and also promoting active students' participation in teaching (Nur Assyura et al. 2019). This is agreed by Rismawati (2017) who stated that collaborative processes between teachers

can enhance teaching quality. This process facilitates interactions between teachers and makes them more open to criticism and feedback from others. This allows teachers to learn from each other on how to improve students' learning outcomes,

A study by Zanaton Iksan et al. (2017) states that Lesson Study in Japan promotes the culture of intellectual collaboration and provides opportunities for teachers to learn through the community to enhance their professional skills and students' engagement as well as providing them to be involved in classroom-based research activities. Meanwhile, in Malaysia, it provides a platform for teachers to collaborate and share ideas about teaching. Lesson Study can also build teachers' knowledge of student learning and further stimulate the development of teacher teaching practices. Moreover, according to Rohaiza & Norasmah (2017), the implementation of Lesson Study has a positive impact on the teaching process as a reflective and collaborative component of Lesson Study helps teachers to improve their teaching practices. Throughout this process, teachers gain input and feedback on the appropriate teaching strategies, inquiry techniques and ways to encourage students to think (Nurul Faisza & Zanaton Iksan 2017).

Tan Ai Lee et al. (2016) stated that Lesson Study provides a platform for teachers to talk about the mistakes students often make in the classroom. Through the reflection process, experienced teachers can identify mistakes and discuss them with other teachers. Leson Study also made it safe for teachers to acknowledge their weaknesses and demonstrates that teachers are willing to customize their teaching strategies to encourage creative and critical thinking skills among students. Nurul Faisza & Zanaton Iksan (2017) further noted that Lesson Study implementation has improved teacher questioning techniques, specifically the questions asked as teachers can post questions that are highly relevant to the topic and able to attract students to answer. Students are also interested to participate in the lessons. Students gradually develop a high grasp the basic knowledge and become more confident and eager to learn. This shows how teachers can help each other to improve their learning outcomes (Rohaida & Zamri 2015).

The implementation of Lesson Study has many benefits. These collaborative practices will build competencies among teachers to produce and conduct effective lessons. At the same, it could enhance a teacher's professional relationships with their peers (BPG 2015). The process of Lesson Study implementation is also beneficial as the documentation provided by the teachers involved can become a reference for others in the future. This process also benefits the students as it allows teachers to discuss and think about the best methods that can be used in their lessons to aid student learning (Zanaton et al. 2014). Subsequently, these practices will help improve the quality of learning through the sharing of professional knowledge.

D. THE HISTORICAL EMPATHY IN LESSON STUDY

One of the important features of historical thinking in History education is empathy (Siti Hawa & Aini Hassan 2007). Empathy is the process of describing the past based on the values and knowledge of the time itself. Empathy can be cultivated as students imagine themselves as a historical figure at the time of a historical event. The value of empathy was considered in redesigning the previous History curriculum in 2002 (KPM 2003). Empathy is also listed as one of the structures of the historical discipline, similar to historical inquiry, resource gathering, historical thinking skills, historical explanation and historical understanding (Siti Hawa & Aini Hassan 2007). Teachers play an important role in helping students to think critically and cultivate the value of empathy so that students can value the importance of History. Students will develop empathy when the lessons conducted are effective and interesting. This empathy will be born in line with clear emotions, and this will help students develop tolerance and adaptability in real life (Ahmad Suhaimi & Abdul Razaq 2017).

The Lesson Study implementation cycle model comprises of five fundamental phases, setting goals, lesson planning, conducting the lesson, observing and reflections (BPG 2015). For instance, during the lesson planning phase, the teacher can identify a historical event that involves the analysis of human or human actions (Siti Hawa & Aini Hassan 2007) . In this light, numerous historical events involved notable figures in the syllabus, including the fight for independence from the British. This topic is one part of the Form five syllabus and it focuses on significant events involving such freedom fighters including Dol Said, Dato 'Emperor Lela, Rentap, Mat Salleh, Tok Janggut and Haji Abdul Rahman Limbong. Throughout the Lesson Study cycle, teachers could discuss, share ideas and find additional information about the historical figures to make the lessons engaging. This will help teachers to encourage students to develop and apply historical empathy throughout the lessons.

Teachers also need to understand the context and chronology of historical events. Hence, they are required to research the facts and evaluate the different interpretations of historical events. In the Lesson Study cycle model, this process is implemented in designing the lessons. Lesson Study requires teachers to collaborate with each other and this makes it easier for teachers to find various historical resources and analyze historical events. Furthermore, understanding the chronology of an event is very important for teachers as it will assist students to imagine being part of the historical event, which will help them develop historical empathy (Ahmad Suhaimi & Abdul Razaq 2018). There are various topics in the syllabus that require the students to know the chronology of the event, including the rise of Nationalism in Malaysia, the rise and fall of the Malacca Sultanate, and the formation of Malaysia.

The final step in the cycle is conducting the lessons. Here, students are expected to develop a narrative framework to reach a conclusive interpretation or conclusion on the event, as well as demonstrating historical empathy. Siti Hawa & Aini Hassan (2007) noted that historical empathy is the desired outcome as those who think empathically are able to understand one's behavior and keen to find information about situations that are different from the current situation. This step requires high-level reasoning as students need understand and examine a situation or a thought that contradicts his or her personal views (Intan Syakila & Mohd Mahzan 2018). The cultivation of empathy requires a high commitment from the teachers as there is a need for careful planning and thorough lesson preparation. This is best achieved when teachers plan lessons collaboratively as part of Lesson Study. This could ensure students develop empathy or the expected perspective which could enhance their learning experience.

E. REFLECTION

History teachers should set high goals in educating students and develop empathy among students through the lessons. In this context, teachers' pedagogical skills play an important role in cultivating values and shaping the students' identity (Ahmad Suhaimi & Abdul Razaq 2017). This can be easily accomplished when teachers embark in Lesson Study as they need to collaborate and discuss with the colleagues on how to optimize the lessons' outcomes. The value of empathy can enhance historical understanding by providing an effective historical setting and awareness over the significance of the historical events. Thus, historical empathy is the most desired learning outcomes as empathy enables one to understand people's actions and provides a rational basis for the actions of the person (Siti Hawa & Aini Hassan 2007). The cultivation of empathy is very important because it will help students understand historical events and the related figures better. The cultivation of historical empathy will cut down teachers' reliance on memorization and rote learning as it helps students develop an understanding of past events through appreciation of history (Intan Syakila & Mohd Mahzan 2018).

F. CONCLUSION

Teachers play an important role in promoting the value of empathy in the teaching of history, Therefore, teachers need to possess high pedagogical knowledge and constantly improve the quality of their teaching. Lesson Study is highly dependent on the collaborative practice and is seen as a smart alternative for conventional professional development as teachers can work together to produce instructional materials and find ways to help students understand historical events and be able to think empathically. Thus, history teachers need to systematically and consistently carry out these initiatives. This method will also help History teachers to implement the teaching and learning process effectively. Another benefit of Lesson Study is it can help increase the pedagogical knowledge among teachers. The elements of historical empathy elements also have the potential to cultivate values like citizenship and patriotism and promote the affective domains of history learning. Subsequently, history students will be able to develop a more open, tolerant and mature mindset. It is hoped that this concept paper will provide insights into Lesson Study practices that can optimize the cultivation of the value of empathy in teaching history.

This paper also demonstrates why Lesson Study can enhance the effectiveness of the teaching and learning process, as well as enhancing students' interest to learn History subjects, which in turn, could lead to higher achievement. Therefore, a study on the importance of Lesson Study practices in the subject of History should be conducted to help improve teacher professionalism. Lesson Study practices can assist teachers to instill empathy among students. This study will also add to the collection of academic materials that will assist researchers to improve national education. It is clear that Lesson Study can help teachers to improve their teaching skills. This method can decrease the number of unskilled teachers and the lack of pedagogical knowledge to teach

History as it allows teachers to learn collaboratively with each other to address issues and challenges surrounding History teachers.

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RETHINKING OF BETTER EDUCATIONAL STRATEGIES FOR ORANG ASLI DEVELOPMENT IN THE NEW ERA

Mohd Mahzan Awang[1] & Abdul Razaq Ahmad[1]
[1]Faculty of Education, The National University of Malaysia, MALAYSIA
E-mail: hanimracd@gmail.com

ABSTRACT

This paper draws from two research on native or aboriginal or Orang Asli that we have conducted in Malaysia. The first study was on parental support for Orang Asli and preferred pedagogical practices of better education for Orang Asli. In that study, we found that Orang Asli parents are more likely to provide basic support (non-academic support) rather than academic-based support to their children. They expect that their children would have better life in the future. Results from the study also demonstrated that fun-learning and creativity in teaching are contributing factors for Orang Asli motivation in schooling. Based on data gathered, we proposed a Culturally Responsive Pedagogy for model for promoting better engagement of Orang Asli in education. The model highlights the importance of socio-cultural values of Orang Asli to be integrated in various educational strategies. We also conducted a study of career personalities of Orang Asli in Pahang Malaysia using an innovative screening technique based on the Holland's Codes of RIASEC Theory (Holland 1997). The study found that the majority of Orang Asli has a social-based personality and they have an interest to be part of modern professions. We summarise that educational development of Orang Asli in Malaysia requires a holistic approach. We may adapt The GPILSEO model of Maori Education in New Zealand (Bishop 2010) and integrate it with our model of Culturally Responsive Pedagogy model (Ahmad & Awang 2016) for educational transformation of Orang Asli in Malaysia.

Keywords: aboriginal students, Orang Asli, socio-educational, parental support, socio-cultural elements

1. Introduction

Education for the aboriginal and marginalized communities is important worldwide. Many past empirical studies revealed that the majority of aboriginal students are marginalized and living in hardship (Ramle & Faridah, 2011). In Malaysia, many native schools were developed since the late 1950-s. The term of "Orang Asli" is ised in Malaysia – referring to various ethnic groups of native people. The Malaysian government allocated a special budget for the Department of the Aboriginal Affairs for Orang Asli education ti support their future life by providing financial assistance schemes and various educational programmes. The government also allocated some budget for healthy food budget for all Orang Asli student. A special scholarship for the aboriginal students who obtained good academic results was also introduced. A laptop is provided for each aboriginal university student (The Department of Aboriginals Affairs, 2009). Despite these programmes and a number of socio-educational assistance that have been provided by the government agencies, there are relatively a small number of aboriginal students in Malaysia who are successful academically.

2. Education for the Aboriginal Communities: Issues and Challenges

The Malaysian government has provided various types of socio-educational support for Orang Asli in Malaysia such as free Pre-school for Orang Asli who live in suburban areas. The government also provides various proper accommodations and introduces new economic activities. Indeed, the government has developed modern houses equipped with water supply and electricity; Orang Asli schools, the Relocation program for Orang Asli etc. Despite many initiatives for Orang Asli, past empirical evidence shows that most of the aboriginal pupils are still not having good motivation at schooling. Research shows that the majority of aboriginal students obtained poor academic achievement and have a lack of school attendance. Data shows that 46% of the aboriginal children left school either at primary or secondary school (The Department of Aboriginals Affairs 2009; 2011). A number of 6640 aboriginal children have not attended primary and secondary schools, while a small number of aboriginal

students succeeded in secondary education. Data from the investigation indicated that only 117 aboriginal students attended higher education institutions since 2008, while only 880 indigenous students obtained Diploma, Bachelor's degree, Master's degree and Doctorate from 1971 to 2010 (The Department of Aboriginals Affairs, 2011). Due to these issues, most of the Orang Asli children are illiterate and faced difficulties to get better life in the new world.

3. Research on Orang Asli Parental Support and Culturally Responsive Pedagogy

We conducted research on parental support for Orang Asli and preferred pedagogical practices of better education for Orang Asli. The study was funded by Tengku Ampuan Afzan Endowment in collaboration with University Kebangsaan Malaysia. We utilized a case study research design using a semi-structure interview for data collection. Results from the study revealed that most Orang Asli parents hoped that their children would have better occupation in the future. Many Orang Asli parents are also providing their supports for their children education as they said that education is a priority for their community. Some parents said that they purchased many learning materials such as books, stationeries, and school attire. In addition, many parents realised that the most important concern in providing support is not only to supply physical matters, but also to offer psychological support to the children. Although they do not know to provide educational guidance but they provide fundamental learning materials needed for their children's education. Many parents reported that they provided a lot of non-academic support instead of academic-based support. This may be due to the low literacy rates among parents. The study also found that two main factors that would encourage Orang Asli children participation in education that are fun learning and creative in teaching. Orang Asli students said that the use of music and songs during lessons attracts students' attention, which would increase student's commitment towards schooling. For instance, one student said that: "*I am happy listening to story, music and song in the class. Singing is lovely" and some students reported that they dislike the use of "chalk and talk*" *approach. I do not like to learn Sciences subject because the teacher just talk and talk ... talk ... and write .. and talk talk and chalk approach) during les*son". Creativity in teaching Orang Asli is another strategy that would be able to attract students' attention and promote their motivation. A student reported that: "*I was happy when the teacher carried out lesson outside the classroom"; another reported that "We feel happy when the teacher conducts lesson outside (as) we will get more data and information through observation*" and "*We feel bored when a teacher teaches us in classroom ... some teachers do not organise classroom activities*". Some students expected teachers to use of computer in classroom. This is in line with past studies confirming the importance of modern teaching aids such as comic (Laba, 2015), television, social media, YouTube channels, internet and many more. Based on this finding, we propose a Culturally Responsive Pedagogy for Orang Asli. The basic principle of Culturally Responsive Pedagogy is that socio-cultural elements are vital for effective teaching and learning in aboriginal schooling system. As socio-cultural elements are fundamental for culturally responsive pedagogy, local community engagement and positive support are essential for improving aboriginal students' engagement in school activities. Therefore, these elements are supposed to take into account while designing curriculum for aboriginal education.

4. Research on Career Personalities of Orang Asli

We conducted a project on Orang Asli to check their tendencies in modern professions using the Holand's Codes of RIASEC theory (Holland 1997). The basic premise of this theory is that one's occupational preferences were in a sense a veiled expression of underlying character (Holland 1997). According to this theory, there six types of career personalities namely Realistic (Doers), Investigative (Thinkers), Artistic (Creators), Social (Helpers), Enterprising (persuaders) and Conventional (Organizers). Usually the screening test uses a set of written document check list where an individual needs to select the most preferred activities. Then, it will be calculated and sorted according to Holland's codes of RIASEC theory. When come to illiterate community, we need to think of another way of doing it. We realised that is difficult for Orang Asli children to read the check list and make their preferred activities. So, we created another way of screening test by using screening cards. We identified 60 types of RIASEC categories (10 cards for each category) then we produced a special set of cards. Orang Asli students were asked to select 10-15 the most preferred activities. Based on that activity, we calculated the most preferred jobs. Results from this study found that the majority of Orang Asli students are Social (helpers) types and Artistic (Creator) of career personalities. We interviewed several Orang Asli students and they reported that they have an interest to be involved in modern jobs and professions. Realising this situation, we developed several modules to motivate them in education. We also created a webpage to connect them with Orang Asli communities: http://orangkita101.blogspot.com

6. Conclusion

Based on research on education for Orang Asli that we had carried out for the past few years, we realised that a holistic structure of educational reforms for Orang Asli may be needed. This is due to there is still a lack of Orang Asli from Peninsular Malaysia enrolling higher education institutions, regardless of many initiatives and incentives have been provided by the Malaysian government. It is time to look at alternative model of improving better education for Orang Asli. In New Zealand, the government adapted the GPILSEO models (Bishops 2010) for educational reforms of Maori education. The GPILSEO model is an acronym of Goals, Pedagogy, Institutional, Leadership, Spread, Evidence, and Ownership. We suggest integrating this model with our model of better pedagogical practices – Culturally Responsive Pedagogy model (Ahmad & Awang 2016) as a new approach of developing better educational development for Orang Asli in Malaysia.

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MULTIPLE PROFESSIONAL IDENTITIES OF NEW TEACHERS

Michael Hall[1]
[1]University of Nottingham Malaysia, MALAYSIA
E-mail: Michael.hall1963@gmail.com

ABSTRACT

Professional identity
"Identity is too ambiguous, too torn between 'hard' and 'soft' meanings, essentialist connotations and constructivist qualifiers, to be of any further use to sociology."
(Brubaker and Cooper 2000, p 2)

Keywords: Multiple professional, identities, teachers

A. INTRODUCTION

This study asks how do new Further Education (FE) teachers construct and manage their multiple professional identities. I aimed to discover the aspects of Initial Teacher Training (ITT) and professional development which guide new FE teachers in realising their new professional identities. This paper examines the experiences of the participants, both positive and negative, are explored, including the ways they construct their professional identity as an FE teacher.

I examine trends and relationships between the participant demographic data and qualitative data captured in this study. The data captured from the two questionnaires reports and discusses the participants' career choices and teacher workloads leading to the participants attaining a new professional identity.

The results of data analysis demonstrate a variety of viewpoints and experiences of the participants. The participants have been categorised into three areas of FE teacher, vocational-academic (professional), vocational, and academic. All participants share some aspects of developing professional teacher identity, although there are several significant distinguishing features of each group. Classifying (or categorisation of) each participant into one of the three groups of FE teachers is not without issues. Brubaker and Cooper (2000) argue a person's sense of identity does not and cannot make people behave in a specified way, the members of the group construct their identity through a continuous process of identification and behaviours. Brubaker and Cooper (ibid) distinguishes between real groups and non-existent groups. The participants of this study were able to identify with several groups, referred to as communities practice. All participants were trainee FE teachers and shared a sense of groupness whilst undertaking the ITT programme. Separating the participants into the three groups, academic, professional and vocational teachers, was based on collective similarities between the members, for example the nature of the subject taught. I notice that some participants move between the groups by the nature of the courses they teach, further complicating the participants' professional and multiple identity. Two participants classified as vocational teachers also teach academic subjects. All participants are members of the college and the FE teaching sector and were able to identify themselves with the college and the FE profession. Brubaker and Cooper (ibid) describes the college as a formal organisation which will continue to function regardless of the movement of its membership. The participants may choose to change employers with other colleges or other FE providers, but the participants will retain an association with the FE sector.

The results of this study concur with Hogg and Terry (2001), where the participants identified with some professional identities more than others. Adding to Hogg and Terry (ibid.) the participants of this study who teach vocational subjects assumed the identity of an FE teacher but recognised their previous salient professional identities.

The Participants described how daunting teaching can be for new teachers, regardless of their academic and or technical skills. Although daunting, the participants stated they were not prepared for the transition from their original occupations to that of an FE teacher. Participants also explained how the transition from one occupation to a new one was not straightforward. Participants who teach vocational subjects found moving between two professional identities challenging and confusing.

The participants were very clear about how they saw themselves at college, primarily as teachers who were experts in their field. Within the context of the college, the participants in this study possess a range of professional identities based on their specific role – class teacher, personal tutor, course leaders – whilst some act as representatives for the college with external agencies. By the end of the ITT programme all participants stated they viewed their professional identity as that of an FE teacher with occupational and/or academic expertise. Such a self-defining approach was not as individualistic as it initially appeared. Throughout the individual interviews, some participants stated they felt under pressure to adopt the role of a teacher and often resisted letting go of their previous professional identity. The participants refute claims made by Jenkins (2008) that a person's identity does not affect their behaviour. One participant described the ways they moved unknowingly from the identity of a FE teacher to that of their previous occupation. Issues of gender, race and social class were referred to in terms of personal identity. Findings and themes from questionnaires, focus groups and interviews reveal introspection by new FE teachers when constructing a new professional identity.

It is not the participation in the pursuit of new skills, but the total participation in a new profession. When asked about the concept of total participation in FE teaching, the consensus of the participants was that it was a 'state of mind'. Becoming and being a teacher is not just doing the job, but being the whole teacher, resulting in changing personal and professional identity. Participants explained their process of learning through observation, writing essays and reflective practice. Results demonstrate the ways new teachers generate the patterns of personal experiences which inform and shape their personal learning and development. Interview data from this study revealed some participants tailored their actions by referring to personal stores of experience from previous occupations. One participant referred to the 'lived experiences with no surprises', making reference to Maslow's (1952) four-stage model of learning moving from unconscious incompetent to unconscious competent (moving from novice to expert), avoiding deliberate and formal record keeping. Themes generated from interview data highlighted the complexities and process of building teacher knowledge and teaching competence through the development of habits and styles, through routine practices. New teachers attempt to avoid mistakes adopting the role of compliant technicians, bound by rules of FE teaching practice and that of the college (Helbsy 1999). Participants described how the ways compliance with rules helped them to automatically comply with expected behaviours of an expert, with less anxiety. In contrast some participants described their initial frustrations about the lack of structure for novice teachers. This perception reinforces a long-established belief that subject specialists are able to teach their chosen subject.

Established models of professional development (CIPD) and work-based learning (IOE) stress the importance of structure in the early stages of professional development. The fundamental relationship between the two human processes of working and learning is at the heart of initial teacher training bringing together knowledge, theory and practice. Results generated from this study reinforce the importance of discriminating between the distinct features of the FE teaching environment and traditional classroom learning. New FE teachers learn to be guided by new knowledge and developing perceptions based on reflective practice. Participants expressed concern about the focus on reflection by teacher educators; they all agreed professionals learn from experience, but challenge the concept of more experience and more reflection results in more learning. Participants described difficulties of 'letting go of previous learned behaviours'. It is recognised some learned behaviours and actions are inefficient, ineffective and difficult to change (Lewin 1947). Participants analysed the ways they considered new experiences, discovering new patterns which helped them to understand their new situations. Reference was made to previous experiences from previous occupations when some new experiences went wrong. Participants searched for new events that made them act differently. The participants (60%) attributed the support of their specialist mentors and former teachers to their successful transformation to an FE teacher.

One common theme gained from the participants' narratives was a desire to discuss student work with their own students on an individual basis and establish individual targets and development plans. They felt the role of the teacher ought to be augmented with the role of the tutor and dealt with within the ITT process. Participants who teach academic subjects complained about the class sizes, claiming that large groups of students prevented them from developing individual student learning plans. One participant who teaches higher education modules, stated he had taught class sizes of fifty and above, restricting his creative skills in teaching through having to deliver formal teacher-led lectures as a primary teaching method. Petty (2004) claims learners will retain between 10% and 20% of the content of a lecture, whereas students who are able to apply new knowledge through cooperative learning exercises and the opportunity to apply new learning to realities will retain up to 80% of the lesson content. The duplication of teaching topics and subject resources became apparent across the teaching subjects; narratives and findings from observations exposed many missed opportunities to share teaching

resources and plans. Examples included the teaching of Management and Leadership. This subject is taught within six areas of the college's curriculum, including Early Years Education, Public Services, Health and Social Care, Education Studies and Business Management.

Participants were often critical of the teacher educators, making claims the teachers in teacher training did not demonstrate good and effective teaching practice and lacked the skills to explain teaching methodology. One participant commented that the way teacher educators had attempted to teach co-operative learning methods was by formal, teacher-centred lecture.

The participants also expressed a desire to visit beacon colleges and experience teachers from all sectors, using elements of ethnography to improve, conceptualise and add best practice to their own teaching. This result demonstrated a need for an extended learning culture, embracing wider collaboration with other colleges.

The participants expressed concern about the lack of opportunity to make long-term curriculum plans by means of drawing from their own professional experiences from previous occupations. The members of Focus Group 1 did explain how the curriculum in Engineering and Information Technology did not reflect current practices in the chosen industry. The participants demonstrated how some technical subjects/industries developed at a greater pace in terms of innovation than the education sector. These developments suggest the FE sector fails to keep pace with the industries it intends to serve.

