Chapter 6

Integrating Artificial Intelligence into EFL Classrooms: Opportunities for Improving Students' Reading Comprehension

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1. INTRODUCTION

The rapid evolution of Artificial Intelligence (AI) has fundamental reshaped modern pedagogy, particularly in English as a Foreign Language (EFL) instruction. Reading comprehension remains a cornerstone of linguistic development, yet many EFL learners struggle with limited vocabulary and complex syntax. As a result, there is a growing need for innovative tools to help students bridge the gap between their current linguistic abilities and the demands of academic texts.

AI-powered technologies offer a transformative solution by simulating human intelligence to support learning through personalized instruction and automated feedback (Luckin et al., 2016; Sharma et al., 2022). These tools, ranging from intelligent tutoring system to adaptive platforms, allow for a more flexible

learning environment where students can receive immediate support (Hidayat, 2024; Holmes et al., 2019). By integrating AI, educators can better address the diverse needs of learners, making the process of reconstructing meaning from English text more efficient.

Despite these benefits, the integration of AI must be balanced with ethical considerations and pedagogical caution. While tools like ChatGPT and Gemini enhance comprehension speed, concerns regarding data privacy and the potential loss of critical thinking remain prevalent (Ibad et al., 2024; Selwyn, 2019). Therefore, educators need to adopt a thoughtful and guided approach in integrating AI tools to ensure that technology supports rather than replaces students' cognitive engagement in reading.

This chapter examines the concepts of using AI in EFL reading classrooms, exploring how it can serve as a supportive tool to overcome linguistic barriers while fostering independent and responsible learning.

2. DISCUSSION

Reading comprehension if a fundamental skill in the EFL context, as it enables students to asses knowledge, expand vocabularies, and develop critical thinking. However, many learners still face difficulties in understanding English texts. Therefore, the integration of Artificial Intelligence (AI) in reding instruction offers promising opportunities to support students' reading development. This section discusses AI in education, reading comprehension in EFL, and the integration of AI in reading classrooms.

2.1 Artificial Intelligence in Education

Defining AI, it is a technology that enables computers and machines to perform tasks that normally require like human. From the father of AI, McCarthy, we know AI as the science and engineering of machines, especially intelligent computer program (McCharthy, 2007). In simpler, AI is "a man-made object with thinking power" (Sharma et al., 2022). It is also known as computer systems designed to perceive information from the environment and perform

intelligent actions to achieve specific goals in ways similar to human intelligence (Luckin et al., 2016). So, Artificial Intelligence refers to computer-based technologies designed to simulate human intelligence by perceiving information, processing data, and performing tasks that typically require human thinking and decision-making to achieve specific goals like human cognition.

Furthermore, Sharma, et al (2022) specified that AI refers to computer-based technologies and systems designed to simulate human intelligence in performing tasks such as learning, reasoning, and problem-solving. In conclusion, AI can be implied as the science and technology of developing intelligence computer system capable of simulating human intelligence in performing tasks such as learning, reasoning, and problem solving.

In educational contexts, AI technologies are used to support learning processes thorough intelligence tutoring system, adaptive learning platforms, automated feedback, and conversation agents. It enable intelligent system to analyse learning data, provide personalized learning experiences, and support adaptive instruction that meets students' individual needs (Holmes et al., 2019; Zawacki-Richter et al., 2019). These technologies allow educators to design more effective learning environments that responds to diverse needs of learners, to help them learning easier. Therefore, AI in education can be defined as the application of AI technologies to support, enhance, and personalize teaching and learning processes.

There are some beneficial and unbeneficial of using AI in education. AI is able to provide personalized learning experiences, where learning materials and activities can be adapted to students' individual needs and learning pace (Holmes et al., 2019). Further, AI also can immediately feedback and assess students' result of learning, allowing them to identify their mistakes and improve their learning more efficient (Woolf, 2008). Last, AI can assist teacher to monitor their students' learning and design the instruction strategies effectively (Zawacki-Richter et al., 2019). It can be stated that AI gives

educators some experiences to make their learning classes are better than before.