B. PROFESSIONAL ROLE CONFLICT

Throughout the data collection period, some participants experienced difficulties in their relationships with their respective line managers and some of their own FE students.

Wirt (1981) provided a five stage instructional model of the process of professional conflict.

Quiescence – professional dominance

Issue emergence – growing number of student complaints

Turbulence – challenges made by pressure groups and some militants within the professional ranks

Resolution – Debate within the professional ranks

Closure – reduction of conflict, accepting some redefinition of professional actions: imposed or voluntary.

The difficulties experienced by the participants with their own students' requests conflicted with college requirements, which could not be explained away in terms of recalcitrance of awkward individuals. The main issue described by the participants is the strain between the participants and the college managers, although the participants claimed they experienced strains and conflicts of interest with external agencies. The results from this research support the positions of Helsby and Etzoni (1992) that teachers are semi-professionals, describing them as compliant technicians. The results also suggest the participants are more amenable than other professions to bureaucratisation as the participants displayed actions of compliance when dealing with their own students in difficult situations. One participant explained her approach to behaviour management. She claimed the teacher-training tutor recommended the concept of transactional analysis. Although theoretically useful, the participant stated it was her role to instil the professional principles of the hairdressing profession. The participant stated her role was one of an adult and parent in the three-stage process.

Results gained from the participants' narratives highlight key changes in terms of differentiation of FE teaching and training roles. Vocational teachers by the nature of competence-based education have a reduced role when comparing the roles of academic teachers. The vocational teachers strongly contested argument stating they had responsibility comparable with those teaching academic and professional subjects. Ecclestone (2009) describes how FE competence based tutors' status, pay and conditions are significantly worse than those teachers employed in schools and sixth form colleges.

"I understand, I do hold a university degree, but it does not affect my ability to teach my subject and trade. The college should respect my skills are different, but at the end of the day, my course results are good and above the national average. … I cannot see the relevance of being able to write 2000 word essays and reference them makes me a better teacher"

(Extract of Interview Transcript May 2017)

The position of the vocational teacher is derived from the nature of vocational training. The qualities of vocational teacher focus on the preparing of FE students for the world of work and in some cases the perception of vocational teachers assumed greater importance than academic and professional vocational teachers. All participants described the importance of their practice having a positive impact on the local and national economy. Participants felt an overwhelming sense of responsibility for their FE students in ways which do not match the current professional standards. Although the concepts of pastoral care are addressed within the current initial teacher training, participants often supported their FE students with their personal issues, beyond the scope of formal teacher education and training. It is the point in which the participants recognise when to pass on/refer the FE students to external organisations or specialist support workers within the college. One participant stated she had written to a Member of Parliament on behalf of a student who was experiencing difficulties with student finance. This action was closely linked to the concepts of altruism, the participants often placed themselves in difficult and vulnerable positions, believing they were acting in the students' best interest. The perceptions of acting professionally (compliance with organisational policy and procedure) is of negated by many of the unplanned meetings with other colleagues and support workers. The participants explained the ways students are able to access a range of support services often brokered by the participants. They clearly valued the work of specialist support workers in the college, but neglected key aspects of their teaching. The participants who teach vocational subjects reported significantly more FE students' welfare and social incidents. Although the sociological and welfare issues relating to non-traditional FE students is an interesting concept, this is an area beyond the scope of this study and a subject for future research.

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CURRICULUM IMPLEMENTATION AT ISLAMIC ISLAMIC PRIMARY SCHOOLS

A Study on "Best Practices" Done by Islamic Islamic primary School Teachers in Planning, Implementing, and Evaluating the Curriculum

Rusman, As'ari Djohar
Chairman of the Graduate Study Program Develoment Curriculum Indonesia University of Education
Curriculum Development Program, Indonesia University of Education
Email: [1]rusman@upi.edu; [2]asaridjohar@upi.edu

Abstract: Applying a new curriculum, namely implementation of 2013 Curriculum at schools has been commenced in July 2014. The implementation of the curriculum is expected to give a push to an increasing quality of managing and processing educational efforts towards betterments at every unit of learning and education. Backgrounded by application of the curiculum, the present study is geard to reveal problematic aspects dealing with a query of "How do islamic primary school teachers respond to implementation of 2013 curriculum in Bandung city viewed from the activity of planning, implementing, and evaluating the curriculum?" and "What best practices are applicably implementable in terms of planning, implementing, and evaluating the curriculum done by islamic primary school teachers in Bandung city?" Results of the study indicate that school teachers' response to the implementation of 2013 curriculum falls into the category of *positive*. As of the activity of planning, it falls into the category of *positive* while the activities of planning and evaluating the curriculum, they fall into the category of *positive*. There exists several "best practices" worth applying in terms of planning, implementing and evaluating the 2013 curiculum by the islamic primary school teachers in Bandung city. The best practices include activities of "sharing", "workshop", "class clinic", "pendampingan", "bimtek", and real teaching" through their implementation at *KKG*.

Key words: 2013 Curriculum, Teachers' Responses, Curriculum Best Practice Implementation.

A. INTRODUCTION

The enactment of *Peraturan Pemerintah Nomor 32 Tahun 2013* concerning Revision on *Peraturan Pemerintah Nomor 19 Tahun 2005* concerning National Education Standards and *Permendikbud No. 81A* concerning Curriculum Implementation aiming at quality enhancement of education especially through the implementation of the new curriculum of the year 2013 commencing in July 2013 in schools and *madrasah*. Pearaturan Menteri Agama Nomor 160 Tahun 2014 concerning Implementation of Curriculum 2013 in islamic primary school starting in 2014. There are several factors possibly the cause of being successful or the other way around in implementing the curriculum. Viewed from the dimension of curriculum, Hasan (2007:479) explains that curriculum implementation means the dimension of process. He further says that "....the dimension of process is the implementation of what is

planned in the dimension of document. The implementation could probably be similar but could also be different from what is planned in the document". Accordingly, conclusion can be drawn that curriculum implementation (the dimension of process, is termed as *implemented*, *observed*, or *reality*) has strongly something to do with written document (dimension of document).

Ornstein & Hunkins (2009:250) echo the aforementioned idea that *"successful curriculum implementation results from careful planning, which focuses on three factors: people, programs, and process"*. They further elaborate that some schools have failed in implementing curriculum because of negtlecting the factor of people. Instead of focusing on the factor of people, the schools have devoted a lot of their time and budget on merely modifying the programs or on the process. On the other side, focusing on new programs give new ways to people to achieve new programs at schools. The process of organizing remains important for the reason that it motivates people to guide components needed to attain successful implementation.

As of the imlementation of curriculum (the case of *KTSP*) commenced since the year of 2006, problems raised on the development of the curriculum proved to be uncertainty on the curriculum developers' part at schools in the districts in developing the curriculum according to the potentials and characteristics owned by the schools and the districts. This is due to the low competency as owned by curriculum developers in making efforts to develop the curriculum. To make things worse, no actions of increasing the existing competencies are taken in the forms of training and technical assistance for the curriculum developers to work optimally.

Results of the research conducted in six Regencies/Cities of West Java Province show that experiences of the teachers as curiculum developers team involved in training or technical assitance in general fall into the category of *sufficient* with the percentage of 42%, and *less than sufficient* of 45%. Further explained is that 45% of the teachers as members of the curriculum developers team has never been involved in the training or technical assistance programs as run by the KTSP development, syllabus, and the *RPP* (Susilana, 2013:156). The findings are in line in terms of similarity with the results of the research showing in general that the quality of islamic primary school curriculum in the six regencies and cities of West Java Province falling into the category of insufficient of 2%, less than sufficient of 50%, and sufficient of 48% (Susilana, 2013:168).

Based on the findings, in the efforts of elevating curriculum developers team's competency at schools and districts while at the same time increasing the quality of *KTSP* document prepared by the team, it is urged that earnestly intensive steps be taken. One of possible steps would be running a program of training with assistance during the period of developping process and the process of structuring the curriculum.

Findings resulted from previous research conducted show a condition of slight difference. There are schools with no curriculum developers team and have no *KTSP*. A quite big number of schools claim to have *KTSP* by only adopting *KTSP* developed by other schools or

other parties. As expected, *KTSP* is supposed to create a variety. However, as a matter of fact, *KTSP* brings with it similarities. The reality as indicated is, certainly, due to the various factors. One of them is a seemingly uncertainty on the curriculum developers team's part at schools, especially competencies as owned by the team in developing the *KTSP* and its supporting facilities.

Successful implementation of curriculum as coined by Ornstein & Hunkins (2009:250) is influenced by three facotrs, namely people, programs, and processes. As of the factor of people, in Indonesia, teachers are positioned as strategic point of departure in developing and implementing the curriculum at schools. Attainment of the goals as stated depends on the teachers' performances including their professional competencies, motivation, abilities, dedication, being determined in terms of self confidence, number of experiences, academic qualifications, active participation in professional education or training progrms, and the period of time for teaching practices. Other than the teacher factor, curriculum implementation has something to do, to some extent, with the factor of programs which, in this study, is assumed as curriculum document prepared by the curriculum developers team. The quality of well-structured curriculum document should bring with it a refference for the excecutives (the teachers in this sense) to implement the curriculum readily well.

In reference to the aforementioned explanation, the query of the present study is put forward as follows: How do Islamic primary school teachers respond to the 2013 curriculum implementation in Bandung city in the light of planning, implementing, and evaluating the curriculum?, and What "Best Practices" would be worth adopting from the teachers in Bandung city in terms of implementing the 2013 curriculum implementation in its plan, implementation, and evaluation?

Based on the queries as formulated, the present study has its aim of gaining the picture of 2013 curriculum implementation, especially the one which has some crucial things to do with the "best practices" worth adopting in terms of planning, implementing, and evaluating how the curriculum works under the management of Islamic primary school teachers in Bandung city. The present study also aims at providing practical uses and benefit besides serving as a direction to teachers and the school willing to implement the 2013 curriculum.

B. METHOD

The present study is conducted in Bandung city with 6 islamic primary school teachers being the target. The islamic primary schools selected as a model or piloting project of the 2013 curriculum implementation is 34 in number. The method used is a survey with questionnaire as instrument and a list of form to be filled with an experience. Data analysis is done using percentage-descriptive and qualitative-descriptive statistics.

C. RESULT AND DISCUSSIONS

There are 2 findings resulting from the present study namely teachers' response to 2013 curriculum implementation, and "best practices" of 2013 curriculum implementation.

1. Teachers' Response

The response of islamic primary school teachers to 2013 curriculum implementation in Bandung city on the three activities (planning, implementing, and evaluating) falls into the category of *positive*. The response is illustrated below.

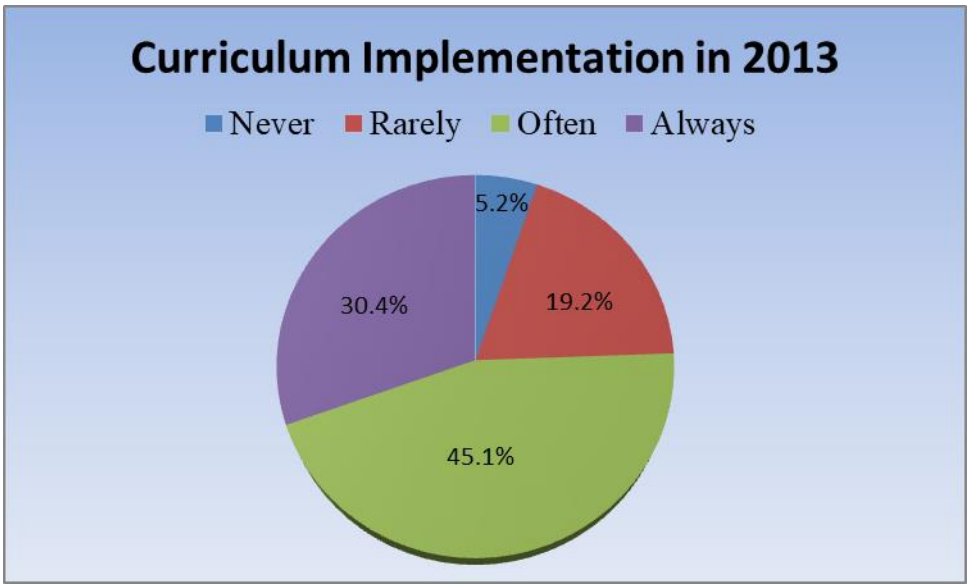

Illustration 1.
Teachers' Response to 2013 Curriculum Implementation

The illustration above indicates that teachers' response to 2013 curriculum implementation is positive. Still, there are teachers who have not implemented 2013 curriculum on the three activities as much as 5,2% although all respondents of the study are teachers who have participated in 2013 curriculum training. It means that a number of islamic primary school teachers have not yet grasped the 2013 curriculum and therefore have not yet got the ability of implementing the curriculum. To cope with, headmaster or otherwise other person in charge at educational local offices involved should take necessary steps to socialize and srengthen the 2013 curriculum implementation at the learning processes in Islamic primary schools.

Table 1 shows that 7,1% of the teachers have negative response to the implementation of learning and that 5,0% of the teachers have negative response the evaluation of learning. It explains to a certain extent that the implementation of leraning based on 2013 curriculum emphasizes on thematic and scientific approaches, and the evaluation of learning based on the 2013 curriculum emphasizes on authentic approach. These two kinds of approaches sound a bit new to the teachers giving negative responses possibly due to their less comprehensive understanding on the matter, while, as indicated, as of planning for learning based on 2013 curriculum, quite positive responses are gained. Part of the reason is that in general teachers see no significant difference between the new curriculum of 2013 and the previous one.

Table 1

Teachers' Responses to the Planning, Implementing, and Evaluating 2013 Curriculum Implementation

No	Statement	Never	Rarely	Often	Always	Toatal
A	Learning Plan	3.5%	15.5%	46.3%	34.7%	100%
B	Implementation in Learning	7.1%	19.2%	45.1%	28.6%	100%
C	Assessment of Learning	5.0%	24.7%	43.5%	26.8%	100%
	Average	5.2%	19.2%	45.1%	30.4%	100%

2. Best Practices

Information given by teachers using format to be filled about the "best practices" in the activities on implementing 2013 curriculum is as follows.

a. "Best Practices" in the activity of planning the learning activity.

In the activity of planning the learning process, teachers are obliged to make an lesson plan. To make it easy in doing the activity of developing the thematic learning implementation plan, islamic primary school teachers in Bandung city do it colaboratively in *KKG* or a group of *KKG* in one cluster. The thematic learning implementation plan is made by referring to the teacher's book and student's book prepared by the Government, with some developing using additional materials and methods. KKG activities are held once a week and there discussed issues of things like: 1. reading the syllabus to be applied in the thematic learning implementation plan; 2. The thematic learning implementation plan is made a day before the implementation of learning activities; 3. tools/materials/media to be provided is prepared accordingly with the condition of the school environments; 4. analyzing teacher's book and student's book to schedule the implementation of learning, just in case that there is something needs revising.

In some islamic primary school in Bandung city, say for example islamic primary school Al-Inayah, early every academic year, teachers hold an in-house training where competent resource persons are invited to deliver speeches on 2013 Curriculum. In this event, parents of the students are asked to participate in socializing the curriculum and made willing to understand and collaborate as well in implementing the 2013 Curriculum. On Thursdays, a KKG activity is held and all teachers, class teachers and subjects disciplines teachers are asked to involve in discussing every part of the whole set of the 2013 curriculum. Among the parts include preparing the UTS pre-designed problems and the problems themselves, and an evaluation of 2013 Curriculum. Other than that, meetings on KKG activities inter clusters and inter municipalities are held to discuss potential problems and constraints along the way of implementing the 2013 Curriculum. Right in the very school, headmasters urge every class teacher and subjects teacher to submit the thematic learning implementation plan they have prepared in a week on Mondays.

To make it easier to monitor the attainment of KI.1 and KI.2, islamic primary school in Bandung city are readily available with facilities of using a folder consisting of stampede or *good point and exellent* in the forms of stickers of "star" awarded once any students are successful in showing an indicator of skill in assessing attitude well. Teachers use this strategy to monitor student's attitude every single day based on the indicator formulated every end of the week. The folder is given to students to bring home to be cross-checked by their parents so that communication between parents and teachers in terms of their children's development.

Other activities possibly worth doing by islamic primary school teachers in Bandung city in implementing the 2013 curriculum may include the followings: (1). Holding various discussions before and after class sessions on findings and constraints found during the teaching-learning process; (2). Doing observation by peer teachers; (3). Adding to the existing materials relevant resources from the Internet or other banks of information like newspapers or magazines.

b. "Best Practices" in the activity of learning implementation
There are several "best practices" done by islamic primary school teachers in Bandung city in implementing learning activities. Among the activities are the availability of rooms for students to ask, reason, try to make use of real medium of instruction (local environments), varied methods of teaching, and class arrangements. Grouping takes place by taking turns every week with the care of students' level of intellectuality. First thing of all before learning starts, reading short verses of Al-quran & hadits and daily prayers is said. Values on characters are inserted well before learning takes place. Forms of activities may include singing a song, inspiring words coming from teachers or students motivating students to behave positively and trigger spirit of learning. Thematic approach and scientific approach (observe, discussion, experiment, presentation). Equipping learning with attractive media, for example, could trigger anthusiasm. Video showing of which materials are relevant to the subject being taught sounds like fun for students. Furthermore, understanding on the topic learned could be high in degree. Islamic primary school Al-Mursyid, for instance, run this program in all grade four classes, using the facility of *infocus* installed in every classroom.

Resource books used are not stricted to those issued by the Government. Books intended for enrichment are also of importance to the process of teaching-learning. One or two books are assisted by audio-visual which may include the followings: 1. LCD used to monitor; 2. "Star" sticker to denote good work on student's part; 3. Stamp to indicate student's good job and excellences to motivate students; 4. Sharing teaching experience by way of practices, and doing a real teaching mode of one cluster in which peer teachers evaluate or give advices for betterments upon a completion of performance of a model teacher.

c. "Best Practices" in the activity of evaluating learning.

As of the activity of evaluating the learning process, islamic primary school teachers in Bandung city are used to construct problems after defining pre-making of the problems for examination, both for daily exam, mid-semester exam (*penilaian tengah semester*) and final exam (*penilaian akhir semester*) – all of which are prepared in KKG under the suspicion of headmaster and the observer. Problems written for exams are referred to the pre-making of the problems and the teacher's book as well as the student's books. Teachers collaborating with students' parents inform students' level of learning progress during a certain period.

Evaluation of KI.1, KI.2, KI.3, and KI.4 is done per sub-theme. Evaluation of KI.1 is done when students are saying prayer before learning. Other objects to be evaluated include possibilities of not saying prayer or, talking to other students, skipping any one of the five time a day of *Shalat* (prayers) of *Dzuhur*, *Asar*, *Magrib*, *Isya*, and *Subuh*. Evaluation of KI.2 is done when students submit their written assignments on time or after the due date. Other objects of evaluation include attending the class on time or coming late to class. Those who violate the rules have their names posted on the board for everyone to see. Students with achievements are awarded Star stickers also posted on the same board. Social attitudes are evaluated through a monthly competition of very best students in terms of criteria like being disciplined, responsible, self-confident, polite, caring, adorable as model. The very best students are chosen by fellow students in the classroom. Evaluaton of KI.3 is done to see if students are doing well in daily exams. After finishing a sub-theme, written exams of moral and religious value, sosial Indonesian Language, Mathematics, Science, and social science are for students to take. Those students with incompleteness in terms of exams and being unable to achieve *KKM* are given the chance to take *remedials* for each basic competency unachieved. After being evaluated and being given remedial, the scores or marks are recorded in the file in a laptop in order to have an access when the process of inputing data of rapport other than the exams. Take-home assignments are also possible to generate scores or marks. Evaluation of KI.4 is done directly on the spot of learning activities and at the time students do the assignments. To make it a lot easier, rapport writing uses mailing and application modes.

D. CONCLUSION

Based on the findings and the data analysis, conclusion can be drawn as follows:

1. Islamic primary schools teachers' response to the 2013 curriculum implementation in Bandung city falls into the category of *positive*. As of the planning activities, they fall into the category of very *positive* while for the activities of implementation and evaluation of the curriculum, they fall into the category of *positive*.
2. A number of "best practices" are worth adopting from islamic primary school teacher in Bandung city in terms of 2013 curriculum implementation in the

activities of planning to implement curriculum. Among the bests are collaboratively developing the thematic learning implementation plan in *KKG* and cluster KKG respectively, sharing program, accompaniment, technical guidance (Bimtek), real teaching and in house training with national instructor or resource person in 2013 Curriculum, developing an alternative activity beyond what has been planned in thematic learning implementation plan, and running the program of "class clinic" for students whose ability in reading needs brushing up.

3. Several other "best practices" worth adopting from islamic primary school teachers in Bandung city include the implementation of curriculum. The teachers are successful in optimizing learning sources available around in the process of learning concurrently with electronic learning. Taking turns in managing the classes and organizing students into groups is also one of the practices in doing their activity. Innovation in the learning process results in the use of LCD to monitor the activities, the use of "Star" sticker in evaluating attitude, the use of Stamp for good jobs and excellences to motivate students. Giving more practices to share experiences and, giving input on learning as it is practiced by model teacher.
4. Other "best practices" are also good to adopt, namely evaluating the curriculum. The teachers have an authentic evaluation using various ways and through different activities like "*Quiz*" *"sharing"* with students' parents in monitoring students' learning progress. The teachers make use of computer application to make it easier to prepare a report on results of the evaluation.

Suggestions based on the results of the present study are as follows:

There are three major activities teachers do in implementing the curriculum, namely planning, implementing, and evaluating. Competencies in doing the three activities are of an obligatory requirement to a teacher.

Enhancement of the three major competencies can be done through various ways. "Best Practices" as demonstrated by islamic primary school teachers in Bandung city are good examples and worth adopting. They include activities of "quiz", "accompaniment", *"sharing"*, *"Syllabus analysis KI, KD and Objectives"*, "material surgery" through their implementation at KKG. These activities prove to be useful in helping teachers to increase teacher's competencies. Therefore, teachers are recommended to actively participate in those activities, either individually or in groups. Quality competencies are expected to trigger enhancement of image to attain teacher values running like "teacher as professional profession bearer".

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INTERACTIVE MULTIMEDIA FOR BASIC GEOMETRY LEARNING USING 3D HOLOGRAPHY PROJECTION

Asyifa Imanda Septiana, asyifa@upi.edu
Dian Anggraini, diananggraini@upi.edu
Indira Syawanodya, indira@upi.edu
Software Engineering, Universitas Pendidikan Indonesia Kampus Cibiru, Jl Raya Cibiru KM 15
Bandung 40393, Indonesia
asyifa@upi.edu

Abstract

Mathematics is always on the top list of hated subjects by many primary school students. This assumption should be removed by the teacher with their teaching strategies. The teacher's creativity is one of the great importance and should be supported by the right media. A method used to project 3D hologram objects is by combining LED screens and holographic reflectors is proposed. Pyramid-shaped hologram reflectors made of transparent acrylic sheets are used to reconstruct 3D hologram objects from four 2D images from monitors placed under the hologram reflectors. The user's hand movements are used to control the 3D holographic object that is displayed and the flow of learning multimedia.The construction of this interactive 3D holographic media is evaluated using the Learning Object Review Instrument (LORI) questionnaire version 1.5.

Keyword: multimedia, interactive, hologram, educational technology

A. INTRODUCTION

Mathematics is always on the top list of hated subjects by many primary school students. This assumption should be removed by teacher with their teaching strategy. The teacher's creativity is a great importance and should be supported by right media. Since mathematical objects are conceptual and invisible, the meaning of representations plays a major role in mathematics and mathematics education [1].The fact shows that students need media of learning mathematics [2]. The students will face the difficulties if teacher did not stimuli their sensory organs since students perform conceptual abstraction based upon concrete characteristics, when they lack sufficient knowledge of and experience [3]. Beside of that, using programs or multimedia-enhanced methods of teaching can be effective in getting students' attention [4].

Different topics of math subjects needs different approach to deliver the content. However, the approach by using white board is not always the option. Multimedia technology can be utilized to deliver the subject, however the 3D technology can be more helpful to assist the student learning process. Current 3D technology such as Augmented Reality and Virtual Reality are widely used nowadays. However, these methods need special equipment and tend to make learning process for individual characteristics. Other 3D technology solution is the holography method. 3D holography is an effective teaching tool in attracting students' attention and enhance their understanding because 3DH can dismantle a complex topic to a simpler form which improves students' comprehension [5].

To optimize the use of 3D hologram media in the classroom, we need a 3D hologram media that can display objects that can be directly seen by many people. Learning media with 3D holograms to be made must also be interesting and interactive in order to increase the interest of learning participants. In addition, the aspects of the use and comfort of this holographic media must be

considered so that the learning process is not interrupted. Therefore, the design of a 3D hologram with the pepper ghost method accompanied by a motion detector is the right and innovative solution for learning media in schools.

B. RELATED WORKS

The use of holographic media has been used as a medium for exhibiting museum objects accompanied by leap motion cameras to detect hand movements [6]. By using leap motion, users can interact with holographic objects. But the interaction that can be done is limited to rotating holographic objects only. In previous studies [7], holographic objects have been successfully touched directly by the user, but the visibility is too narrow because the 3D hologram creation method uses pepper ghost media combined with two parabolic glass pieces. Because of its small size it needs to be further studied whether it is possible to be used as a learning medium. The use of multimedia learning with a combination of the holographic pepper ghost and AR to display learning objects has been made [8], but the interaction is limited by using only cards to change the objects displayed by the hologram.

C. SYSTEM OVERVIEW

The system of the interactive multimedia can be seen in figure 1. To project a 3D holographic image (d), a combination of LED screens (a) and pyramid reflectors (b) are used. Pyramid-shaped hologram reflector made of transparent acrylic sheet is used to reconstruct 3D hologram objects from four 2D images. The leap motion camera is used to capture hand gesture input from the user. The user's hand movements are used to control the 3D holographic object that is displayed and also the flow of learning multimedia.

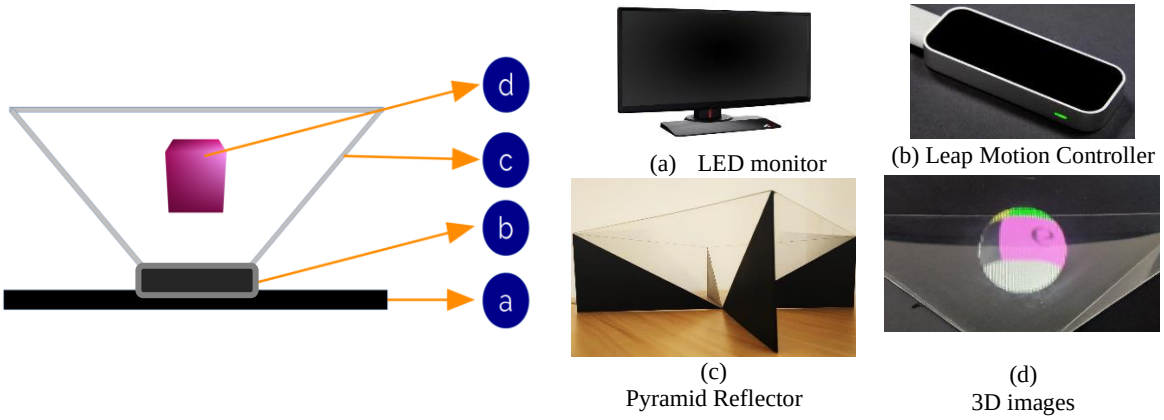

Figure 1 The Overall System of Interactive Multimedia

The LED screens monitor produce 4 pieces 2D images. Those 2D images initially was a 3D images that deconstructed properly based on its point of view so the user can view the 3D images as they move from each pyramid projection side. This system is done by using Unity. The hand gesture processing also done in Unity by utilizing the Leap Motion Orion SDK.

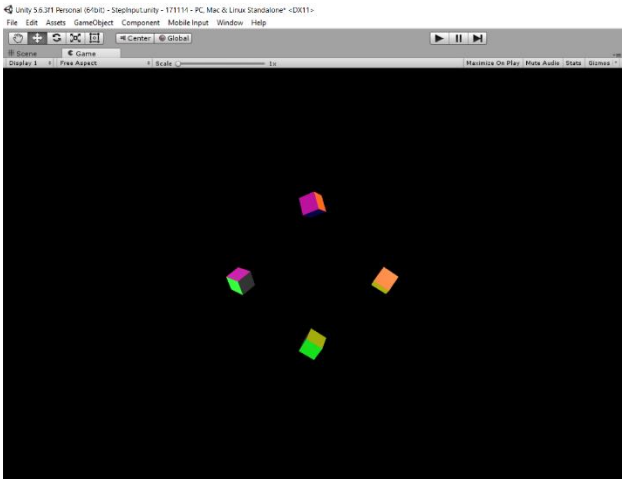

Figure 2 Four pieces of 2-dimensional images that projected from the LED Screen Monitor

In this multimedia we provide different types of 3D shapes to explore by students. The student can rotate the 3D image in the hologram using their hand gesture movement as shown in figure 3.

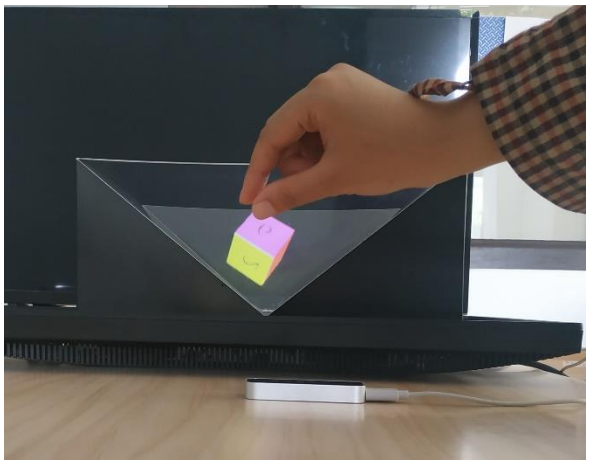

Figure 3 The interactive multimedia is being used by the user hand gesture

1. System Evaluation

The last stage of this research is the evaluation. The evaluation is conducted by two methods, using the questionnaire and the interview. We asks two experts in multimedia about their opinion of our interactive media by LORI questionnaire[9]. There are 6 items to be reviewed as can be seen on figure 4. Overall, this interactive media get the good score.

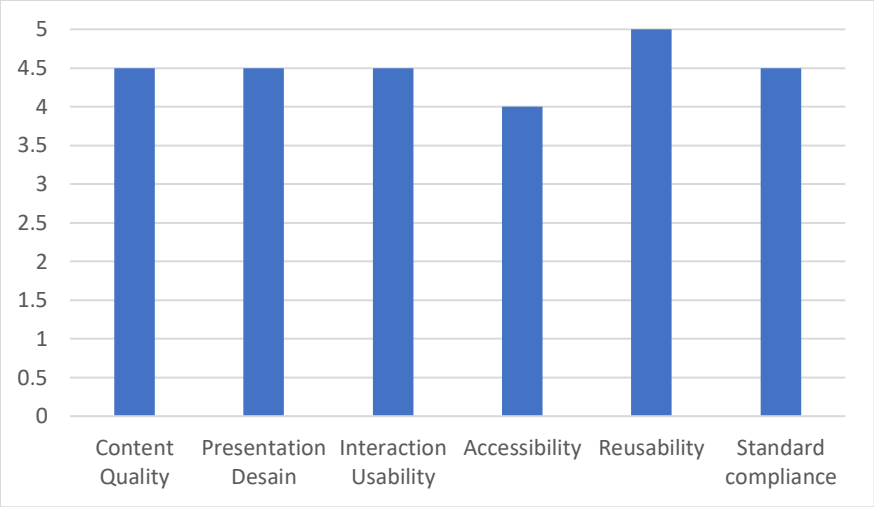

Figure 4 Evaluation result by LORI questionnaire

To explore the evaluation deeper, we ask the experts directly in formal interview about our interactive media. From this, we found some drawback in our interactive media. The concept of using the 3D hologram display for teaching math is great, but it can be better if the delivered content is not only about the basic 3D shapes. The school usually already have tangible model of 3D shapes. So more abstract concept of math will be better to deliver in our interactive media. Other than that, the hand gesture control should be made easier for student because their motor development usually different to adult.

D. Conclusion

The interactive media using 3D holographic projection have been built. An LED screen monitor, a leap motion controller, and a pyramid acrylic are used to build this interactive media. The content of this multimedia is built in Unity. User can interactively control the 3D image because of the leap motion controller. This interactive multimedia get good score in its evaluation plus some comment for future improvement.

There are so many possibilities of future work on this research. We are going to build the multimedia for subject that have more abstract conceptual. The hand gesture usability for this kind of 3D pyramid hologram also should be studied further. Beside of that, the gamification version by using our interactive multimedia is planned to build.

E. Acknowledgment

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RELIGIUSITY DEVELOPMENT OF EARLY ADOLESCENT

Mia Rusmiati
Psikologi Pendidikan Pasca UPI
miarusmiati@upi.edu

The purpose of this study is to improve the religiosity of early adolescents in learning in schools in the disruptive era. All data and concepts in this article use the Literature Review method with a qualitative approach, reading material that can be used as a reference in the form of books, journals, and articles relating to the development of religiosity. Religiosity is one of the important characters in education in the disruptive era in which the development of information and communication technology has brought great changes in various fields of life, not least in the world of education especially for teenagers with unstable emotions in the process of searching for self-identity. The preliminary study contained in this article shows that religiosity is a behavior that is implemented not only by doing ritual worship such as prayer, reciting, fasting but also when carrying out other activities. High religiosity is directly proportional to success, self-adjustment, emotional regulation, diligent worship, personal subjective well-being and high confidence. The cause of high religiosity is education and religious experience. The result of the study in this article can be used as a consideration for educators in learning activities in schools to implement religiosity both in terms of theory and implementation/habituation to students. This article can also be used as a first step for researchers who are interested in examining the religiosity of early adolescents and the strategy in learning at school.

Key words: Religiosity, Adolescent, Disruptive Era

A. INTRODUCTION

Nowadays, character building becomes a main issue in education sector as it is related to the phenomenon of moral decadence occurred in society, and government. Crime, injustice, corruption, violence against children, and human-right violation are the evidence of personal and moral decadence in Indonesia. It occurs not only in society but at school with some various actions such as ditching 10%, cheating 40%, fighting 5% as well (Azizah, 2006).

Lately, religiosity, good character, and good manner which become Indonesian culture are rare to be found in Indonesian society especially Indonesian youth. Adolescence is identical to the social environment in which they are required to be able to adapt effectively (Hurlock E. , 2005) moreover in disruptive era in which the development of information and communication technology has brought great changes in various fields of life, including education. Disruptive era is an era in which communication and technology are advancing, information is not limited, and information sources are from not only one or two but also hundreds or thousands media that can be a carrier of information and new knowledge for students (Kristiawan, 2015).

Behavior dynamics and the tendency of specialization of this millennial generation when interacting with the internet in relation to the education sector are they prefer visual-based information (through youtube, online games) rather than through narrative texts (reading printed books or listening to teacher lectures). They are better to access and use internet, receive and accept information from the internet than to stay and study at a conventional library. When the students are like this, the education sector will be influenced the effect of disruption that can harm the students (Priyatna, 2018). The character building – the national goal of Indonesian education – is the best solution to solve these problems.

Article 3 No: 20 of 2003 Chapter II states that to develop the potential of students believing in God Almighty, the national education aims to develop the ability to create noble, creative, independent and responsible human beings in continuing the ideals of a dignified nation (Sholekhah, 2019). But there are still many inappropriate events such as the phenomena described above. It shows that the actualization of religiosity is not integrated between knowledge, attitudes, and behavior in daily life.

Adolescents belonging to the religion are hoped to have good religious behaviour and character. Religiosity is expected to be implemented not only in the dimensions of religious rituals but also in other dimensions in order to have a positive impact on the dailylife especially teenagers. Belief and appreciation of religious teachings – often referred to as religiosity – is an important thing for humans as a way of life, especially for adolescents (Suparno, 2013).

The psychological condition of adolescents has a considerable influence on their religious life. Adolescent cognitive development – which has reached the formal operational level according to Piaget's theory – enables adolescents to think abstractly, theoretically and critically. Critical attitude of adolescents also appears in religious life. They no longer take for granted the religious teachings given by their parents. Even, the religious lesson that they have learned in childhood begins to be questioned, so it often causes a religious doubt. Clark in (Subandi, 1995) sees that religious doubt is indeed a prominent characteristic of religious life in adolescence. The doubtful thing can be ritual worship such as asking why the obligatory salah must be 5 times in a day, why salah must face the

Qiblat, etc. Not only cognitive development but the scientific information also contributes to the rise of religious doubts in adolescents. Scientific explanations of science are often perceived by adolescents as contradictory (Rizki Setiawati, Nurhamidi, 2014). Adolescent behavior is also influenced by the surrounding environment – the more often adolescent attends the religious event, the higher his/her religious level is. It is also stated by Thaher (Afiatin, 1998) that religious improvement was very striking in the younger generation.

According to Clark in (Subandi, 1995), religious conflict and doubt are a natural part of the process of developing one's religious life. From the perspective of developmental psychology, this phenomenon is commonly seen as a process of finding adolescent self-identity. Education that develops religiosity in this disruptive era is a right solution as adolescents generally still have unstable emotions, even experiencing *storm and stress*.

B. RESEARCH METHOD

All data and concepts in this article have used Literature Review method with qualitative approach, a reading material that can be used as a reference, namely books, journals, and articles relating to the development of religiosity.

C. RESULT AND DISCUSSION

1. Theoretical Review of Religiosity

According to Indonesian Dictionary, religiosity is devotion to religion; piety. Meanwhile according to the Dictionary of Psychology, Religion is (Religion, religion); one system which is complex of beliefs, attitudes, and ceremonies that connect individuals with a divine being (Kartono, 2011). According to Rahman (Umasugi, 2013), religiosity behavior is behavior based on conscience and attachment to God, manifested in the quantity and quality of worship and norms that govern relation to the environment internalized in humans.

According to the term, religiosity is a comprehensive unity of elements that makes a person called a religious (being religios) and not merely claims to have a religion (having religion). Religiosity includes religious knowledge, religious beliefs, religious ritual practices, religious experience, religious morality behavior and social religious attitudes (Ancok, 1994, p. 77).

Religiosity is a condition that exists in a person that encourages him to behave in accordance with his observance of religion (Jalaluddin, 2008). According to Ancok and Suroso (Umasugi, 2013), religiosity is manifested in various aspects of life. Religious activities not only occur when someone performs ritual or worship behavior, but also when performing other activities that are driven by final power. It is suitable to the opinion of (Boston and Gray, 1981, Hair and Bowerrs 1992, McIntosh et al 1993) in (Afiatin, 1998).

While Religiosity (adjective: religious) is not identical with religion. Actually, Religious people should have religious character and behaviour but some people adhere to a religion for trade motivation or career advancement only. In addition, there are also people who have converted because they are prosecuted by their future parents-in-law, who have different religion (Muhaimin, 2008). Thus, the essence of one's level of religiosity lies not only in individual spirituality, but it more closely resembles the religious activities shown in daily life that is carried out consistently. This correlates with the opinion of (Compton, 2005) *Religiosity may increase generativy*. The following is the Comparison of the Concept of Religiosity.

Table 1. Religiosity Concept Comparison

No	Dimension	Glock, C.Y & R.W. Stark	Robert H. Thouless	Jaluluddin Rahmat	Sintesis
1	Definition	Religious is the level of one's conception of religion & the level of one's commitment to his religion.	Religion is an attitude (a way of adjusting itself to the world that includes references that indicate a wider environment than the physical world environment related to space & physical).	Religiosity involves several aspects namely cognitive, affective and conative aspects.	From three written sources, it can be concluded that Religiosity is manifested in various aspects of human life. Religious activities occur not only when someone performs ritual behavior (worship), but also when carrying out other activities that are driven by supernatural powers. It is Not only real activities that can be seen by the eyes, but

					also activities that are not visible and occur in one's heart.
2.	Essence	Faith	Obedience and Muamalah	Complex integration	The essence of religiosity includes faith, monotheism, worship, syariah and Muamalah
3.	Aspect	1. Cognitive -*ideological dimension,* - *the intelectual dimension*) 2.Psychomotor - Ritualistik (*the ritulistic dimension*), - Konsekuensial (*the consequential dimension)* 3.Affective Eksperiensial (*theexperiential dimension*)	1. Social factors 2. Experience Factor 3. Needs / self-esteem factors 4.Intellectual Factors	1 Internal Cognitive (Faith on God) 2. External Psychomotor (environment in the outside family & community)	So the aspect of religiosity from the three sources covers the relationship vertically (hablum minallah) and horizontal relations (hablum minannas).
4.	Indicator	1.1 Understanding of God (acknowledging the existence of God, angels etc.) 1.2 Attending religious seminars, recitation 2.1 Pray, recite, fasting Etc 2.2 Doing good, honest, help etc. 3.1 Feeling close with God, pray always granted etc.	1.1 Parental education, customs etc. 2.1 Religious attitude; humble, polite, honest, help each other 3.1 Security, love Affection etc. 4.1 Religious understanding	1.1 Fear of God, fear of sin, & hell 2.1 Influence of environment (habituation and education at home, influence of friend & custom of community)	Thus, indicators of the religious aspects of the three figures include vertical relationships (hablum minallah) and horizontal relationships (hablum minannas)
Source		(Glock & Stark, 1994)	(Thouless, 2000)	(Jalaludin, 2010)	

Based on the table above**,** Religiosity is the ability to be realized in various aspects of human life. Religious activities not only occur when someone performs ritual behavior (worship), but also when carrying out other activities that are driven by supernatural powers. Not only will it relate to activities

to Glock and Stark in (Utami 2012, Azizah, 2006 and Afiatin 1998), there are five aspects/dimensions of religiosity, namely :

1. *The ideological dimension*

Related to the level of someone in believing the truth of their religious teachings, religious belief is the extent to which one's beliefs about things that are dogmatic in the teachings of the religion they hold for example beliefs to God, angels, hell heaven, qdha and qadar, and the laws of God regarding human behavior.

2. *The ritualistic dimension*

The ritualistic dimension is the level of obedience of a person in carrying out ritual obligations as it is instructed in his religion (religious practice) for example prayer, zakat, fasting, going to pilgrimage if able, reading / studying the Qur'an

3. Aspek eksperiensial / penghayatan (the experiential dimension)

The experiential dimension is a religious experience in the form of feelings or emotions, sensations, and perceptions experienced by individuals as a communication with the essence of God (religious feeling) such as the feeling of the greatness of God, the feeling of being close to God, the feeling of solemnity and peace when praying, and shaking when hearing the verses of the Holy Qur'an, and feeling his prayers were answered by God, feeling afraid to sin.

Aspek pengalaman / konsekuensial (the consequential dimension)

The consequential dimension is an aspect that measures the extent to which a person's behavior is motivated by the teachings of his religion in social life, namely how individuals relate to the world, especially with fellow humans (religious effect) in Islam known as hablum minannas.

4. Aspek keilmuan / intelektual (the intellectual dimension)

The intellectual dimension is related to the level of knowledge and understanding of a person towards the teachings of his religion (religious knowledge). In Islamic religion, this intellectual aspect contains the contents of the Qur'an and the basic principles of teachings that must be trusted and implemented – Islamic law and history of Islam.

Religious education is considered to have a very important role to instill religiosity in someone. Through education, the formation of attitudes and religiosity is also carried out. There are three phases of education that affect the formation of one's religiosity, namely family education, institutional education or

formal education, and education in the community. Harmony between the three fields of education will have a positive impact on the formation of religious life. (Rizki Setiawati, Nurhamidi, 2014). According to Robert H. Thouless in (Ahmad Isham Nadzir, Nawang Warsi Wulandari, 2013) there are four factors that influence religiosity, namely :

1. Social influences, educational/teaching influences and various social pressures, including parental education, and social-tradition environmental pressure agreed upon by the environment.
2. Various experiences that shape religious attitudes, especially experiences of beauty, harmony and goodness in other world (natural factors), moral conflicts, and emotional or affective experience factors
3. Needs, factors that arise entirely or partly from unmet needs, especially the need for security, love, self-esteem, and the threat of death
4. Various processes of verbal ownership (intellectual factors)

According to Dr. Singgih D. Gunarsa in (Rizki Setiawati, Nurhamidi, 2014) the factors that influence the development of one's psychology are the same as the factors that influence one's religious maturity, namely :

1. Internal factors, namely something that comes from that one such as physical condition and body structure, motor coordination, mental abilities (intelligence and special talents).
2. External factor is something that comes from a person's environment for example family, school and community environment.

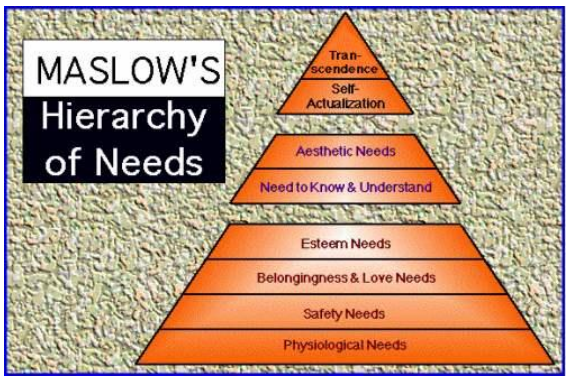

Figure 1. Maslow's Hierarchy of Needs

Maslow's hierarchy of needs has been revised in 1970 and 1971. In 1970, Maslow separated the behavioral tendencies that existed in self-actualization into

cognitive needs and aesthetic needs. In 1791, Maslow discovered that some people can actualize themselves through their own abilities and experience. Maslow called it as the ability to transcendence. But Maslow never included self transcendence in his hierarchy of needs. But Maslow's successors such as Henry Gleitman Alan Fridlund, and Daniel Reisberg put it as the highest hierarchy, the eighth hierarchy. According to the most recent version, the hierarchy of human needs consists of eight levels: physiological needs, security needs, social needs, appreciation needs, cognitive needs, aesthetic needs, self-actualization needs, and transcendence needs. (Elisa Sari, Rina Dwiarti, 2018).

According to (Boniwell, 2012) transcendence is divided into 2 namely: a). Appreciation of beauty and excellence (creating it and / or being inspired, elevated by it) and b). Spirituality, sense of purpose, faith, religiousness (having a calling in life, developing coherent beliefs about the higher meaning).

Religiosity is one of the hierarchy of needs in the eighth level, namely the level of transcendence needs. According to Ahyadi in (Dita, 2017), Religiosity is a condition that encourages a person to behave according to the degree of obedience to the religion he embraces. Religiosity involves all functions of the human body and soul, therefore religiosity can be interpreted as integration between belief in religion, a conative and motoric element. Affective and conative functions can be seen in the experience of God, religious sense, and longing for God. Cognitive aspects are seen in the faith and belief, while motor functions can be seen from the actions and behavior in daily life.