However, although AI in education has many advantages, it also has some weaknesses, such as data privacy and ethical consideration (Holmes et al., 2019). Another problem is that AI raises the lack of human interaction in learning environment (Luckin et al., 2016). In addition, it is also making the teacher's jobs more complete, because it requires significant financial to serve themselves with technological infrastructure, system maintenance, and teacher training (Selwyn, 2019). In conclusion, AI presents several challenges such as data privacy concern, reduced human interaction in learning environments, ethical issues, and requires substantial financial investment.

From description above, it can be concluded that Artificial Intelligence Artificial Intelligence in education refers to the use of AI-based technologies to assist, improve, and personalize teaching and learning activities. Although offering significant benefits, AI also has weaknesses. Therefore, its use in education should be implemented wisely to ensure that it supports learning without reducing students' critical thinking and independence. So, AI optimizes modern education effectively.

2.2 Reading Comprehension in EFL Context

Reading comprehension is a complex cognitive process in which readers actively construct meaning from written texts. Klingner et al. (2007) defined reading as a process of reconstructing meaning by coordinating a number of complex process that include reading, word and world knowledge, and fluency. Further, it is stated that reading comprehension is the interaction between linguistic knowledge, cognitive processing, and background knowledge to understand the message covered by the text (Harida et al., 2016). By description above, it can be stated that reading comprehension is as a complex cognitive try construct meaning by interacting with a text through their existing knowledge and linguistic resources.

According to Grabe and Stoller (2019), successful reading comprehension requires the integration of bottom-up processing, such as decoding words and syntactic structures and top-down processing, which involves using prior knowledge and contextual information to interpret meaning. Similarly, Alderson (2000) states that comprehension results from interaction between the reader, the text, and the purpose of reading. Therefore, reading comprehension can be understood as an interactive process in which readers actively construct meaning by combining linguistic knowledge, schemata, and reading purposes.

In the context of English as a Foreign Language (EFL), reading plays a particularly important role because English is not commonly used for everyday communication. Learners are therefore mainly exposed to English through classroom instruction and written materials. As a result, reading becomes a major source of language input that supports vocabulary development, grammatical understanding, and overall language proficiency (Grabe & Stoller, 2019). Therefore, developing effective reading comprehension skills is essential for EFL learners to improve their language proficiency (Hasbi, 2026).

The success of reading comprehension in EFL contexts is influenced by several factors, including linguistic knowledge, cognitive factors, and metacognitive strategies. Linguistic knowledge, such as vocabulary and syntactic awareness, plays a crucial role in enabling learners to decode and interpret texts (Tánczikné, 2017; Verhoeven et al., 2010). In addition, cognitive factors, such as background knowledge and inferencing ability support readers in construction meaning from texts (Nergis, 2013; Smith et al., 2021). Further, metacognitive strategies, including predicting, monitoring comprehension, and summarizing, also help learners regulate their reading process and improve understanding (Meniado, 2016; Nergis, 2013). Together, these factors play an essential role in shaping learners' reading comprehension performance in EFL context.

However, many EFL learners still faces difficulties in comprehending English texts, such as limited vocabularies knowledge, unfamiliar sentence structures, and others. These challenges highlight the importance of effective instructional strategies and supportive learning tools to enhance students' reading comprehension skills in EFL context (Grabe & Stoller, 2019). Therefore, instructional approaches and technologies are increasingly needed to support students in overcoming these reading challenges.

In conclusion, reading comprehension in EFL context is interactive process that requires learners to integrate linguistic knowledge, cognitive abilities, and reading strategies to construct meaning from text (Hasbi & Wulansari, 2025). Because English is not commonly used in daily communication, effective instructional support is essential to help learners develop their reading comprehension skills.

2.3 Integrating Artificial Intelligence into EFL Reading Classroom

Artificial Intelligence (AI) can be integrated into EFL reading classroom to support students' reading comprehension and learning process. AI tools can help teachers to create more interactive and flexible learning environments (Hasbi et al., 2024). Through AI platforms, students can access reading materials, vocabulary explanations, and automatic feedback. These features help students understand English text more easily and learn more independently. Studies show that AI can improve learning experiences and support language instructions in modern classrooms (Hidayat, 2024; Holmes et al., 2019; Zawacki-Richter et al., 2019). So, there are no reasons to avoid the used of AI in learning classroom, especially for reading classroom.