Religiosity is the crystals of religious values in humans that are formed through the process of internalizing religious values from an early age. Religiosity will be formed into a Crystal value at the end of the child's age and function in early adolescence. The value crystals that are formed will function as an inner direction of attitudes and behaviors in his life. (Rizki Setiawati, Nurhamidi, 2014).

Adolescents are individuals who are in a period of development transition between childhood and adulthood which includes biological, cognitive and socio-emotional changes (Santrock, 2007). In accordance with adolescence which has a range of ages 11-24 years, adolescence is a transition from childhood to adulthood. In addition to experiencing physical changes, there are also

psychological changes that are almost universal such as the heightening of emotions, interests, roles, patterns of behavior, values that are embraced, and are ambivalent to every change (Hurlock E. B., 1999).

Awareness in practicing religion cannot be separated from the level of human development itself. Religious awareness in childhood will be very different when the individual has become a teenager and an adult. Teenagers feel more attracted to religion and spiritual beliefs than children. Their increasing abstract thinking and the search for their identity lead them to religious and spiritual problems. Teenagers want to study religion based on intellectual understanding and do not want to take it for granted. Teenagers are often skeptical of various forms of religion, such as prayer and other religious ceremonies.

James Fowler offers his views on the development of religious concepts. *Individuating-reflexive faith* is the stage in which he believes that the development of adolescent moral values is closely related to the development of their religious values.

D. CONCLUSION

The term of religious (which means religion) is different from religiosity. Religion seems more formal and official while religiosity seems flexible because it sees aspects that are always related to human depth, namely the appreciation of aspect of religion itself. Religiosity is deeper than religion. Religiosity is more to see aspects that exist in the bottom of the heart, the conscience, and personal attitude which becomes a mystery to people, namely the image of taste that includes the ratio and feeling of humane into the human person.

Development in human occurs in two kinds, namely physical development and spiritual or psychological development. One's spiritual development is measured based on the level of ability. The achievement of a certain level of ability for spiritual development is called the term maturity, one of which is the maturity of religious activities, namely religiosity. This religiosity marks whether people in their daily lives are able to understand and practice their religious teachings or not.

Awareness in practicing religion is inseparable from the level of human development itself. Religious awareness in childhood will be very different when

the individual has become a teenager and an adult. Teenagers feel more attracted to religion and spiritual beliefs than children do.

Teenagers want to study religion based on intellectual understanding and do not want to take it for granted. Teenagers are often skeptical of various forms of religion, such as prayer and other religious ceremonies.

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Use of Magic Cards in Improving Students' Cursive Handwriting Skills at Second Grade Elementary School

Gita Akmalia Safitri, Effy Mulyasari, Arie Rakhmat Riyadi
Program Studi Pendidikan Guru Sekolah Dasar Departemen Pedagogik
Fakultas Ilmu Pendidikan
Universitas Pendidikan Indonesia
e-mail: gitaakmalia@student.upi.edu; effy@upi.edu; arie.riyadi@upi.edu

Abstract*: This purpose of this research to improve cursive handwriting skills through the application of magic card learning media in Indonesian subject. In this class students can write cursive handwriting, but when students must write in capital letters, almost all students do not write the letters J, L, and H correctly. Of all students, only 10% of students are able to write upright letters properly. Most students only write capital letters as in regular upright letters. The research method used is a classroom action research method that adapts the Kemmis and Tagart designs that take place in two cycles. The research subjects were 2nd grade elementary school students in the city of Bandung, with a total of 29 students. The instruments used in this study were evaluation sheets, observation sheets of teacher and student activities, field notes and documentation. Qualitative data about lesson plans and learning were analyzed by applying data reduction procedures. While quantitative data were analyzed using percentages. The results showed an increase from cycle I 34% to 90% in cycle II. It is suggested that magic card can improve cursive handwriting skills.*

Keywords*: magic card, cursive handwriting skills*

PENDAHULUAN

Pembelajaran Bahasa Indonesia di sekolah dasar meliputi keterampilan-keterampilan yang dibagi menjadi keterampilan menyimak, keterampilan membaca, keterampilan berbicara, dan keterampilan menulis. Peserta didik pada jenjang Sekolah Dasar (SD) umurnya berkisar antara 6 atau 7 tahun, sampai 12 atau 13 tahun. Pembelajaran Bahasa

Indonesia di sekolah dasar yaitu sudah memasuki tahap kompetensi penuh, tahap ini anak mampu membuat berita, kalimat tanya, dan sejumlah konstruksi lain. Pada tahap ini anak mulai aktif dan mencari pengalaman baru, maka penggunaan media yang inovatif serta menyenangkan untuk anak sangat diperlukan. Dalam tingkatan sekolah dasar perkembangan bahasa anak termasuk dalam kelas rendah yaitu kelas I, II, dan III.

Dapat dilihat dari hasil menulis tegak bersambung kelas II Sekolah Dasar yang terletak di salah satu kecamatan Sumur, kota Bandung, yang berjumlah 33 siswa, terdiri dari 16 siswa laki-laki dan 17 siswa perempuan. Dalam kelas ini, 90 % peserta didik sudah bisa menulis tegak bersambung. Tetapi saat siswa harus menulis dengan huruf kapital, hampir semua siswa tidak menulis huruf j, l, dan h besar dengan benar. Kebanyakan siswa hanya menulis huruf kapital seperti pada huruf tegak biasa.

Saat guru meminta siswa menulis ulang kalimat dengan memperhatikan huruf kapital dan tanda baca, masih banyak siswa yang bingung dan salah menulisnya. Untuk tanda baca, siswa bingung menentukan penempatan tanda tanya. Seperti pada kata "siapa" yang seharusnya diakhiri tanda tanya, masih ada siswa yang tidak memberikan tanda bacanya.

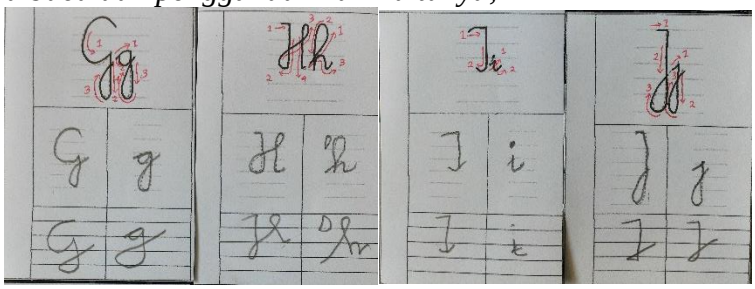
Dari uraian di atas, untuk meningkatkan kemampuan menulis tegak bersambung siswa kelas II Sekolah Dasar, banyak metode pembelajaran maupun media yang dapat

meningkatkan kemampuan menulis tegak bersambung antara lain yaitu metode drill, metode SAS, media flashcard, media gambar, dan lainnya. Maka peneliti akan melakukan Penelitian Tindakan Kelas (PTK) dengan menggunakan media magic card yang diberi judul: "Penerapan Media Pembelajaran Magic Card untuk Meningkatkan Keterampilan Menulis Tegak Bersambung Kelas II Sekolah Dasar".

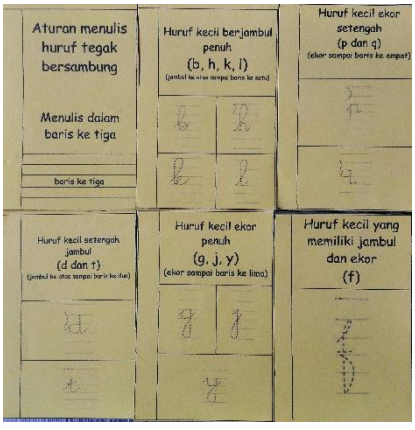
Media pembelajaran magic card membuat pengajaran lebih menarik perhatian siswa sehingga dapat menumbuhkan motivasi belajar, metode pembelajaran akan lebih bervariasi, siswa lebih mudah paham, siswa tidak bosan dan guru tidak kehabisan tenaga, siswa lebih banyak melakukan kegiatan belajar, seperti mengamati, melakukan dan mendemonstrasikan.

Dalam penelitian ini pembuatan media magic card dibuat sendiri oleh peneliti dengan langkah-langkah sebagai berikut:

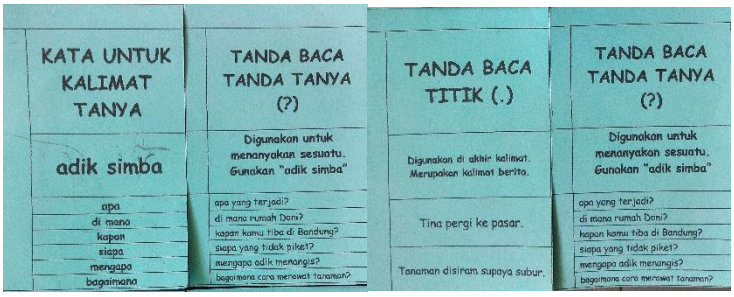
1) *Menyiapkan kertas karton berwarna putih (untuk anak menjiplak), kertas karton berwarna kuning, dan kertas karton berwarna biru muda. Pada kertas putih ini berisi huruf besar dan huruf kecil dari huruf a-z huruf tegak bersambung. Pada kertas ini anak akan menjiplak huruf tegak bersambung yang semula diberi arahan (titik-titik) sampai menulis sendiri dalam baris yang sudah disediakan. Pada kertas berwarna kuning berisi aturan menulis huruf tegak bersambung. Pada kertas berwarna biru muda berisi penggunaan tanda baca dan penggunaan kalima tanya;*



Gambar 2.1 Kertas putih pada media magic card



Gambar 2.2 Kertas kuning pada media magic card



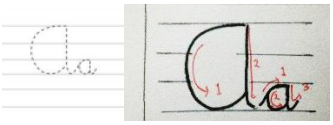
Gambar 2.3 Kertas biru muda pada media magic card

2) *Media pada kertas putih yang berisi arahan menulis tegak bersambung di-crop satu per satu dari huruf a-z.*

Gambar 2.4 Menulis tegak bersambung dengan bantuan garis putus-putus

Sumber: Sumber: http://buatbelajaranak.blogspot.com/

3) *Media di print pada kertas karton ukuran A4 untuk masing-masing warna;*
4) *Media di gunting sesuai ukurannya;*
5) *Tebalkan huruf dan beri panah arahan cara menulis huruf tegak bersambung;*



Gambar 2.5 Cara menulis huruf tegak bersambung

6) *Media siap digunakan.*

Berdasarkan permasalahan di atas, tujuan penelitian ini di antaranya mendeskripsikan rencana pelaksanaan pembelajaran menggunakan media pembelajaran Magic Card, mendeskripsikan pelaksanaan pembelajaran dengan menggunakan media pembelajaran Magic Card, dan mendeskripsikan peningkatan penerapan media pembelajaran magic card untuk meningkatkan keterampilan menulis tegak bersambung kelas II Sekolah Dasar.

METODE

Peneliti menggunakan metode penetilian tindakan kelas atau yang biasa disingkat menjadi PTK, dalam bahasa Inggris PTK disebut Classroom Action research. Dalam Kunandar (2011, hlm. 45), Penelitian Tindakan Kelas (PTK) diartikan sebagai suatu penelitian tindakan (action research) yang dilakukan oleh guru yang sekaligus sebagai peneliti di kelasnya atau bersama-sama dengan orang lain (kolaborasi) dengan jalan merancang, melaksanakan, dan merefleksikan tindakan secara kolaboratif dan partisipatif yang bertujuan untuk memperbaiki atau meningkatkan mutu (kualitas) proses pembelajaran di kelasnya melalui tindakan (treatment) tertentu di dalam suatu siklus.

Model Penelitian Tindakan Kelas (PTK) menurut Kunandar (2011, hlm. 45), pada umumnya menggunakan model Kemmis dan McTaggart. Model ini pada hakekatnya terdiri dari empat komponen, yakni perencanaan, tindakan, observasi, dan refleksi. Dalam implementasinya, model Kemmis dan McTaggart menggabungkan antara tindakan dan observasi. Hal ini dilakukan karena pada pelaksanaannya komponen tindakan penelitian tidak terpisahkan dengan komponen observasi. Komponen-komponen penelitian pada

model Kemmis dan McTaggart merupakan satu siklus tindakan yang dilaksanakan dalam satu kali pembelajaran. Subjek dalam ini yaitu siswa kelas 2 (dua) SD di kota Bandung dengan jumlah 29 orang. Terdiri dari 13 siswa laki-laki dan 16 siswa perempuan. Waktu Penelitian dimulai pada awal April sampai akhir April 2019. Tempat penelitian dilaksanakan di salah satu SD yang terletak di kecamatan Sumur kota Bandung. Instrumen yang digunakan dalam penelitian ini berupa soal, berisi latihan menulis siswa menggunakan huruf tegak bersambung dengan media magic card sebagai pegangan siswa. Lembar observasi berisi langkah kegiatan pembelajaran saat peneliti melakukan siklus. Catatan lapangan berisi tentang catatan selama kegiatan siklus berlangsung untuk refleksi peneliti. Dokumentasi berisi pengabadian kegiatan peneliti selama siklus. Adapun aspek penilaian menulis tegak bersambung pada penelitian ini disesuaikan dengan kompetensi siswa di antaranya komponen huruf, kejelasan, kerapihan, jarak penulisan, kualitas barisan, kesejajaran, penggunaan huruf kapital, penggunaan tanda baca dengan skor maksimal masing-masing 3.

HASIL DAN PEMBAHASAN

Berdasarkan hasil observasi di kelas II mengenai keterampilan menulis tegak bersambung masih rendah, terlihat siswa masih belum bisa menempatkan tanda baca titik dan tanda tanya pada tempatnya. Penggunaan huruf kapital masih ditulis pada awal kalimat, sedangkan untuk nama orang dan nama tempat masih menggunakan huruf kecil. Maka dari itu peneliti melakukan penelitian dengan penerapan magic card yang berisi aturan menulis tegak bersambung, aturan penggunaan huruf kapital, dan aturan penggunaan tanda baca.

Menurut Ang (2011 hlm. 34) Magic adalah sesuatu yang dapat ditulis dan dihapus. Media magic card adalah sebuah kartu yang berisi huruf-huruf abjad tegak bersambung yang bertujuan untuk melatih siswa agar dapat menulis tegak bersambung dengan mudah dan sesuai dengan aturan yang ditentukan.

Langkah-langkah penggunaan magic card dalam penenlitian ini adalah: 1) Guru membagikan media magic card kepada siswa; 2) Guru menjelaskan cara pemakaian media magic card; 3) Guru membimbing siswa menggunakan media magic card. Siswa menjiplak dan menulis menggunakan magic card pada lembar yang disediakan, yang berisi tentang penulisan huruf besar, huruf kecil, aturan menulis huruf tegak bersambung, penggunaan kata dalam kalimat tanya, dan penggunaan tanda baca. Guru bertindak sebagai pembimbing, fasilitator, dan pengamat siswa dalam mengerjakan tugas pada media magic card.

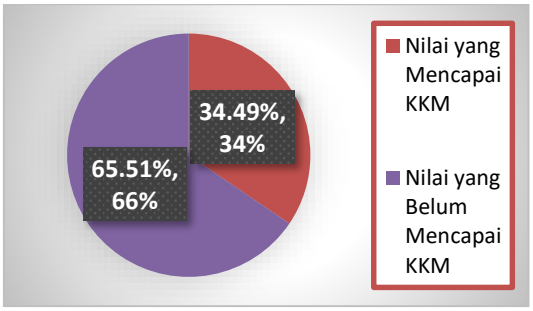
Penelitian ini dilakukan sebanyak II siklus. Pada setiap siklus peneliti membuat rencana pelaksanaan pembelajaran dengan menerapkan media magic card. Pembelajaran siklus I dilaksanakan pada hari Selasa tanggal 9 April 2019, dari pukul 07.00-10.00 dengan materi pembelajaran tematik kelas II tema 6 (merawat hewan dan tumbuhan) sub tema 4 (merawat tumbuhan) pembelajaran 2 mengenai cara merawat tanaman yang di dalamnya termuat 2 mata pelajaran yaitu PPKn dan bahasa Indonesia, yang lebih fokus kepada pembelajaran bahasa Indonesia mengenai menulis tegak bersambung. Ditemukan kelemahan-kelemahan pada pembelajaran siklus I di antaranya sebagai berikut:

Tabel 4.1 Temuan Pada Siklus I

No.	***Temuan***	***Penyebab***
1	*Tahap membagikan media magic card kepada siswa. Temuan, siswa kelompok lain mengobrol saat guru belum membagikan.*	*Pada tahap ini guru membagi siswa ke dalam 5 kelompok untuk dibagikan media magic card pada setiap kelompoknya. Hal tersebut dikarenakan guru belum bisa memusatkan perhatian siswa.*
2	*Tahap menjelaskan cara pemakaian media magic card. Temuan, siswa masih mengobrol bersama teman kelompok lain dan hanya beberapa siswa yang menyimak penjelasan guru.*	*Hal ini di karenakan adanya pengelompok kan siswa, sehingga kelompok yang sedang dijelaskan penggunaan media oleh guru teralihkan perhatiannya terhadap kelompok yang sudah dijelaskan di setiap kelompoknya.*
3	*Tahap siswa menjiplak dan menulis menggunaka n magic card pada lembar yang disediakan.*	*Hal ini diduga karena siswa yang tidak latihan mandiri menulis tegak*

	Temuan, masih ada siswa yang menulis huruf kapital dengan salah, siswa juga masih belum benar dalam penulian huruf kecil tegak berambung yang mempunyai jambul maupun ekor.	*bersambung. Siswa menulis tegak bersambung hanya pada saat pembelajaran di sekolah sehingga siswa masih belum terbiasa dengan penulisan huruf tegak bersambung.*

Hasil keterampilan menulis tegak bersambung siswa pada siklus I dapat dilihat pada grafik 4.1 berikut ini:



Grafik 4.1 Rekapitulasi Hasil Menulis Tegak Bersambung Pada Siklus I

Dari data yang tersaji pada grafik 4.1 di atas dapat dilihat terdapat 10 siswa (34,49%) yang melampaui Kriteria Ketuntasan Minimal (KKM) yaitu 72, sementara 19 siswa (65,51%) lainnya mendapat nilai di bawah Kriteria Ketuntasan Minimal (KKM) yaitu 72. Hal tersebut menjelaskan bahwa secara klasikal kelas tersebut belum tuntas dalam keterampilan menulis tegak bersambung.

Sebagaimana dalam penelitian (Agnesta, Riyadi, dan Heryanto 2018) menurut Depdiknas bahwa suatu kelas dikatakan tuntas belajaranya (ketuntasan klasikal) jika dalam kelas tersebut terdapat ≥85% siswa yang telah tuntas belajarnya. Adapun rata-rata keterampilan menulis tegak bersambung dengan menerapkan magic card dalam pembelajaran bahasa Indonesia siklus I adalah 65.

Berdasarkan ketuntasan klasikal di atas belum mencapai 85% maka dilaksanakan siklus II. Pada siklus II mengalami peningkatan karena pembelajaran diperbaiki dari refleksi siklus I.

Perbaikan pada siklus I yaitu saat pelaksanaan di siklus I anggota kelompok siswa yang terbilang banyak mengakibatkan penggunaan media magic card yang kurang efisien. Karakter anak kelas II yang masih suka bermain mengakibatkan pembelajaran kurang

kondsif. Maka dari itu guru harus lebih mempersiapkan media magic card dan mengurangi anggota kelompok. Pembagian media magic card pada siklus II diperbanyak menjadi 26 buah, setiap dua orang siswa (satu bangku) mendapat satu media magic card.

Perbaikan selanjutnya penjelasan guru mengenai penggunaan magic card. Guru menjelaskan dan memberi contoh penggunaan media magic card dari kertas putih, kuning, dan kertas biru. Guru memberi contoh penggunaan magic card bagian kertas putih agar siswa lebih paham penempatan menulis huruf tegak bersambung.

Tabel 4.2 Peningkatan Persentase Indikator dari Siklus I ke Siklus II

No.	***Indikator Penilaian***	***Siklus I***	***Siklus II***
1	*Komponen Huruf*	*91,95 %*	*97,70 %*
2	*Kejelasan*	*62,06%*	*93,10 %*
3	*Jarak Penulisan*	*62,06%*	*94,25 %*
4	*Kelengkapan Huruf*	*60,91%*	*86,20 %*
5	*Kesejajaran*	*65,51%*	*89,65 %*
6	*Kualitas Barisan*	*52,87%*	*73,56 %*
7	*Penggunaan Huruf Kapital*	*59,77%*	*87,35 %*
8	*Penggunaan Tanda Baca*	*60,91%*	*90,80 %*

Pada indikator pertama komponen huruf dari siklus I ke siklus II mengalami peningkatan dari siklus I mencapai 91,95% dan siklus II mencapai 97,70%. Maka pada indikator pertama mengalami kenaikan sebesar 5,75%. Kenaikan indikator ini bisa dibilang kecil di karenakan rangkaian huruf siswa pada siswa kelas II sudah saling menyambung satu sama lain. Seperti yang dipaparkan pada penelitian (Samsiyah, 2018) bahwa alasan siswa diberi pelajaran menulis huruf bersambung adalah (1) Tulisan sambung memudahkan siswa untuk mengenal kata – kata sebagai satu kesatuan, (2) Menulis tegak bersambung tidak memungkinkan menulis terbalik, (3) Menulis tegak bersambung lebih cepat karena tidak ada gerakan berhenti tiap huruf (Abdurahman, 1999).

Kejelasan, pada siklus I mencapai 61,06% dan siklus II mencapai 93,10%. Maka pada indikator kedua mengalami kenaikan sebesar 31,04%%. Indikator ini dipengaruhi oleh penulisan siswa yang sudah rapi dalam pembelajaran sehari-hari. Berdasarkan penelitian yang dilakukan (Samsiyah, 2018) menulis huruf tegak bersambung atau menulis halus memiliki banyak manfaat bagi anak-anak. Ketika anak menulis dengan tangan, sensori motorik halus, sentuhan, dan visual anak akan aktif secara bersamaan. Proses penggoresan dan garis miring yang tipis pada huruf tegak bersambung melatih anak tentang ketegasan, kelembutan, dan ketekunan. Dengan dilakukannya menulis tegak bersambung, melatih sensori motorik anak secara bersamaan sehingga tulisan menjadi jelas.

Indikator selanjutnya Jarak Penulisan, mengalami peningkatan dari siklus I mencapai 62,06% dan siklus II mencapai 94,25%. Maka pada indikator ketiga mengalami kenaikan sebesar 32,19%. Indikator mengalami peningkatan karena pembelajaran menulis tegak bersambung siswa dilakukan rutin pada buku khusus, siswa belajar mengatur jarak antar kata dalam kalimat. Berdasarkan penelitian (Setiyaningsih, 2013), Kurniawan mengemukakan bahwa terdapat tahap-tahap dalam pembelajaran menulis tegak bersambung, yaitu di antaranya: (a) Siswa belajar merangkai bentuk huruf tegak bersambung; (b) Siswa belajar menulis tegak bersambung dengan cara menjiplak huruf demi huruf; (c) Siswa belajar menulis tegak bersambung dengan menggunakan buku halus.