In EFL learning, reading comprehension is an essential ability that helps students interpret and understand written information. However, many EFL learners face difficulties when reading English texts because of some problems, such as limited vocabularies, unfamiliar grammar, and lack of reading strategies. AI-based tools

can help them by providing explanation, guiding them to find main ideas, and giving practice exercises. There are some findings that have been agreed that AI can improve understanding of the students in the English texts and their overall reading ability (Khotimah et al., 2022; Lizar et al., 2025; Luckin et al., 2016; Öner, 2025). Therefore, the use of AI-based tools can support EFL learning in overcoming reading difficulties and improving their comprehension of English texts.

When the students got difficulties in reading activities, they agreed that using AI help them to understand their reading problems. It is seen in the following chart, that 100% students used AI as tools for helping them understand what they read.

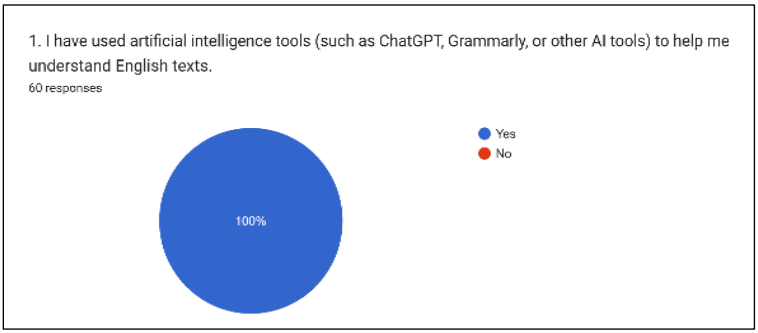

Figure 1: Use AI to understand English texts

Further, students also confirmed that AI helped them to understand English text faster. It is seen in the chart below that more than 95% students agreed about it.

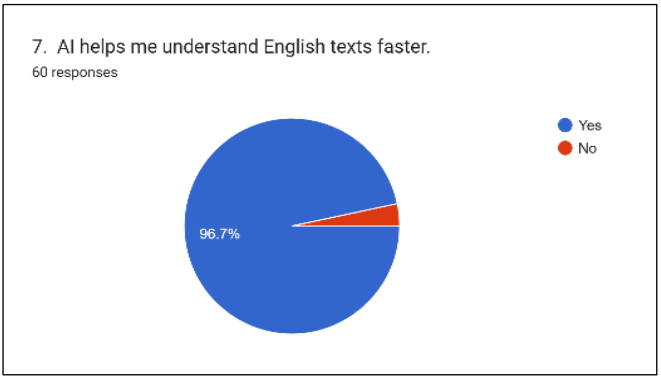

Figure 2: AI helps understand English texts faster

There are many tools that the students can use in their reading activities. AI platforms or tools that is given by the students to help in their reading activities are various, such as chat GPT, Gemini, Cloud AI, DeepSeek, NotebookLM and others. It can be seen in the following picture.

Figure 3: Tools AI used by the students in reading

AI technologies can help teachers manage their reading activities in the classroom, while teachers still play an important role in guiding students and supporting their learning. Therefore, AI can be used as a supportive tool to improve reading instruction in EFL classrooms. When integrated effectively and use wisely, the use of AI in reading instruction can contribute to improve students' reading comprehension.

3. FUTURE DIRECTION

Reading comprehension is an essential skill that learners need to develop; however, many students still difficulties in obtaining information from English texts. Various problems are frequently found in reading classrooms, and Artificial Intelligence (AI) can be considered as a potential solution (Hang & Ha, 2024; Harida et al., 2025; Hidayat, 2024). Nevertheless, the use of AI has also become a subject of debate because it may create new challenges in the learning process. A recent literature review indicates that excessive reliance on AI may reduce students' creativity and critical thinking abilities (Ibad et al., 2024). Therefore, teachers and educators need to guide students carefully in using AI and emphasize the importance of ethical and responsible use of this technology. Thus, integrating AI into reading classroom activities can serve as a supportive approach to help students overcome their reading problems.

Further, AI integration in EFL reading classrooms offers opportunities to enhance students' reading comprehension. However, it must be implemented carefully so AI supports learning without replacing independent thinking. Further, teachers should guide ethical AI use while promoting critical thinking and creativity. Finally, future research should examine the effectiveness of AI-assisted reading instruction across different context and strategies.

Author

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