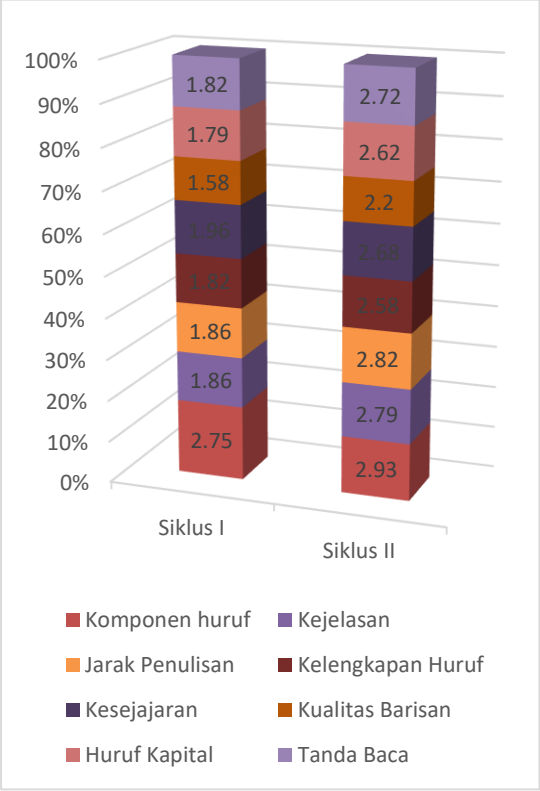
Indikator selanjutnya Kelengkapan Huruf, mengalami peningkatan dari siklus I mencapai 60,91%% dan siklus II mencapai 86,20% Maka pada indikator keempat mengalami kenaikan sebesar 25,29%. Indikator ini dipengaruhi oleh media magic card, karena magic card menurut (Ang, 2011, hlm. 34) adalah sebuah kartu yang berisi huruf-huruf tegak bersambung yang bertujuan untuk melatih siswa agar dapat menulis tegak bersambung dengan mudah dan sesuai dengan aturan yang ditentukan. Pada indikator ini, siswa terbiasa berlatih huruf tegak bersambung pada media magic card. Dalam penelitian (Novita, 2013), kelebihan penggunaan media Magic Card sebagai berikut: (a) Pengajaran lebih menarik perhatian siswa sehingga dapat menumbuhkan motivasi belajar. (b) Metode pembelajaran akan lebih bervariasi. (c) Siswa lebih mudah paham. (d) Siswa tidak bosan dan guru tidak kehabisan tenaga. (e) Siswa lebih banyak melakukan kegiatan belajar, seperti mengamati, melakukan dan mendemonstrasikan.

Indikator selanjutnya yaitu Kesejajaran, mengalami peningkatan dari siklus I mencapai 65,51% dan siklus II mencapai 89,65%. Maka pada indikator kelima mengalami kenaikan sebesar 24,14%. Indikator ini dipengaruhi oleh latihan yang dilakukan rutin pada buku khusus, menurut Kurniawan (Setiyaningsih, 2013, hlm. 22) mengemukakan bahwa terdapat tahap-tahap dalam pembelajaran menulis tegak bersambung, yaitu: (c) Siswa belajar menulis tegak bersambung dengan menggunakan buku halus. Pada kegiatan ini siswa dibiasakan menulis sejajar. Media magic card sebagai alat ukur siswa terhadap indikator kesejajaran. Menurut (Sadiman, 2009, hlm. 31) mengemukakan bahwa pemilihan gambar yang tepat dengan syarat yang sesuai dengan pembelajaran dan pilihlah sederhana. Komposisi gambar hendaknya cukup jelas menunjukkan poin-poin pokok dalam gambar. Maka media magic card sesuai dengan pemaparan Sudiman, gambar tepat yang sederhana sesuai dengan pembelajaran agar siswa bisa mencapai indikator kesejajaran.

Indikator selanjutnya Kualitas Barisan, mengalami peningkatan dari siklus I mencapai 52,87% dan siklus II mencapai 73,56%. Maka pada indikator keenam mengalami kenaikan sebesar 20,69%. Dalam penelitian (Samsiyah, 2018) mengatakan bahwa: (1) memulai menulis dari huruf kecil dengan mengenalkan bentuk baris-baris terlebih dahulu pada siswa dimulai dari tepi bawah baris ke-3, (2) sebelum menulis siswa atau anak harus diperkenalkan huruf mana yang tinggi, menggantung dan memiliki ekor, (3) mengulangi terus menerus sampai hafal dan rapi. Indikator ini dipengaruhi oleh media magic card yang berisi aturan penulisan huruf tegak bersambung dengan memperhatikan baris yang tersedia, di mana pada kertas berwarna kuning tertera aturan menulis tegak bersambung, seperti baris dalam menulis tegak bersambung, baris untuk jambul dan ekor.

Indikator ketujuh penggunaan huruf kapital, mengalami peningkatan dari siklus I mencapai 59,77% dan siklus II mencapai 87,35%. Maka pada indikator ketujuh mengalami kenaikan sebesar 27,58%. Indikator ini dipengaruhi oleh media magic card, di mana pada kertas berwarna biru tertera aturan penggunaan huruf kapital yang digunakan untuk nama orang, nama tempat, nama hari, dsb.

Indikator kedelapan penggunaan tanda baca, mengalami peningkatan dari siklus I mecapai 60,91% dan siklus II mencapai 90,80%. Maka pada indikator kedelapan mengalami kenaikan sebesar 29,89%. Maka dari indikator kedelapan mengalami peningkatan dari siklus I ke siklus II karena penerapan media magic card, di mana pada kertas berwarna biru tertera aturan penggunaan tanda baca, yaitu tanda baca titik dan tanda tanya.



Grafik 4.2 Perkembangan Indikator Menulis Tegak Bersambung

Berdasarkan data hasil keterampilan menulis tegak bersambung siswa pada semua indikator mengalami peningkatan dari siklus I ke siklus II. Penelitian dapat dikatakan berhasil karena terjadi peningkatan dari siklus I ke siklus II meskipun tidak semua mencapai 100%.

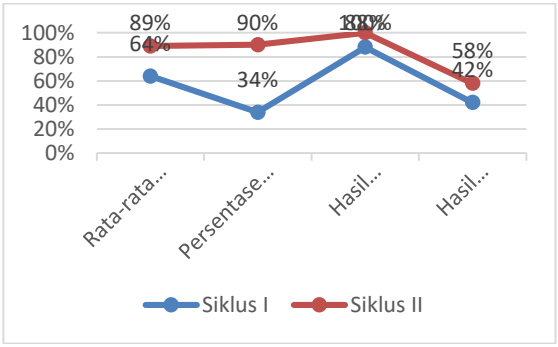
Berikut adalah tabel peningkatan hasil keterampilan menulis tegak bersambung siswa dapat dilihat dari tabel 4.2 berikut ini.

Aspek	***Siklus I***	***Siklus II***
Rata-rata nilai siswa menulis	*64%*	*89%*
Persentase Ketuntasan sesuai KKM	*34%*	*90%*
Hasil keterampilan Tertinggi	*88*	*100*

Hasil keterampilan Terendah	*42*	*58*

Tabel 4.3 Peningkatan Hasil Keterampilan Menulis Tegak Bersambung

Dapat dilihat dari tabel di atas, adanya peningkatan hasil keterampilan menulis tegak bersambung siswa dalam pembelajaran bahasa Indonesia. Hasil rata-rata nilai keterampilan menulis siswa naik dari 64% mencapai 89%. Kemudian persentase ketuntasan menurut KKM naik 56% hasil keterampilan terendah menulis tegak bersambung mengalami perbaikan sebesar 16. Hasil tersebut dituangkan ke dalam grafik 4.2 berikut ini.



Grafik 4.3 Peningkatan Hasil Menulis Tegak Bersambung

Berdasarkan data di atas setelah melalui proses pembelajaran pada siklus I dan siklus II keterampilan menulis tegak bersambung siswa meningkat. Dapat dilihat pada setiap indikator mengalami peningkatan. Indikator komponen huruf mengalami kenaikan dari 91,95% mencapai 97,70%, indikator kejelasan mengalami peningkatan dari 61,06% mencapai 93,10%, indikator jarak penulisan mengalami peningkatan dari 62,06% mencapai 94,25%, indikator kelengkapan huruf mengalami peningkatan dari 60,91%% mencapai 86,20%, indikator kesejajaran mengalami peningkatan dari 65,51% mencapai 89,65%, indikator kualitas barisan mengalami peningkatan dari 52,87% mencapai 73,56%, indikator penggunaan huruf kapital mengalami peningkatan dari 59,77% mencapai 87,35%, dan indikator kedelapan penggunaan tanda baca mengalami peningkatan dari 60,91% mencapai 90,80%. Hal tersebut karena hasil refleksi yang sudah peneliti lakukan pada siklus II. Pada ketuntasan di siklus II sudah mencapai 90%, sebagaimana yang dijelaskan menurut Depdiknas dalam penelitian (Agnesta et al., 2018) bahwa suatu kelas dikatakan tuntas belajar (ketuntasan klasikal) jika dalam kelas tersebut ≥85% siswa yang telah tuntas belajarnya. Maka, berdasarkan hal tersebut peneliti menyimpulkan bahwa penelitian sudah dapat dihentikan.

SIMPULAN

Penelitian ini dilaksanakan dengan menerapkan media pembelajaran magic card pada pembelajaran tematik, khususnya mata pelajaran bahasa Indonesia kelas II di salah satu SDN yang berada di kota Bandung. Berdasarkan prosesnya, terdapat kekurangan pada pelaksanaan siklus I, dengan dilaksanakannya perbaikan berdasarkan refleksi pada siklus I maka pembelajaran pada siklus II mengalami peningkatan. Hal ini terbukti pada siklus I persentase rata-rata menulis tegak bersambung siswa kelas II yaitu 64,51 dan penelitian

siklus II mengalami peningkatan dengan rata-rata nilai sebesar 89,07. Setiap indikator pada keterampilan menulis tegak bersambung dengan menerapkan magic card ini mengalami peningkatan.

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APPLICATION OF COOPERATIVE LEARNING OF THINK PAIR SHARE (TPS) TO IMROVE STUDENTS CRITICAL THINKING SKILLS AS LEARNING SOCIETY

Dimas Isman Purnama, Ruswandi Hermawan, Effy Mulyasari
Universitas Pendidikan Indonesia
dimasisman29@student.upi.edu

Abstract*: The research aims to improve students' critical thinking skills by using Think Pair Share (TPS) learning models to improve critical thinking skills of fifth grade students of SDN A in Bandung. The background of this study is that the students critical thinking skills were low, with the condition of teachers who only use conventional methods or lectures in the learning process that causes students to be passive in the learning process. The method used by researchers is Classroom Action Research (CAR) adapted from the Kemmis and Mc.Taggart model. Subjects consisted of 14 male students and 14 female students. This research was conducted in two cycles using qualitative and quantitative methods with data collection instruments, descriptions, observations, and documentation. The steps of Think Pair Share (TPS) learning model, namely: thinking, pairing, sharing. In the first cycle, overall students obtained results in a fairly good category with completeness reaching 64.3%. Then in the second cycle, the results obtained as a whole improved even better with completeness reaching 85.7%. Based on these results it can be concluded that the application of Think Pair Share (TPS) learning models in grade V elementary school is proven to improve students' critical thinking skills by referring to critical thinking indicators according to Ennis namely: observing, giving arguments, formulating questions, gathering information and attracting conclusion. Thus this model can be used as an alternative in learning that can be used by teachers to improve students' critical thinking skills.*

Keywords*: cooperative learning, think pair share, critical thinking*

A. PENDAHULUAN

Salah satu keterampilan yang harus dikembang dalam rangka mengikuti perkembangan jaman adalah keterampilan abad 21. Salah satu keterampilan abad 21 adalah kemampuan berpikir tingkat tinggi (*high order thinking/HOTS*). Hal tersebut
sejalan dengan tujuan pendidikan nasional di Indonesia yaitu untuk mewujudkan cita-cita bangsa, yang mana menciptakan kesejahteraan, kebahagiaan, dan mampu sejajar dengan bangsa lain, dengan pembentukan masyarakat yang berkualitas, yaitu masyarakat yang mandiri, memiliki kemauan dan berkemampuan untuk mewujudkan cita-cita bangsa Indonesia (BSNP, 2010).

HOTS salah satu keterampilan yang wajib dikuasai sejak dini. HOTS yang wajib dikuasai oleh seorang peserta didik di abad 21 ini yaitu kemampuan berpikir kritis (NEA, 2011; Partnership for 21st Century Skills, 2011). Kemampuan berpikir kritis merupakan salah satu kegiatan berpikir tentang suatu hal yang di hadapi secara mendalam. Onion (2009, hlm. 2) menyatakan kemampuan berpikir kritis merupakan.

> "*.... is a way of thinking, and a set of skills, that encourages an informed, aware, systemic, considered and logical approach to deciding what to believe or do. Critical thinking leads to arguments and conclusions that are valid, substantiated and resistant to criticism*".

Pada kenyataannya proses pembelajaran dilapangan belum mengoptimalkan proses pembelajaran yang mampu meningkatkan kemampuan berpikir kritis. Di kelas guru terlalu

menekankan pada keterampilan prosedural, sehingga ketika peserta didik dihadapkan pada persoalan yang memiliki sifat non rutin, sedikit sekali peserta didik yang mampu memecahkan. Thomson (2011) berpendapat pembelajaran yang menekankan hafala, pengulangan, dan strategi pembelajaran yang memiliki memori jangka pendek tidak begitu efektif untuk kebermaknaan peserta didik.

Sejalan dengan hal tersebut kenyataan di lapangan (Kusyamto, 2014; Sopandi, Aditama & Handayani, 2019) pembelajaran yang dilakukan oleh pendidik masih berorientasi pada hasil belajar dan mengesampingkan pengembangan keterampilan, serta pembelajaran masih berpusat pada guru (*teacher center*).

Rendahnya kemmapuan berpikir kritis oeserta didik di Indonesia dapat kita lihat berdasarkan beberapa survey PISA (*Programme for International Student Assessment*) 2003 peserta didik asal Indonesia menduduki ranking 38 dari 40 negara tahun 2006 menduduki ranking 50 dari 57 negara tahun 2009 menduduki ranking 61 dari 65 negara, tahun 2012 menduduki ranking 64 dari 65 negara dan pada tahun 2015 menduduki ranking 62 dari 70 negara (OECD: 2017).

Selain PISA lembaga survey lain yaitu *Mathematics and Science Study* menyatakan bahwa pada tahun 1999 Indonesia menduduki ranking 32 dari 38 negara, tahun 2003 Indonesia menduduki ranking 37 dari 46 negara, tahun 2007 Indonesia menduduki ranking 49 dari 55 negara, tahun 2011 Indonesia menduduki ranking 40 dari 42 negara, dan tahun 2015 Indonesia menduduki ranking 45 dari 48 negara.

Dilihat dari hasil di atas bahwasanya rata-rata prestasi peserta didik Indonesia begitu signifikan di bawah rata-rata peserta didik secara internasional. permasalahan kemampuan berpikir kritis peserta didik juga terjadi pada kegiatan pembelajaran di SDN A dari hasil observasi yang dilakukan dapat dilihat dari 28 peserta didik hanya 14,2% atau hanya 4 siswa yang terlihat memiliki pemikiran kritis dan 85,8% atau 24 siswa yang masih di katakan kurang memenuhi indikator berpikir kritis.

Oleh karena itu dalam meningkatkan kemampuan berpiir kritis peserta didik diperlukan proses pembelajaran yang mampu merangsang HOTS peserta didik dengan maksimal salah satunya dengan menggunakan model pembelajaran inovatif.

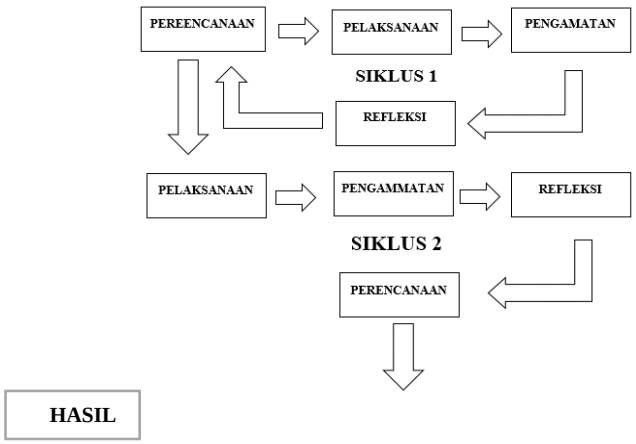
Salah satu model pembelajaran inovatif tersebut adalah model *Cooperative Learning* tipe *Think Pair Share* (TPS). Melaui kegiatan pembelajaran *Cooprative Learning* tipe TPS, peserta didik lebih terlibat aktif dalam proses pembelajaran, tidak hanya peserta didik yang pandai yang domain, dikarena metode TPS pada tahap *Think* peserta didik diminta berpikir individu, pada tahap *Pair* peserta didik saling berdiskusi dengan pasangan nya yang pada akhirnya tahap *Share* hasil diskusi di paparkan di depan kelas. Frank Lyman dari University of Maryland (Huda, 2011, hlm. 132).

Berdasarkan latar belakang diatas penulis tertarik melakukan penelitian dengan judul **"Penerapan Pembelajaran Kooperatif tipe *Think Pair Share (*TPS) untuk Meningkatkan Kemampuan Berpikir Kritis Siswa Kelas V Sekolah Dasar".**

METODE

Metode yang digunakan dalam penelitian ini adalah penelitian tindakan kelas (PTK). PTK merupakan kegiatan belajar berupa sebuah tindakan, yang sengaja dimunculkan dan terjadi dalam sebuah kelas secara bersama. Tindakan tersebut diberikan oleh guru atau dengan arahan dari guru yang dilakukan peserta didik.

PTK ini menggunakan rancangan penelitian model spiral: Kemmis & Mc Taggart (1998) yaitu model siklus yang dilakukan secara berulang-ulang dan berkelanjutan. Untuk lebih jelasnya berikut ini dikemukakan bentuk desainnya.



Gambar 1 Siklus PTK

Dari bagan di atas, rancangan Model Desain Kemmis & Taggart ini berupa komponen-komponen dengan satu rangkaian terdiri dari empat komponen, yaitu *plan* (perencanaan), *action* (tindakan), *observe* (pengamatan), dan *reflective* (refleksi). Untuk pelaksanaan, sesungguhnya jumlah siklus sangat tergantung pada permasalahan yang dihadapi dan perlu dipecahkan.

Penelitian dilakukan di kelas V SDN A di Kota Bandung Jawa Barat. Penelitian ini akan dilaksanakan pada semester genap, Tahun Ajaran 2018/2019 yang akan dilaksanakan selama bulan Maret sampai Mei 2019. Subjek penelitian ini adalah peserta didik kelas V Sekolah Dasar. Jumlah peserta didik sebanyak 28 orang, terdiri dari 14 perempuan dan 14 laki-laki.

Instrumen penelitian yang digunakan pada penelitian ini terdiri dari Tes (Soal tes kemampuan berpikir kritis) dan Non Tes (Observasi dan studi dokumentasi). Selanjutnya intrumen penelitian tersebut di terapkan pada proses pembelajaran selanjutnya hasilnya dilakukan pengolahan data, dengan melakukan analisis hasil yang diperoleh hasilnya digunakan untuk merefleksi kekurangan dan hambatan yang terjadi dalam proses pembelajaran yang menyebabkan apakah berpikir kritis siswa sudah mengalami peningkatan atau belum. Setelah mengetahui kekurangan yang terjadi dalam proses yang telah berlangsung akan ditindak lanjuti pada kegiatan berikutnya serta menjadi bahan untuk menyusun hasil penelitian. Selanjutnya dilakukan analisis data melalui beberapa tahapan dianataranya tahap penyeleksian data dan memberikan skor sesuai dengan sistem penskoran yang digunakan pada semua nstrumen penelitian.

HASIL DAN PEMBAHASAN

A. Hasil

1. **Laporan Pelaksanaan Siklus 1**

a. Tahap Perencanaan

Rancangan kegiatan siklus I.

1) Peneliti menggunakan model pembelajaran kooperatif tipe *think pair share (TPS)* dalam pembelajaran untuk meningkatkan kemampuan berpikir kritis peserta didik .
2) Penyusunan RPP dibuat berdasarkan pada KI dan KD pada buku tematik tema 8 lingkungan sahabat kita sub tema 2 usaha pelestarian lingkungan. Pembelajaran tersebut akan dipelajari dengan model TPS
3) Penyusunan lembar observasi kemampuan berpikir kritis peserta didik saat pembelajaran menggunakan TPS.
4) Mempersiapkan soal tes individu peserta didik.

b. Tahap Pelaksanaan Tindakan

Siklus I dimulai pada hari Selasa, 30 April 2019 pada pukul 07.00-10.40 WIB. Dengan materi tema 8 subtema 2 yaitu tentang memahami pebuah peristiwa pada teks bacaan dan air untuk kebutuhan sehari hari.

1) Kegiatan awal

Pembelajaran di buka dengan mengucapkan salam, dilanjutkan dengan pengkondisian peserta didik, berdoa, menyayikan lagu wajib indonesia raya dan pengecekan absensi peserta didik.

2) Kegiatan Inti

Guru membagika LKS kepada peserta didik dan menjelaskan mengenai tatacara dalam mengerjakan LKS tersebut. Peserta didik difokuskan pada tahap *think* yaitu peserta didik fokus mengerjkan soal yang terdapat pada LKS secara mandiri.

Setelah peserta didik selesai masuk ketahap *pair,* peserta didik diminta berpasangan dan berdiskusi untuk menyelesaikan permasalahan pada LKS. Pada tahap ini kelas menjadi kurang kondusif dikarenakan kelompok yang ada cukup banyak sehingga guru kewalahan menanganai peserta didik yang bertanya.

Selanjutnya masuk pada tahap *share* yaitu memaparkan atau mempersentasikan hasil dari pemecahan masalah yang mereka temukan. Pada tahap ini guru bertindak sebagai moderator dan fasilitator jalannya diskusi kelas agar diskusi lebih hidup dan peserta didik lebih aktif.

c. Hasil Tindakan

1) Hasil Tes Kemapuan Berpikir Kritis Peserta Didik

Berdasarkan data yang diperoleh, hasil tes dapat dilihat pada tabel berikut:

Tabel 1. Hasil Tes
Peserta didik Siklus I

Nilai Tes	F	%
< 75	10	35,7%
≥ 75	18	64,3%
Jumlah	**28**	**100%**

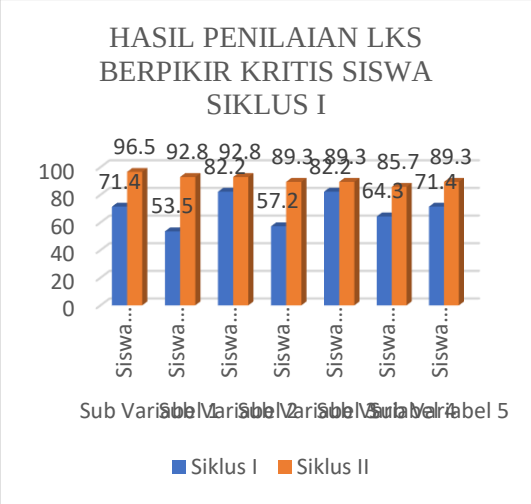
Tabel 1 mengenai hasil tes peserta didik menunjukkan bahwa nilai peserta didik pada siklus I masih belum optimal dan kurang dari kriteria keberhasilan yang ditentukan akan tetapai mengalami peningkatan dibandingkan sebelum prasiklus. Jika dilihat berdasarkan nilai KKM kelas V, terdapat 18 peserta didik atau sekitar 64,3% dari total jumlah peserta didik kelas V yang mampu mencapai nilai diatas 75 dan 10 peserta didik lainnya atau sekitar 35,7% mendapatkan nilai di bawah nilai KKM.

Dari hasil LKS yang peserta didik kerjakan sebagian besar hasil nya mendapatkan nilai atau hasil yang cukup baik dilihat dari peserta didik mampu menjawab semua soal yang diberikan dengan baik dan tepat. Akan tetapi masih ada bebebrapa peserta didik yang masih kesulitan dalam menjawab pertanyaan-pertanyaan yang terdapat pada LKS hal itu dapat di lihat dari beberapa soal yang kurang maksimal bahkan tidak mampu di jawab oleh peserta didik .

Dilihat dari hasil tersebut bahwasanya peningkatan berpikir kritis peserta didik kelas V mengalami peningkatan yang cukup signifikan dilihat dari prasiklus yang hanya 4 peserta didik atau 14,2% dari 28 peserta didik yang temasuk ke dalam indikator berpikir kritis meningkat menjadi 18 peserta didik atau 64,2% dari 28 peserta didik . Pelaksanaan pembelajaran pun mulai mengalami peningkatan, dikarenakan peserta didik mulai mampu berpendapat dan saling bertukar pikiran dalam proses pembelajaran nya. Hal dilihat pada aktivitas peserta didik

ketika kelompok, mereka saling berdiskusi dan bertukar pikiran dengan teman kelompoknya dan peserta didik berani memaparkan hasil diskusi di depan kelas.

Peningkatan keterampilan berpikir kritis peserta didik juga dapat di lihat dari soal LKS yang sesuai dengan indikator berpikir kritis yang dapat kita liat dari gambar berikut:



Grafik 1 Observasi Kemapuan Berpikir Kritis Peserta Didik

2). Hasil Lembar Observasi kemampuan berpikir kritis Siklus I

Hasil observasi berpikir kritis peserta didik dengan menggunakan model TPS pada siklus I dapat dilihat pada tabel di bawah ini.

Tabel 2 Hasil Observasi Berpikir Kritis Peserta didik Siklus I

N	Indikator Berpikir Kritis	Sub-Indikator	Deskripsi
1.	Mengobservasi/ mengamati.	a) Peserta didik mampu memfokuskan pertanyaan untuk memperoreh jawaban.	**OB 1 :** Sebagian besar peserta didik sudah tampak dapat memfokuskan pertanyaan untuk memperorel jawaban atau permasalahan yang sedang peserta didik hadapi meskipun ada sebagian kecil peserta didik yang masih main-main. **OB 2 :** Belum terlihat, peserta didik masih bingung saat menjawab pertanyaan. **OB 3 :** Peserta didik mampu memfokuskan pertanyaan dengan cara

				membaca teks di dalam LKS. **OB 4 :** Peserta didik mengamati pertanyaan dalam lembar kerja
		b)	Peserta didik mampu menganalisis argumen.	**OB 1 :** Dari 28 peserta didik hanya 2-3 orang saja yang mampu menganalisis sebuah argumen. **OB 2 :** **OB 3 :** Dapat terlihat dari pemahaman peserta didik mengenai teks bacaan **OB 4 :** Peserta didik mencari argumen yang tepat dan mensintesiskan nya untuk menjawab pertanyaan
2	Memberi argument/alasan.	a)	Peserta didik mampu menjawab pertanyaan klarifikasi dan pertanyaan yang menantang	**OB 1 :** Dari 28 peserta didik hanya 4-5 orang saja yang mampu menjawab pertanyaan klarifikasi dan pertanyaan yang menantang. **OB 2 :** Tampak terlihat **OB 3 :** Kebanyakan peserta didik mampu menjawab, namun beberapa kali peserta didik memastikan maksud pertanyaan kepada guru. **OB 4 :** Beberapa peserta didik mampu bertanya untuk mengklarifikasi temuan nya.
3	Merumuskan pertanyaan/ bertanya.	a)	Peserta didik mampu membuat pertanyaan deduktif dan mempertimbangkan hasil deduktif	**OB 1 :** Sebagian peserta didik sudah mampu membuat pertanyaan deduktif dan mempertimbangkan hasil pertanyaan deduktif tersebut **OB 2 :** Tampak terlihat **OB 3 :** Peserta didik mampu mebuat pertanyaan berdasarkan teks. **OB 4 :** Peserta didik membuat pertannyaan sesuai teks.
		b)	Peserta didik mampu membuat pertanyaan induktif dan mempertimbangkan hasil induktif	**OB 1 :**Ada beberapa peserta didik yang masih bingung membuat pertanyaan induktif **OB 2 :**Tampak terlihat **OB 3 :** Peserta didik mengajukan pertanyaan secara lisan kepada guru secara spontan. **OB 4 :**

4	Mengumpulkan informasi (mengeksplor).	a)	Peserta didik mampu membuat dan mempertimbangkan hasil keputusan	**OB 1 :** **OB 2 :** Peserta didik mampu membuat dan mempertimbangkan hasil. **OB 3 :** **OB 4 :**Sebagian peserta didik mampu mempertimbangkan jawaban berdasarkan hasil diskusi bersama teman.
5	Menarik kesimpulan (mengkomunikasikan).	a)	Peserta didik mampu mengidentifikasi asumsi dan membuat kesimpulan yang sesuai	**OB 1 :** **OB 2 :** Peserta didik mampu mengidentifikasi asumsi. **OB 3 :** Peserta didik dan guru bersama sama menyimpulkan pembelajaran. **OB 4 :** Peserta didik sudah mempu menyimpulkan hasil kerja dan mengkomunikasikan nya

Pada hasil observasi yang dilakukan observer diketahui terjadi peningkatan berpikir kritis peserta didik dalam proses pembelajaran. Dapat dilihat per aspek pada siklus I, yaitu pada aspek 1, observer berpendapat bahwasanya sebagian bersar peserta didik sudah mampu menfokuskan pertanyaan untuk memperoleh jawaban. Pada aspek 2, observer berpendapat bahwa terdapat sebagian kecil peserta didik yang mampu menganalisis argumen. Pada aspek 3, observer berpendapat bahwa hanya beberapa peserta didik yang mampu menjawab pertanyaan yang menantang dan sebagian besarnya peserta didik kebingungan bahkan malu untuk berpendapat. Pada aspek 4, observer berpendapat bahwa sebagian besar dari peserta didik sudah mampu membuat pertanyaan deduktif dilihat dari pertanyaan pertanyaan yang mereka buat saat mendapatkan permasalahan. Pada aspek 5, hanya sebagian kecil peserta didik yang mampu membuat pertanyaan induktif dan yang lain nya kebingungan. Pada aspek 6, sebagian besar peserta didik mampu mempertimbangkan hasil hasil keputusan mereka di lihat dari proses didkusi mereka. Pada aspek 7, observer berpendapat bahwa peserta didik sudah mampu membuat kesimpulan yang sesuai di lihat dari cukup banyak nya peserta didik yang berpendapat untuk mengutarakan kesimpulan yang mereka peroleh.

Dilihat dari pendapat para observer bahwasanya peningkatan berpikir kritis peserta didik kelas V mengalami peningkatan meskipun tidak meningkat secara derastis akan tetapi sangat mengalami perubahan dari sebelum di lakukan nya pembelajaran kooperatif tipe *think pair share (TPS).*

Sedangkan hasil observasi pelaksanaan pembelajaran TPS menurut para observer sudah cukup baik dalam pelaksanaan nya dapat dilihat dari sebelum memasuki langkah Think guru menjelaskan terlebih dahulu mengenai tatacara mengerjakan LKS sehingga peserta didik padah tahap ini fokus mengerjakan dan cukup kondusif. Selanjutnya ketika memasuki tahap *Pair* guru juga menjelaskan tatacara mengerjakan LKS pada tahap ini, akan tetapi pada tahap ini beberapa peserta didik kurang dapat mengikuti pembelajaran dengan baik dikarenakan peserta didik berdiskusi sambil main-main sehingga proses diskusi kurang terlaksana dengan baik. Selanjutnya memasuki tahap *Share* peserta didik mampu memaparkan hasil kerjanya di depan kelas dan guru pun memberikan kesempatan kepada peserta didik lain untuk bertanya ataupun menanggapi hasil pemaparan dari teman nya sehingga diskusi lebih aktif.

d. Tahap Refleksi

Hasi observasi pada siklus I mengalami peningkatan dari sebelum dilakukan nya tindakan, akan tetapi peningkatan yang terjadi belum memenuhi kriteria yang di tentukan. Selain itu proses pembelajaran pun mengalami peningkatan dilihat dari peserta didik yang mulai berani mengemukakan pendapatnya ketika proses diskusi berlangsung dan berani memaparkan hasil nya di depan kelas. Dilihat dari peningkatan yang terjadi dirasa belum maksimal dan belum memenuhi kriteria keberhasilan yang telah ditentukan, oleh sebab itu peneliti akan melanjutkan pada siklus yang ke II. Berdasarkan hasil dari siklus yang I peneliti membuat perbaikan-perbaikan yang akan di terapkan pada siklus II. Perbaikan tersebut adalah:

1) Merubah pembagian kelompok dari 2 peserta didik di setiap kelompok nya menjadi 4 peserta didik.
2) Memotivasi peserta didik agar dapat aktif berdikusi dan bekerjasama dalam proses pembelajaran.
3) Membuat pembelajaran menjadi menyenangkan dan terkontrol.
4) Memperbaiki pengelolaan waktu agar pembelajaran lebih terarah.

2. Laporan Pelaksanaan siklus II

a. Tahap Perencanaan

Dalam perencanaan siklus II diawali dengan mengidentifikasi masalah berdasarkan hasil refleksi pada siklus I yang terdapat kekurangan dan perlu dilalukan perbaikan. Kekurangan tersebut terlihat dari pengelolaan waktu yang kurang baik ketika pembagian kelompok belajar, 10 peserta didik yang masih belum terlihat peningkatan dalam berpikir kritisnya. Beberapa persiapan yang dilakukan peneliti sebelum melakukan tindakan pada siklus 2 diantaranya adalah:

1) Menyusun dan mempersiapkan perangkat pembelajaran, seperti RPP dengan model TPS.
2) Menyiapkan materi yang akan di ajarkan.
3) Menyusun Lembar Kerja Peserta didik .
4) Menyiapkan lembar observasi yang terdiri dari lembar observasi untuk mengetahui keterampilan berpikir kritis peserta didik melalui penerapan model TPS.

b. Tahap Pelaksanaan Tindakan

Siklus 2 dimulai pada hari Senin, 30 Mei 2019 pada pukul 07.00-10.40 WIB. Materi yang dipelajari adalah materi pada tema 9 subtema 3 yaitu tentang lingkungan sahabat kita.

1) Kegiatan awal

Pembelajaran di buka dengan mengucapkan salam, dilanjutkan dengan pengkondisian peserta didik, berdoa, menyayikan lagu wajib indonesia raya, pengecekan absensi peserta didik dan menjelasakan pembelajaran yang akan di laksanakan menggunakan model TPS.

2) Kegiatan Inti

Guru membagika LKS kepada peserta didik dan menjelaskan mengenai tatacara dalam mengerjakan LKS tersebut. Peserta didik difokuskan pada tahap *think* yaitu peserta didik fokus mengerjkan soal yang terdapat pada LKS secara mandiri.

Dilanjutkan tahap *pair,* peserta didik berkelompok mendiskusikan permasalahan yang terdapat pada LKS. Pada tahap ini peserta didik kondusif dikarenakan peserta didik sudah mengenal cara atau langkah pembelajaran menggunakan TPS pada siklus I. Setiap kelompok terdiri dari dua peserta didik. Dalam pembagian kelompok cukup kondusif di bandingkan dengan siklus I dikarenakan sebelum dilakukan pembagian kelompok guru memberika motivasi mengenai kerjasama sehingga peserta didik mau bekerjasama dengan teman nya dengan baik.

Dilajutkan tahap pada *share*, pada tahap ini peserta didik lebih aktif dalam pelaksaan diskusi dapat di lihat dari banyak nya peserta didik yang berpendapat dan bertanya mengenai hasil pemaparan dari kelompok lain.

a. Hasil Tindakan

1) Hasil Tes Kemmapuan Berpikir Kritis Peserta Didik

Berdasarkan data yang diperoleh, hasil tes dapat dilihat pada tabel berikut:

Tabel 3. Hasil Tes Peserta didik Siklus II

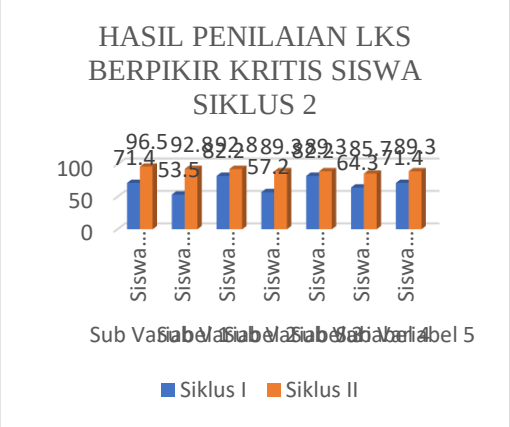
Nilai Tes	F	%
< 75	4	14,2%
≥ 75	24	85,7%
Jumlah	28	100%

Tabel 3. mengenai hasil tes peserta didik menunjukkan bahwa nilai peserta didik pada siklus II mengalami peningkatan yang sangat signifikan dan mampu melebihi kriteria keberhasilan yang ditentukan. Jika dilihat berdasarkan nilai KKM kelas V, terdapat 24 peserta didik atau sekitar 85,7% dari total jumlah peserta didik kelas V yang mampu mencapai nilai diatas 75 dan 4 peserta didik lainnya atau sekitar 14,2% mendapatkan nilai di bawah nilai KKM.

Dari hasil LKS yang peserta didik kerjakan sebagian besar hasil nya mendapatkan nilai yang sangat baik dilihat dari peserta didik mampu menjawab semua soal yang diberikan dengan baik dan tepat. Akan tetapi masih peserta didik yang masih kesulitan dalam menjawab pertanyaan-pertanyaan yang terdapat pada LKS halitu dapat di lihat dari beberapa soal yang kurang maksimal bahkan tidak mampu di jawab oleh peserta didik.

Dilihat dari hasil tersebut bahwasanya peningkatan berpikir kritis peserta didik kelas V mengalami peningkatan yang sangat signifikan dilihat dari siklus 1 yang hanya 18 peserta didik atau 64% dari 28 peserta didik yang temasuk ke dalam indikator berpikir kritis dan mengalami peningkatan menjadi 24 peserta didik atau 82% dari 28 peserta didik . Pelaksanaan pembelajaran pun sudah mengalami peningkatan, karena peserta didik sudah banyak yang mulai mampu berpendapat dan saling bertukar pikiran dalam proses pembelajaran nya.

Peningkatan keterampilan berpikir kritis peserta didik juga dapat di lihat dari soal LKS yang sesuai dengan indikator berpikir kritis yang dapat kita liat dari gambar berikut.



Grafik 2 Observasi Kemampuan Berpikir Kritis Peserta Didik

2) Hasil Lembar Observasi kemampuan berpikir kritis Siklus II

Hasil observasi berpikir kritis peserta didik pada pembelajaran tematik dengan menggunakan model kooperatif tipe TPS pada siklus 2 dapat dilihat pada tabel di bawah ini.

Tabel 4 Hasil Observasi Berpikir Kritis Peserta didik Siklus 2

No	Indikator Berpikir Kritis	Sub-Indikator	Deskripsi
1.	Mengobservasi/ mengamati.	a) Peserta didik mampu memfokuskan pertanyaan untuk memperoreh jawaban.	**OB 1 :** Sudah tampak, peserta didik sudah membuat pertanyaan sesuai isi wacana. **OB 2 :** Peserta didik fokus dalam menganalisis teks bacaan dan mendapat gambaran materi yang di ajarkan.
		b) Peserta didik mampu menganalisis argumen.	**OB 1 :** Peserta didik sudah mampu memberi tanggapan untuk memberi jawaban pertanyaan. **OB 2 :** Secara keseluruhan peserta didik sudah mampu menganalisis sebuah argumen.
2	Memberi argument /alasan.	a) Peserta didik mampu menjawab pertanyaan klarifikasi dan pertanyaan yang menantang	**OB 1 :** Peserta didik sudah mampu menjawab pertanyaan **OB 2 :** Secara keseluruhan sudah mampu menjawab pertanyaan yang dilontarkan teman nya.
3	Merumuskan pertanyaan/bertanya.	a) Peserta didik mampu membuat pertanyaan deduktif dan mempertimbangkan hasil deduktif	**OB 1 :** Sudah mampu membuat pertanyaan menggunakan kata tanya yang sesuai. **OB 2 :** Peserta didik sudah mampu membuat pertanyaan yang sesuai.
		b) Peserta didik mampu membuat pertanyaan induktif dan mempertimbangkan hasil induktif	**OB 1 :** Peserta didik sudah mampu membuat pertanyaan yang sesuai **OB 2 :** Peserta didik sudah mampu membuat pertanyaan yang sesuai.
4	Mengumpulkan informasi (mengeksplor).	a) Peserta didik mampu membuat dan mempertimbangkan hasil keputusan	**OB 1 :** Peserta didik sudah mampu berdiskusi untuk mengerjakan atau

				menyelesaikan suatu masalah. **OB 2 :** Peserta didik berdiskusi dan saling mempertimbangkan keputusan setiap kelompok untuk mengambil suatu keputusan.
5	Menarik kesimpulan (mengkomunikasikan).	a)	Peserta didik mampu mengidentifikasi asumsi dan membuat kesimpulan yang sesuai	**OB 1 :** Peserta didik sudah mampu mempersentasikan hasil diskusi dan memberi tanggapan kepada kelompok yang tampil. **OB 2 :** Peserta didik sudah mampu membuat kesimpulan yang sesuai dengan materi yang telah di pelajari.

Dari hasil observasi yang dilakukan observer dapat dilihat per aspek pada siklus II,yaitu pada aspek 1, observer berpendapat bahwasanya sebagian besar peserta didik yang mengikuti pembelajaran sudah mampu menfokuskan pertanyaan untuk memperoleh jawaban. Pada aspek 2, observer berpendapat bahwa banyak peserta didik sudah mampu memberi tanggapan untuk memberikan jawaban atas sebuah pertanyaan. Pada aspek 3, observer berpendapat bahwa peserta didik sudah mampu menjawab pertanyaan pertanyaan yang dilontarkan dan sudah tidak terlihat malu malu lagi dalam hal bertanya maupun menjawab. Pada aspek 4, observer berpendapat bahwa peserta didik sudah mampu membuat pertanyaan deduktif dilihat dari pertanyaan pertanyaan yang mereka buat saat mendapatkan permasalahan. Pada aspek 5, observer berpendapat bahwa peserta didik sudah mampu membuat pertanyaan induktif dengan baik. Pada aspek 6, peserta didik sudah mampu mempertimbangkan hasil hasil keputusan mereka di lihat dari proses didkusi mereka. Pada aspek 7, observer berpendapat bahwa peserta didik sudah mampu membuat kesimpulan yang sesuai di lihat dari cukup banyak nya peserta didik yang berpendapat untuk mengutarakan kesimpulan yang mereka peroleh.

Dilihat dari pendapat para observer bahwasanya peningkatan berpikir kritis peserta didik kelas V pada siklus 2 ini mengalami peningkatan yang sangat signifikan dilihat dari pendapat obsever pada setiap indikator berpikir kritis dan saat dilakukan nya pembelajaran mengunakan model pembelajaran kooperatif tipe *think pair share* (TPS) di dalam kelas.

Sedangkan hasil observasi pelaksanaan pembelajaran TPS menurut para observer pada siklus II mengalami peningkatan yang sangat baik dalam pelaksanaannya dapat dilihat dari sebelum memasuki langkah *Think* guru menjelaskan terlebih dahulu mengenai tatacara mengerjakan LKS sehingga peserta didik padah tahap ini fokus mengerjakan dan sangat kondusif. Selanjutnya ketika memasuki tahap *Pair* guru juga menjelaskan tatacara mengerjakan LKS pada tahap ini, akan tetapi pada tahap ini beberapa peserta didik dapat mengikuti pembelajaran dengan baik dikarenakan peserta didik dapat berdiskusi dengan baik. Selanjutnya memasuki tahap *Share* peserta didik mampu memaparkan hasil kerjanya di depan kelas dan guru pun memberikan kesempatan kepada peserta didik lain untuk bertanya ataupun menanggapi hasil pemaparan dari teman nya sehingga diskusi lebih hidup dan aktif.

c. Tahap Refleksi

Berdasarkan hasil berpikir kritis pada siklus II telah mengalami peningkatan dari siklus I. Peserta didik sudah dapat mengikuti pembelajaran dengan model TPS dengan baik dan optimal. Hal ini dapat dilihat dari antusias dan keaktifan peserta didik dalam mengikuti pembelajaran. Peserta didik berpartisipasi dengan sangat baik dalam diskusi, presentasi, dan mengerjakan tugas individu.

Berdasarkan hasil pembelajaran yang telah dilaksanakan, dapat dikatakan bahwa kegiatan pembelajaran yang telah dilakukan handaknya menjadi salah satu umpan balik bagi guru untuk meningkatkan kualitas pembelajaran, sehingga setiap pembelajaran yang dilakukan menjadi lebih bermakna bagi peserta didik. Salah satu faktor penting yang harus diperhatikan oleh guru adalah menumbuhkan minat peserta didik pada pembelajaran yang dilakukan, pentingnya memaksimalkan aktifitas peseta didik dalam kegiatan pembelajaran serta memotivasi peserta didik untuk mengungkapkan ide untuk berkarya maupun memecahkan masalah dengan baik. Pembelajran dengan menggunakan model kooperatif tipe TPS dapat digunakan guru dalam upaya meningkatkan kualitas pembelajaran.

Melihat pada hasil penelitian yang diperoleh, model kooperatif tipe TPS membawa pengaruh besar dalam meningkatkan keterampilan berpikir kritis peserta didik. Dapat kita lihat diri hasil pelaksanaan pembelajaran pada siklus II sudah baik, hal ini dibuktikan dengan adanya peningkatan keterampilan berpikir kritis peserta didik dibandingkan pada siklus sebelumnya.

B. Pembahasan

Tujuan dari penelitian ini ialah demi meningkatkan keterampilan berpikir kritis peserta didik pada peserta didik kelas V di salah satu SDN di Kota Bandung melalui model pembelajaran kooperatif tipe TPS. Secara keseluruhan hasil penelitian tindakan kelas ini terdiri dari dua siklus. Setiap siklus terdiri dari 4 tahap yaitu : perencanaan, pelaksanaan tindakan, observasi, dan refleksi.

Sebelum melakukan penelitian, peneliti terlebih dahulu melakukan tindakan observasi dan wawancara. Hal ini dilakukan untuk mengetahui permasalahan yang terjadi di kelas V Tahun Ajaran 2018/2019. Melalui hasil observasi dan wawancara tersebut, ditemukan adanya permasalahan dalam proses pembelajaran, seperti penggunaan metode pembelajaran yang kurang bervariasi, sehingga menyebabkan para peserta didik merasa bosan selama proses pembelajaran berlangsung. Padahal peserta didik membutuhkan adanya variasi dan inovasi yang baru dalam pembelajaran, salah satunya dalam penggunaan metode pembelajaran. Agar peserta didik lebih tertarik dan bersemangat dalam mengikuti proses belajar mengajar sehingga berimplikasi pada hasil prestasi yang diperoleh peserta didik. Sehingga peneliti memilih model pembelajaran kooperatif tipe *Think Pair Share* (TPS) sebagai solusi permasalahan yang terjadi.

Model TPS memiliki 3 tahapan yaitu *think*, *pair* dan *share*. Pada tahap *think*, peserta didik diminta untuk berpikir mandiri dalam menyelesaikan suatu permasalahan. Suprijono (2014, hlm. 91) berpendapat bahwa pembelajaran diawali dengan guru memberikan pertanyaan atau permasalahan yang berkaitan dengan pembelajaran untuk dipikirkan dan dipecahkan peserta didik.

Pada tahap *pair*, peserta didik saling bepasangan dan berdiskusi dengan pasangan. Pembetukan kelompok dilakukan secara heterogen berdasarkan kemampuan peserta didik, agar peserta didik mampu bekerjasama dengan baik dan saling membantu satu sama lain. Peserta didik berpasangan untuk menyelesaikan permasalahan diberikan.

Pada tahap *share*, peserta didik diminta mempersentasikan hasil diskusinya di depan kelas dan peserta didik lain diminta untuk berpendapat ataupun bertanya mengenai hasil yang telah di paparkan oleh temannya (Suprijono, 2014, hlm. 91).

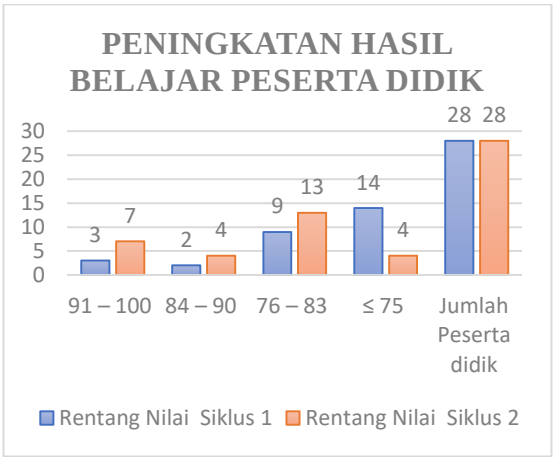
Pada siklus I, proses pembelajaran belum begitu optimal, dikarenakan peserta didik masih beradaptasi dan belum terlalu paham mengenai model kooperatif tipe TPS. Meskipun

begitu peningkatan berpikir kritis peserta didik meningkat cukup baik, dapat kita lihat dari hasil prasurpay yang hanya 4 orang atau 14,2% dari 28 peserta didik meningkat menjadi 18 peserta didik atau 64,2% dan ini dapat dikategorikan cukup baik.

Kurang optimalnya pembelajaran pada siklus I menjadikan bahan refleksi pada siklus II. Untuk kegiatan siklus II kegiatan pelaksanaan pembelajran berjalan sangat kondusif, ini diperlihatkan dengan pelaksanaan model yang sudah mulai tampak jelas, peserta didik telah terbiasa beradaptasi dengan model kooperatif tipe TPS, pemberian motivasi dengan memberikan penguatan kepada peserta didik sudah sangat baik, terlihat situasi pembelajaran yang menyenangkan, bahkan peserta didik menunjukan antusias dengan berdiskusi dengan sangat baik. Pada siklus II, Keterampilan berpikir kritis peserta didik mengalami peningkatan sebesar 21,4%, yakni dari 64,3% menjadi 85,7%. Setiap indikator keterampilan berpikir kritis peserta didik mengalami peningkatan.

Berdasarkan hasil analisa dari data observasi, maka hipotesis pertama benar. Melalui Model Pembeljaran Kooperatif tipe TPS dapat keterampilan berpikir kritis peserta didik kelas V di salah satu SDN A kota Bandung tahun ajaran 2018/2019. Berdasarkan hasil tersebut, bahwasanya penelitian ini sesuai dengan penelelitian sebelumnya yaitu penelitian Surayya (2015, hlm. 85-87) yang menyatakan bahwa model kooperatif tipe TPS dapat meningkatkan keterampilan berpikir kritis peserta didik.

Selain itu penggunan metode pembelajaran kooperatif TPS juga berimplikasi pada peningkatan hasil belajar peserta didik kelas V di SDN A. Berdasarkan hasil analisis post-test 1 dan post-test 2 menunjukkan bahwa terdapat peningkatan hasil belajar peserta didik melalui penerapan model pembelajaran kooperatif tipe TPS. Hal ini ditunjukkan dengan peningkatan hasil belajar peserta didik dari siklus 1 ke siklus 2, secara jelas dapat dilihat pada gambar 3.



Gambar 3. Peningkatan Hasil Belajar Peserta Didik Kelas V A melalui Penerapan Pembelajaran Kooperatif Tipe TPS

Pada tabel dan gambar di atas, dapat dilihat bahwa hasil *post-test* pada siklus I, sejumlah 50% atau 14 peserta didik dari 28 peserta didik masih di bawah KKM, sedangkan sebanyak 50% atau 14 peserta didik kelas V SDN A mencapai KKM dengan nilai diatas 74 (dilaksanakan pada hari selasa, 30 April 2019). Sedangkan pada siklus II, hasil *post-test* peserta didik mengalami peningkatan yang sangat baik, peserta didik telah mampu mencapai KKM dengan nilai lebih dari 75 (hari Kamis, 09 Mei 2019). Begitu juga dengan rata-rata peningkatan berpikir kritis pada siklus I ke siklus II juga mengalami peningkatan sebesar 21,4%, yakni dari 64,3% menjadi 85,7% dibanding siklus I. Sedangkan untuk data hasil tindakan dan pengamatan dapat di lihat pada hasil penelitian di bagaian laporan pelaksanaan siklus I dan laporan pelaksanaan siklus II.

Berdasarkan hasil tersebut, maka hipotesis kedua adalah melalui Model pembelajaran kooperatif tipe *think pair share* (TPS) dapat meningkatkan hasil belajar SDN A kota Bandung tahun ajaran 2018/2019.

SIMPULAN

Berdasarkan hasil dari penelitian yang dilakukan secara keseluruahan proses kegiatan pembelajaran kooperatif tipe TPS dapat meningkatkan kemampuan berpikir kritis siswa kelas V di SDN A Kota Bandung. Hal ini dapat teramati dari hasil siklus pertama sampai kedua yang mengalami peningkatan sangat baik. Dilihat dari siklus satu secara keseluruhan peserta didik memperoleh hasil dengan kategori cukup baik, dimana pada siklus satu mengalami peningkatan sebesar 64,3% atau 18 peserta didik yang mengalami peningkatan berpikir kritis. Lalu pada siklus dua, terjadi peningkatan yang sangat baik. Adapun hasil presentase yang dapat diperoleh pada siklus satu yaitu 64,3%. Lalu siklus dua, mengalami peningkatan kembali dengan hasil akhir yang diperoleh pada siklus kedua ini memperoleh presentase 85,7% atau 24 peserta didik yang mengalami peningkatan berpikir kritis. Secara keseluruhan, penerapan model pembelajaran kooperatif tipe *Think Pair Share* (TPS) peserta didik sudah mampu meningkatkan kemampuan berpikir kritisnya dan dapat memenuhi indikator yang telah di tentukan oleh peneliti.

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IMPLEMENTATION OF STORYTELLING METHOD IN IMPROVING SELF-CONFICENDE CHARACTER AT THE FORTH GRADE STUDENTS OF ELEMENTARY SCHOOL

Azylia Olta Puspa Multi, Arie Rakhmat Riyadi, Effy Mulyasari
Primary Teacher Education Study Program, Pedagogic Departement
Faculty of Education,Universitas Pendidikan Indonesia
azyliao@upi.edu

***Abstract**: This research was compiled based on the results of observations at one of elementary school in Bandung. It was found that there was still a low level of confidence in students in the fourth grade. This was because teachers often used the lecture method so students rarely express their opinions and explore themselves less. Most students feel embarrassed in expressing their opinions, embarrassed to appear in front of the class. This research to describe the application of storytelling method to improve students' confidence with indicators of mastering the contents of the story, being able to write the contents of the story clearly, make eye contact with the audience, be calm when telling stories, use gestures, use loud intonation and use clear sound. The research method used CAR by Kemmis & Taggart model. The procedure carried out in two cycles that covers of planning, action, observation and reflection. The students as subject in this research were 24 pupils. Data collection techniques consisted of observation sheets for teacher and student activities, observation sheets for student confidence and documentation. The results of the study proved that the students' self-confidence have increased from the first cycle which reached 55% to 87% in the second cycle.*

***Keywords**: Storytelling method, self confidence, elementary school*

A. PENDAHULUAN

Percaya diri akan mengantarkan seseorang menjadi manusia yang optimis dan berpikir postif. Individu yang percaya diri dapat dengan mudah mengatasi permasalahan-permasalahan dalam kehidupan. Ketika percaya diri sudah ada dalam diri manusia dan sudah menjadi sikap yang tertanam dalam dirinya akan menjadi keuntungan bagi dirinya sendiri. Dalam ranah pendidikan sikap percaya diri haruslah di tanamkan pada peserta didik dan pendidik. Jika tidak ada percaya diri dalam diri seseorang maka akan sulit untuk mengatasi permasalahan yang akan dihadapinya.

Percaya diri perlu di tanamkan pada peserta didik terutama pada masa sekolah dasar. Mereka yang sudah terlatih untuk bisa membawa dirinya menjadi lebih optimis ketika menghadapi suatu permasalahan. Dalam pembentukan sikap percaya diri pun perlu dilatih agar peserta didik terbiasa untuk percaya diri dimana saja mereka berada.

Seperti yang diungkapkan oleh (Hakim, 2008, hlm 6) bahwa percaya diri merupakan suatu keyakinan segala aspek kelebihan yang dimilikinya dan keyakinan tersebut membuatnya merasa mampu untuk bisa mencapai berbagai tujuan di dalam hidupnya. Berbeda dengan (Komang & Riyadi, 2018, hlm. 28) berpendapat bahwa percaya diri *(self confident)* adalah sejauh mana adanya keyakinana terhadap penilaian atas kemampuan untuk berhasil.

Pendapat ini yang diperjelas oleh (Surya, 2007, hlm. 2) mengatakan bahwa sikap percaya diri pada peserta didik juga harus mendapat campur tangan dari guru. Hal yang perlu kita ketahui bahwa guru sebagai fasilitator dan motivator pada proses pembelajaran sehingga perlu adanya peran guru dalam menciptakan suasana pembelajaran yang aktif, berpusat pada peserta didik dan dapat meningkatkan percaya diri peserta didik.

Namun pada kenyataan dilapangan ketika dilakukan observasi di kelas IV SDN Kota Bandung diperoleh data bahwa seluruh peserta didik terdapat 31 siswa, dimana terdapat 17

siswa perempuan dan 14 siswa laki-laki. Ketika melakukan *sit in* peneliti menemukan masalah terhadap sikap percaya diri siswa. Siswa malu untuk menyampaikan pendapatnya, menunjukan kemampuannya, siswa malu untuk bertanya, dan malu ketika guru meminta siswa untuk membacakan cerita fiksi. Guru per;u memaksa siswa agar siswa berani untuk maju kedepan kelas, itu pun hanya 2 orang saja yang berani, ketika membcakan cerita fiksi siswa masih menutup wajahnya dengan buku dan menggunakan suara yang pelan.ketika guru meminta siswa untuk menjawab pertanyaan hanya 2 orang saja yang berani menjawab pertanyaan, salah satu dari mereka pun terlihat ragu dalam menjawab pertanyaan guru. Pada pembelajaran lain guru meminta siswa untuk berani mengekspresikan perannya dalam pembelajaran bermain peran. Ketika di observasi peneliti menemukan hanya 5 orang yang berani, siswa lainnya malu dan tidak mengeluarkan suaranya ketika bermain peran. Pada pembelajaran lain, guru meminta siswa untuk membcakan puisi, tetapi hanya ada 3 orang saja yang berani maju kedepan kelas untuk membacakan pusi dengan baik, itupun harus dipaksa terlebih dahulu barulah siswa mau maju kedepan kelas. Sehingga berdasarkan data diatas bahwa keseluruhan peserta didik yang berani mengungkapkan pendapatnya dapat dipersentasekan sebesar 38,7%.

Dari uraian yang telah dipaparkan diatas permasalahan yang terjadi di kelas IV adalah siswa yang malu untuk mengungkapkan pendapatnya, ragu-ragu ketika akan menjawab dan bertanya, kurang berlatih untuk berbicara dalam suatu diskusi. Maka dapat peneliti simpulkan bahwa sikap percaya diri siswa di kelas IV masih rendah dan perlu adanya metode atau model pembelajaran yang dapat mendukung agar sikap percaya diri siswa di kelas IV menjadi meningkat.

Sikap percaya diri siswa di kelas IV masih rendah hal itu dapat disebabkan oleh cara mengajar guru yang kurang menggunakan mode, metode atau pendekatan kurang mengeksplor sikap percaya diri siswa, sehingga guru hanya menggunakan metode ceramah saja. Hal ini perlu diatasi dengan mencari pemecahan masalahanya terkait sikap percaya diri siswa, agar tidak menjadi kebiasaan yang akan dilakukan siswa hingga masa depan.

Berdasarkan permasalahan diatas peneliti merasa perlu adanya tindak lanjut dalam mengatasi permasalahan sikap percaya diri siswa dengan menerapkan metode *storytelling.* Menurut (Madyawati, 2016, hlm. 162) berpendapat bahwa bercerita adalah sutu kegiatan yang dilakukan seseorang secara lisan kepada orang lain dengan alat tentang apa yang harus disampaikan dalam bentuk pesan, informasi atau hanya sebuah dongeng yang dikemas dalam bentuk cerita yang dapat didengarkan dengan rasa menyenangkan. Menurut (Pratiwi, 2016, hlm. 201) berpendapat bahwa dalam bercerita seseorang melibatkan pikiran, kesiapan mental, keberanian, perkataan yang jelas sehingga dapat dipahami oleh orang lain. Kegiatan bercerita bertujuan agar siswa dilatih untuk berbicara dengan berani mengungkapkan pendapatnya atau cerita yang akan disampaikan berdasarkan pengalaman atau karangan cerita yang telah dibuat.

Pada penelitian ini peneliti menggunakan metode *storytelling* karena dengan bercerita siswa dapat mengungkapkan pendapatnya, mengungkapkan apa yang telah didapatkan dan mengekspresikan ide/gagasannya di depan teman-temannya. Dengan itu sikap percaya diri siswa dapat dilatih dengan berbicara di depan teman kelompok besarnya.

Berdasarakan permasalahan yang telah dideskripsikan diatas maka peneliti menyusun rumusan masalah sebagai berikut.

1. Bagaimanakah perencanaan pembelajaran dengan menggunakan metode *storytelling* untuk meningkatkan percaya diri siswa di kelas IV Sekolah Dasar?
2. Bagaimanakah pelaksanaan pembelajaran dengan menggunakan metode *storytelling* untuk meningkatkan percaya diri siswa di kelas IV Sekolah Dasar?
3. Bagaimanakah peningkatan percaya diri siswa di kelas IV Sekolah Dasar?

Adapun tujuan dilaksanakan penelitian ini agar mengetahui rencana pelaksanaan pembelajaran menggunakan metode *storytelling,* mengetahui pelaksanaan pembelajaran dan mendeskripsikan peningkatan sikap percaya diri siswa di kelas IV setelah menggunakan metode *storytelling.*

Pada penelitian ini peneliti menggunakan berbagai teori sikap percaya diri dan metode *storytelling*. Dengan itu percaya diri dapat diukur melalui 3 aspek. Menurut (Norman & Hyland, 2003, hlm. 8) ketiga aspek tersebut adalah aspek kognitif, aspek emosional, dan aspek *performance*. Menurut (Dhieni, 2014, hlm. 65) *storytelling* adalah metode bercerita yang dilaksanakan dalam upaya memperkenalkan, memberikan keterangan, atau menjelaskan tentang hal baru dalam rangka menyampaikan pembelajaran yang dapat mengembangkan berbagai kompetensi anak usia dini. Pendapat lain yang dikemukakan oleh (Grissinger, 2014, hlm. 658) berpendapat bahwa *storytelling* adalah adalah bentuk komunikasi yang akrab, yang beresonansi dengan kita. Cerita faktual mendidik kita, menyentuh kita, dan merangsang kita untuk bertindak. Mereka adalah kendaraan yang efisien untuk membuat orang memahami, mengingat, dan menerima informasi baru. Sehingga *storytelling* merupakan sebuah aktivitas menceritakan hal yang baru atau kejadian berkesan yang pernah dialami oleh pencerita, menceritakan tentang dongeng sehingga pendongeng perlu menguasai isi cerita, dan menyampaikan sebuah materi yang sangat perlu juga untuk di perhatikan oleh pemateri yang dipertunjukan di hadapan banyak orang dengan sikap percaya diri dan diungkapkan secara lisan sesuai dengan apa yang ada dipikirannya sehingga pendengar mendapatkan informasi yang baru dari cerita yang dikemukakan

Pada penelitian ini langkah metode *storytelling* terdapat 3 tahapan metode *storytelling.* Hal ini dikemukakan oleh (Gunawan, 2018, hlm. 18) bahwa langkah metode *storytelling* terdapat 3 tahapan yaitu 1.Tahap Pra Cerita, 2.Tahap Bercerita, 3.Tahap Pasca Cerita.

B. METODE

Pada penelitian ini, peneliti menggunakan metode Penelitian Tindakan Kelas. Menurut (Lewin dalam Kunandar, 2012, hlm. 42) mengemukakan bahawa Penelitian Tindakan Kelas adalah suatu rangkaian langkah yang terdiri atas empat tahap, yakni perencanaan, tindakan, pengamatan dan refleksi. Metode Penelitian Tindakan Kelas merupakan sebuah metode penelitian yang dilakukan oleh pengajar atau guru untuk memperbaiki permasalahan yang ada di dalam kelas dimiana subjek dari penelitian ini adalah peserta didik.

Dalam melakukan penelitian tindakan kelas diperlukan model yang mendukung agar penelitian dapat berjalan dengan baik dan tersusun berdasarkan prosedur yang telah di tentukan. Menurut (Arikunto dalam Dimiyati, 2013, hlm. 122) menjelaskan bahwa model penelitian tindakan pada garis besarnya terdapat empat tahapan yang lazim dilalui, yaitu perencanaan, pelaksanaan, pengamatan/observasi, dan refleksi. Dari keempat model yang disebutkan tadi penelitian dilaksnakan untuk tahapan satu siklus dan ke siklus berikutnya. Model yang digunakan dalam penelitian ini menggunakan model penelitian Kemmis Mc Taggart. Pada model ini terdapat 4 tahapan penelitian yaitu perencanaan *(planning),* tindakan *(action),* mengobservasi *(observing),* dan merefleksi *(reflecting).*

Pada penelitian ini subjek yang terlibat peserta didik kelas IV di salah satu SDN di Kota Bandung yang terdiri dari 24 orang siswa. Waktu penelitian yang dilaksanakan dari bulan Februari 2019 hingga bulan Mei 2019. Instrument yang digunakan dalam penelitian

terdiri dari instrument pembelajaran yaitu RPP, bahan ajar, media pembelajaran. Sedangkan instrument pengungkap data pada penelitian ini adalah lembar observasi aktivitas guru dan peserta didik dan lembar observasi percaya diri peserta didik. Prosedur analisis data yang digunakan terdapat beberapa tahap yaitu tahap pra penelitian, pada tahapan ini peneliti mempersiapkan apa saja yang harus dilakukan sebelum melakukan penelitian, tahap perencanaan tindakan pada tahap ini peneliti menyusun apa saja yang akan dilakukan saat pelaksanaan penelitian, tahap pelaksanaan tindakan pada tahap ini peneliti melaksanakan penelitian sesuai dengan yang sudah di rencanakan, tahap pengamatan pada tahap ini peneliti melakukan pengamatan selama proses pembelajaran berlangsung dengan mengamati sikap percaya diri siswa saat menggunakan metode *storytelling*, tahap terakhir yaitu tahap refleksi terhadap tindakan pada tahap ini merupakan tahap terakhir dalam tindakan penelitian, peneliti melakukan refleksi dari pembelajaran yang sudah dilakukan sehingga tindakan selanjutnya agar lebih baik.

Instrumen yang digunakan peneliti untuk mengungkap data dan mendukung saat tindakan penelitian adalah Rencana Pelaksanaan Pembelajaran (RPP), media ajar, bahan ajar, lembar observasi kegiatan guru dan siswa, lembar observasi sikap percaya diri siswa, dan dokumentasi.

Untuk menjawab rumusan masalah yang disusun, peneliti menggunakan analisis kualitatif dan kuantitatif. (Miles dan Hubermman dalam Sugiyono, 2015, hlm. 247) membagi komponen pada analisis data kualitatif menjadi 3 yaitu reduksi data *(data reduction)*, penyajian data *(data display)*, dan penarikan kesimpulan *(conclusion drawing)*.

Pada teknik analisis data kuantitatif merupakan dapat dianalisis secara deskriptif. Menurut (Kunandar, 2012, hlm. 128) mengemukakan bahwa data kuantitatif merupakan data dari nilai hasil belajar siswa yang dapat dianalisis secara deskriptif. Nilai hasil sikap percaya diri siswa dalam pembelajaran yang telah didapatkan oleh observer dapat hitung. Menurut (Riduwan, 2010, hlm. 15) untuk menghitung skor ideal dapat dilakukan dengan cara sebagai berikut:

$$\text{Nilai Percaya Diri} = \frac{n}{N}\ x\ 100$$

Hasil dari data yang telah diolah dapat dikategorikan dengan menyesuaikan dengan tabel kriteria sikap percaya diri siswa. Pada penelitian ini indikator keberhasilan yang ditentukan oleh peneliti sebesar 85%. Jika sikap percaya diri siswa setelah menerapkan metode *storytelling* mencapai 85%, maka penelitian dapat dihentikan.

C. HASIL DAN PEMBAHASAN

Hasil temuan pada penelitian dan pembahasan temuan akan dideskripsikan sebagai berikut.

SIKLUS 1

Penelitian ini dapat terlaksanakan jika instrument yang digunakan sesuai dengan penelitian yang akan dilaksanakan. Peneliti menggunakan metode penelitian tindakan kelas dimana tindakan yang dilaksanakan saat pembelajaran dan subjek yang diteliti yaitu peserta didik. Sehingga peneliti perlu menyusun RPP menggunakan metode *storytelling* agar meningkatkan sikap percaya diri siswa. Menurut (Kunandar, 2012, hlm. 263) berpendapat bahwa rencana pelaksanan pembelajaran (RPP) adalah rencana yang menggambarkan prosedur dan pengorganisasian pembelajaran untuk mencapai satu kompetensi dasar yang dijabarkan dalam silabus. RPP yang disusun mengacu pada (Permendikbud No 22 Tahun

2016). Setelah RPP disusun, peneliti melaksanakan tindakan siklus 1 dengan memperhatikan sikap percaya diri siswa.

Pada siklus 1 saat tindakan langkah-langkah pembelajaran disesuaikan dengan langkah-langkah yang ada pada metode *storytelling* yang telah disusun oleh ahli.pada langkah *pertama,* **pra cerita** dimana pada tahap ini guru menstimulus siswa agar mengetahui gambaran saat nanti akan bercerita. Sehingga siswa termotivasi agar mau menyampaikan cerita disesuaikan dengan contoh yang telah di lakukan oleh guru. Tahap *kedua* adalah tahap **bercerita,** dimana pada tahap ini siswa menyampaikan isi ceritanya didepan teman-teman kelompok besarnya dengan percaya diri, cerita yang disampaikan siswa berdasarkan cerita yang sudah didapatkan oleh masing-masing siswa. Sehingga masing-masing siswa dalam satu kelompok besar memiliki cerita yang berbeda. Hal ini bertujuan agar penyimak tidak bosan mendegarkan cerita yang terus diulang-ulang. Pada tahap ini sikap percaya diri siswa dinilai oleh observer disesuaikan dengan instrumen yang telah disediakan. Tahap *ketiga* adalah tahap **pasca cerita,** dimana pada tahap ini guru memberikan apresiasi kepada siswa dan guru memberikan lembar evaluasi untuk mengukur pemahaman cerita siswa dengan menuliskan kembali isi cerita yang telah dibacakan oleh siswa.

Pada penelitian siklus 1 ditemukan sikap percaya diri siswa yang masih rendah sehingga diperlukan refleksi agar siklus selanjutnya pembelajaran lebih baik dan tidak terjadi kesalahan yang sama. Sehingga peneliti perlu melakukan refleksi siklus 1.

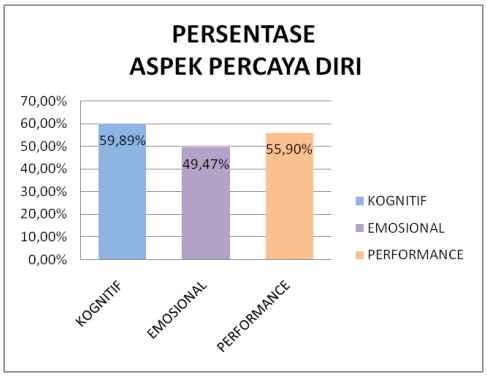
Pelaksanaan siklus 1 dilakukan pada hari selasa, 9 April 2019 di kelas IV. Pembelajaran menggunakan alokasi waktu 2x60 menit. Pada siklus 1 siswa yang hadir berjumlah 24 orang. Pembelajaran pada siklus 1 mengenai tema 8 "Daerah Tempat Tinggalku", subtema 3 "Bangga terhadap Tempat Tinggalku" dan pembelajaran ke 6. RPP yang disusun untuk siklus 1 perlu ditambahkan indikator percaya diri pada RPP. Ketika siswa diminta untuk bercerita, mereka kesulitan karena 2 kelompok di satukan dalam ruangan yang sama sehingga akan saling bersautan dan masing-masing kelompok atau yang bercerita membuat tidak dapat berkonsentrasi. Sebaiknya saat melakukan tindakan, kelompok besar dipisahkan ruangannya. Pada kondisi lain cerita yang didapatkan oleh peserta didik tidak sesuai dengan karakteristik siswa SD. Cerita yang peneliti siapkan terlalu panjang sehingga siswa kurang menguasai isi cerita yang akan disampaikan. Sebaiknya siswa sendiri yang mengarang cerita sesuai dengan kreatifitas masing masing sehingga siswa dapat mengetahui apa yang sudah mereka tuliskan. Pada kondisi lain, siswa banyak yang tidak memperhatikan ketika temannya bercerita. Sebaikan guru menggunakan kontrak belajar diawal pembelajaran dan guru bersikap tegas kepada siswa yang melanggar kontrak belajar.

Pada siklus 1 persentase sikap percaya diri siswa kelas IV hanya mendapatkan 55%. Angka ini masih masuk kedalam kategori sikap percaya diri yang rendah. Siswa yang masuk kedalam kategori percaya diri sangat tinggi hanya 2 orang, kategori tinggi hanya 2 orang, kategori cukup hanya 6 orang dan kategori rendah 11 orang. Maka dapat disimpulkan pada siklus 1 sikap percaya diri siswa masih termasuk kedalam kategori rendah. Perlu adanya refleksi agar sikap percaya diri siswa dapat meningkat hingga mencapai target yang telah ditentukan oleh peneliti.

Terdapat satu aspek yang termasuk kedalam kategori paling rendah yaitu pada aspek emosional. Hal ini disebabkan siswa merasa gugup dan merasa tidak dapat menyampaikan isi cerita dengan baik, tidak menggunakan kontak mata karena terpaku pada teks, dan tidak menggunakan gerak tubuh. Data yang telah dideksripikan dapat dilihat pada diagram aspek percaya diri dibawah ini.

Tabel 4.1
Hasil Percaya Dri Siswa Siklus 1

No.	Aspek	Jumlah	Persentase
1.	Kognitif	115	59.87%
2.	Emosional	95	49.49%
3.	*Performance*	161	55.9%
Rata-rata siklus 1		371	55%



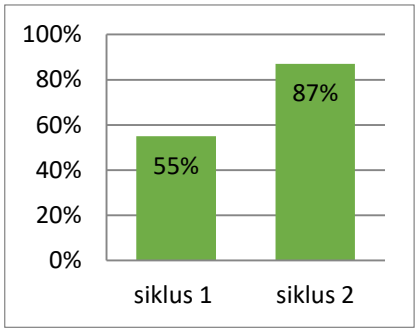
Gambar 4.*1* Diagram Aspek Percaya Diri Siswa Siklus 1

SIKLUS II

Pelaksanaan siklus II dilakukan pada hari selasa 30 April 2019 di kelas IV dengan alokasi waktu 2x60 menit. Siswa yang hadir mengikuti pembelajaran berjumlah 24 orang. Pembelajaran siklus II mengenai tema 9 "Kayanya Negeriku", subtema 3 "Pelestarian Kekayaan Sumber Daya Alam di Indonesia". Terdapat perbedaan KD pada siklus 1 dan siklus II. Pada siklus II terdapat KD Bahasa Indonesia dan PPKn. Sedangkan pada siklus I terdapat KD Bahasa Indonesia dan SBdP. RPP pada siklus II sudah mengalami perbaikan berdasarkan hasil refleksi pada siklus 1, yaitu dengan memperbaiki media ajar terutama cerita yang digunakan disesuaikan dengan karakteristik siswa SD, tempat saat melakukan *storytelling* sehingga siswa akan berkonsentrasi saat bercerita, kontrak belajar yang perlu dipertegas agar siswa memperhatikan temannya saat bercerita.

Pelaksanaan pembelajaran masih mengacu pada RPP siklus 1. Namun pada siklus II RPP yang disusun mengkhususkan di mata pelajaran PPKn. Dimana siswa menuliskan cerita sesuai dengan kreatifitas mereka dengan mengikuti arahan dari guru. Gambar persatuan dan kesatuan yang telah disiapkan oleh guru, lalu siswa bercerita sesuai dengan gambar yang tersedia. Sehingga siswa bebas untuk mengkomunikasikan sesuai kreatifitas masing-masing siswa. Pada pelaksanaan siklus II semua berjalan dengan lancar dan kondusif, hanya masih ada beberapa siswa yang jarang memperhatikan temannya ketika bercerita. Siswa bercerita sesuai dengan gambar yang mereka dapatkan sehingga setiap siswa memiliki cerita yang berbeda. Pada setiap siswa bergiliran untuk bercerita, guru meminta agar teman lainnya dapat menghargai orang yang sedang berbicara di depan agar ketika bercerita seluruh siswa dapat percaya diri dan memiliki sikap optimis.

Peningkatan percaya diri pada siklus II mengalami peningkatan dibandingkan pada saat siklus 1. Pada siklus 1 sikap percaya diri siswa apabila di persentasekan yaitu 55% atau masuk kedalam kriteria rendah. Namun pada siklus II sikap percaya diri siswa meningkat menjadi 87%. Data tersebut data dilihat pada diagram sikap percaya diri dibawah ini.

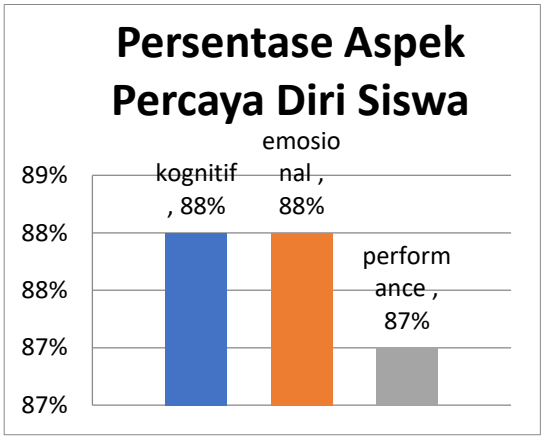


Gambar 4.2 Diagram Perbandingan Sikap Percaya Diri Siswa Siklus 1 dan Siklus II

Pada siklus II sikap percaya diri siswa mengalami peningkatan dibandingkan siklus 1. Jika di persentasekan sikap percaya diri siswa di kelas IV secara keseluruhan yaitu 87% atau masuk kedalam kategori sangat tinggi. Dari 24 siswa yang mengikuti pembelajaran terdapat 17 siswa yang memiliki kategori sikap percaya diri yang sangat tinggi. Terdapat 6 siswa yang masuk kedalam sikap percaya diri tinggi dan hanya 1 siswa yang sikap percaya dirinya cukup. Tetapi secara umum bahwa sikap percaya diri di kelas IV sudah meningkat dan masuk kedalam kategori sangat tinggi. Sehingga tindakan dapat hentikan. Hal ini dapat dilihat dari data aspek percaya diri siswa dibawah ini.

Tabel 4.3
Hasil Sikap Percaya Diri Siswa Siklus II

No	Aspek	Jumlah	Perssentase
1.	Kognitif	169	88%
2.	Emosional	165	88%
3.	*Performance*	251	87%
Rata-rata siklus II		585	87.7%

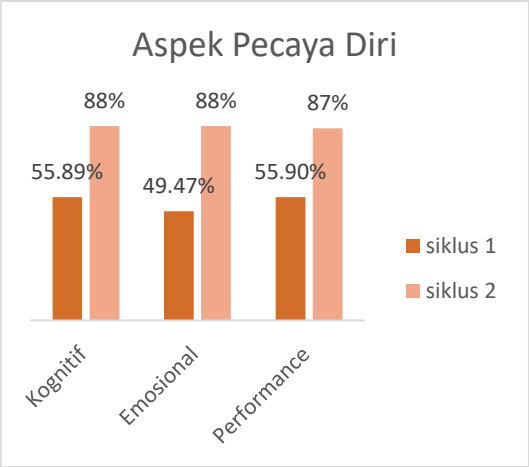


Gambar 4.3 Diagram Aspek Percaya Diri Siswa Siklus II

PEMBAHASAN

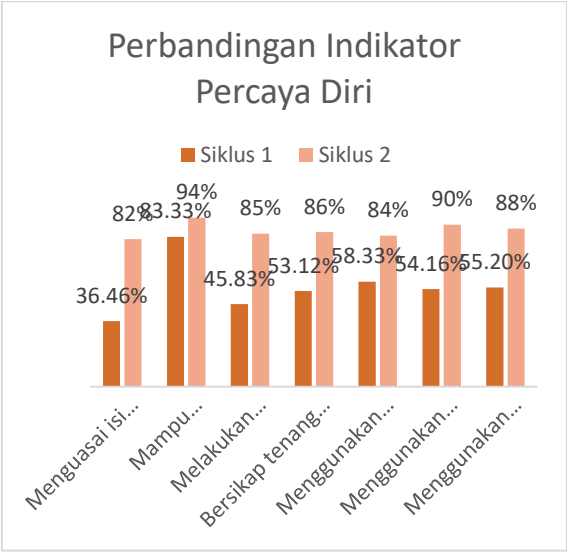
Dari hasil rata-rata siklus 1 dan siklus II, sikap percaya diri siswa di kelas IV mengalami peningkatan. Presentase pada siklus 1 sebesar 55% atau masuk kedalam kategori sikap percaya diri siswa yang masih rendah dan pada siklus II dengan presentase sebesar 87% atau masuk kedalam kategori sangat tinggi.

Apabila dilihat dari perbandingan presntase aspek pada siklus I dan siklus II, terlihat bahwa aspek kognitif sikap percaya diri siswa 59.89% meningkat menjadi 88%. Pada aspek emosional yaitu 49.47% meningkat menjadi 88%. Pada aspek *performance* yaitu 55.9% meningkat menjadi 87%. Dari data tersebut terlihat jelas bahwa terjadi peningkatan pada setiap siklus. Data presentase diatas dapat dilihat pada diagram dibawah ini.



Gambar 4.*4* Diagram Aspek Percaya Diri Siswa Siklus 1 dan Siklus II

Aspek percaya diri yang telah dideskripsikan diatas maka adapun indikator sikap percaya diri siswa yaitu menguasai isi cerita/materi yang disampaikan, mampu menuliskan isi cerita/materi denga jelas, melakukan kontak mata dengan *audience,* bersikap tenang ketika menjelaskan materi yang disampaikan, menggunakan gerak tubuh, menggunakan intonasi yang lantang, dan menggunakan suara yang jelas. Maka sikap percaya diri siswa meningkat setelah diterapkan metode *storytelling.* Hal tersebut dapat dilihat pada gambar 4.5 disamping.



Gambar 4.5 Diagram Indikator Percaya Diri Siswa Siklus 1 dan Siklus II

Dari hasil data diatas dapat dilihat pada indikator sikap percaya diri siswa meningkat, dapat dilihat bahwa perbandingan indikator siklus I dan siklus II terjadi peningkatkan. Hal ini disebabkan ketika pada siklus I aspek kognitif siswa kecil sehingga berpengaruh pada aspek emosional dan *performance*. Dimana pada siklus I siswa diberikan cerita oleh guru tetapi siswa tidak mampu untuk memahami isi cerita tersebut. Setelah direfleksi dan diberikan tindakan pada siklus II sikap percaya diri siswa meningkat hal ini disebabkan karena siswa mampu menguasai isi cerita dengan baik sehingga indikator selanjutnya dapat berpengaruh dan meningkat. Pada siklus II siswa dapat bercerita dengan percaya diri dikarenakan siswa sendiri yang membuat cerita pada gambar yang telah di sediakan oleh peneliti. Sehingga jika pada indikator menguasai isi cerita dan mampu menuliskan isi cerita dengan baik maka indikator melakukan kontak mata, bersikap tenang ketika bercerita, menggunakan gerak tubuh, menggunakan intonasi yang lantang dan menggunakan suara yang jelas siswa dapat melakukannya dengan baik dan mencapai nilai yang diharapkan.

Pengamatan sikap percaya diri siswa dan kegiatan pada saat pembelajaran diukur menggunakan lembar observasi yang sudah disusun oleh peneliti. Pada saat tindakan berlangsung, pada siklus 1 masih kurang terlihat sikap percaya diri siswa, terlihat pada aspek kognitif sikap percaya diri siswa hanya 55.89%, pada aspek emosional yaitu 49.47% dan pada aspek *performance* yaitu 55.9%. Hal ini karena siswa tidak percaya pada kemampuannya sendiri, siswa masih melihat teks dalam bercerita, malu untuk mengeluarkan suaranya, dan tidak berani melihat *audience*. Menurut (Mardatillah dalam Syam, Asrullah, 2017, hlm.92) mengemukakan bahwa seseorang yang memiliki kepercayaan diri tentunya memiliki ciri-ciri antara lain mengenal dengan baik kekurangan dan kelebihan yang dimilikinya, membuat standar atas pencapaian tujuan hidupnya, tidak menyalahkan orang lain atas ketidakberhasilannya, mampu mengatasi kecemasan dalam dirinya, tenang dalam menghadapi sesuatu, berpikir positif, maju terus tanpa menoleh kebelakang. Pada siklus II terjadi peningkatan sikap percaya diri siswa bahwa terlihat siswa bersikap tenang dalam menyampaikan pendapatnya, berani untuk menjawab pertanyaan guru, tidak ragu untuk bertanya. Pada siklus II terjadi peningkatan sikap percaya diri siswa menjadi 88% sehingga peneliti menghentikan tindakan pada penelitin ini.

Penelitian menjadi berhasil tidak lepas dari RPP yang telah disusun oleh peneliti menggunakan metode *storytelling*. Menurut (Grissinger, 2014, hlm. 658) berpendapat bahwa *storytelling* adalah adalah bentuk komunikasi yang akrab, yang beresonansi dengan kita. Cerita faktual mendidik kita, menyentuh kita, dan merangsang kita untuk bertindak. Mereka adalah kendaraan yang efisien untuk membuat orang memahami, mengingat, dan menerima informasi baru.

Dengan bercerita anak akan belajar untuk mengkomunikasikan pendapatnya di depan teman-temannya. Hal ini dapat menjadi tentangan bagi siswa untuk melatih sikap percaya diri dimulai dari lingkungan sekolah dasar. Sehingga ketika sikap percaya diri yang positif sudah tertanam pada diri siswa, maka untuk masa depan siswa akan terus tertanam sikap percaya diri yang positif. RPP yang disusun oleh peneliti mengacu pada pada (Permendikbud No 22 Tahun 2016) yang terdiri dari identitas sekolah yaitu nama satuan pendidikan, identitas mata pelajaran atau tema/subtema, kelas/semester, materi pokok, alokasi waktu, tujuan pembelajaran, kompetensi dasar dan indikator pencapaian kompetensi, materi pembelajaran, metode pembelajaran, media pembelajaran, sumber belajar, langkah-langkah pembelajaran, dan penilaian hasil pembelajaran. RPP yang disusun juga menggunakan metode *storytelling.* Tujuan disusun RPP untuk acuan bagi guru untuk mekasanakan

kegiatan pembelajaran di kelas, agar kegiatan pembelajaran menjadi sistematik dan berjalan dengan terarah. RPP yang disusun oleh peneliti agar pembelajaran lebih efektif dan efisien.

Adapun beberapa hal yang harus diperbaiki pada siklus I yaitu pada teks cerita fiksi yang didapatkan siswa terlalu panjang dan tidak sesuai dengan karakteristik anak. Sebaiknya teks yang didapatkan anak disesuaikan karakteristik anak sehingga anak dapat menguasai isi cerita. Dengan membaca cerita fiksi yang telah dibagikan maka siswa dapat menceritakannya kembali di depan teman-teman kelompok besarnya. Menurut (Zuhari, 2018, hlm. 12) bahwa membaca merupakan sebuah keterampilan yang sangat berbeda dengan keterampilan lain. Dalam proses pembelajaran kegiatan membaca tidak dapat dipisahkan, karena dengan kegiatan tersebutlah peserta didik dalam menggali informasi dari sebuah teks bacaan sebagai salah satu kegiatan pembelajaran yang dilakukan oleh peserta didik. Ketika siswa sudah membaca cerita fiksi yang akan diceritakan kepada teman-temannya, maka siswa akan masuk ke proses *storytelling.* Pada saat bercerita observer menilai sikap percaya diri siswa menggunakan instrument yang telah disusun oleh peneliti.

Pada siklus II, peneliti menggunakan media gambar untuk siswa menceritakan isi yang ada pada gambar tersebut. Masing-masing siswa memiliki gambar yang berbeda pada tiap kelompoknya. Menururt (Dewi, 2015, hlm. 3) berpendapat bahwa gambar adalah alat bantu yang dapat dijadikan sebagai penyalur pesan guna merangsang pikiran, perasaan, dan kemampuan anak untuk belajar. Melalui media gambar sehingga anak dapat berimajinasi menceritakan isi gambar sesuai dengan bahasa mereka sediri dan dapat menceritakan kembali di depan teman-teman kelompok besarnya dengan percaya diri. Dengan menceritakan isi gambar dengan kreatifitas masing-masing siswa, maka dengan mudah siswa dapat mengingat apa yang telah diceritakan pada gambar tersebut. Sehingga ketika siswa menguasai aspek kognitif dengan baik maka, aspek emosional dan *perfomance* akan baik pula. Pada siklus II semua aspek sudah meningkat. Pada aspek kognitif memiliki presentase sebesar 88%, aspek emosional memiliki presentase sebesar 88% dan pada aspek *performance* memiliki presentase 87%. Hal ini dikarenakan siswa dapat menguasai isi cerita dengan baik sehingga aspek sikap percaya diri dapat emningkat. Selain itu, guru memberikan penghargaan kepada siswa yang sudah mencapai sikap percaya diri, baik pengahragaan verbal maupun *non verbal.* Menurut (Surya, 2007, hlm. 2) berpendapat bahwa sikap percaya diri pada peserta didik juga harus mendapat campur tangan dari guru. Hal yang perlu kita ketahui bahwa guru sebagai fasilitator dan motivator pada proses pembelajaran sehingga perlu adanya peran guru dalam menciptakan suasana pembelajaran yang aktif, berpusat pada peserta didik dan dapat meningkatkan percaya diri peserta didik. Seluruh aspek sikap percaya diri siswa di kelas IV sudah mencapai 88% sehingga peneliti memutuskan untuk mengehentikan penelitian.

D. SIMPULAN

Berdasarkan temuan dan pembahasan penelitian yang sudah dideskripsikan di bab IV , maka dapat peneliti simpulkan sebagai berikut.

1. Rencana Pelaksanaan Pembelajaran dengan menerapan metode storytelling untuk meningkatkan sikap percaya diri siswa di kelas IV sekolah dasar di salah satu SDN di Kecamatan Hegarmanah Kota Bandung, disusun oleh peneliti mengacu pada pada Permendikbud No 22 Tahun 2016. RPP ini disusun menggunakan langkah-langkah pada metode storytelling. Pada kegiatan inti terdapat langkah-langkah storytelling yang telah dirumuskan oleh ahli. Maka tahapannya yaitu tahap pertama tahap pra cerita dimana pada kegiatan ini guru menstimulus siswa dengan bercerita didepan kelas sebelum siswa bercerita agar siswa mendapatkan gambaran ketika nanti bercerita di depan teman-teman kelompok besarnya, tahap kedua tahap bercerita dimana pada

kegiatan ini siswa bercerita di depan teman-teman kelompok besarnya, dengan menceritakan masing-masing materi yang telah didapatkan siswa, pada tahap ini observer menilai sikap percaya diri siswa menggunakan intrumen pengungkap data yang telah disusun oleh peneliti dengan memperhatikan aspek dan indikator sikap percaya diri siswa. Pada tahap ketiga yaitu tahap pasca cerita dimana siswa menuliskan hasil ceritanya pada lembar kerja yang telah diberikan oleh peneliti, dengan tujuan siswa mengingat isi cerita yang telah disampaikan di depan teman-temannya.

2. Pelaksanaan pembelajaran dengan menggunakan metode storytelling membuat pembelajaran lebih aktif dan berpusat pada siswa. Dengan menerapkan metode storytelling pembelajaran menjadi lebih bermakna dan dapat mengasah kemampuan sikap percaya diri siswa. Sehingga ketika sikap percaya diri siswa sudah tertanam sejak di pendidikan dasar, maka ketika di fase selanjutnya siswa sudah terlatih sikap percaya diri melalui pembelajaran yang telah di rancang oleh guru. Pada pembelajaran di kelas tidak lagi pembelajaran yang berpusat pada guru sehingga siswa tidak dapat menggali potensi yang ada dalam dirinya.
3. Peningkatan sikap percaya diri siswa di kelas IV sekolah dasar setelah menggunakan metode storytelling ternyata meningkat. Terlihat pada data yang telah didapatkan oleh peneliti bahwa indikator percaya diri yang telah dirumuskan sudah meningkat. Dari beberapa indikator percaya diri yang disusun oleh peneliti yaitu pada aspek kognitif yang memiliki indikator menguasai isi cerita/materi yang disampaikan dan mampu menuliskan isi cerita/materi dengan jelas. Pada aspek emosional yang memiliki indikator melakukan kontak mata dengan audience dan bersikap tenang ketika menjelaskan materi yang disampaikan. Pada aspek performance dengan indikator menggunakan gerak tubuh, menggunakan intonasi yang lantang dan menggunakan suara yang jelas. Setelah diterapkan metode storytelling terlihat bahwa indikator sikap percaya diri siswa pada setiap tindakannya meningkat. Sehingga dapat disimpulkan bahwa penerapan metode storytelling dapat meningkatkan sikap percaya diri siswa di kelas IV Sekolah Dasar.

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