THE EFFECTIVENESS OF AI TOOLS IN ENHANCING READING SKILLS AMONG INTERMEDIATE LEARNERS

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Abstract: This study investigates the role of artificial intelligence (AI) tools in developing reading skills among intermediate-level students. As AI technologies become increasingly integrated into educational environments, they offer innovative opportunities to improve language learning and reading comprehension. The research focuses on how AI-powered applications can support students in enhancing vocabulary knowledge, reading fluency, comprehension abilities, and critical thinking skills through personalized and interactive learning experiences. The study examines several important factors influencing the effectiveness of AI-assisted reading instruction, including the type of AI tool used, the frequency of student interaction with these technologies, learners' English proficiency levels, teaching methods, and the duration of AI usage. Popular AI-based platforms such as ChatGPT, Grammarly, and AI-supported reading applications were analyzed to determine their impact on students' reading performance and engagement. To evaluate the relationship between these variables and students' reading development, quantitative research methods were applied, including surveys, reading assessments, and statistical analysis. The findings suggest that AI tools can significantly improve students' reading comprehension, motivation, and independent learning abilities by providing immediate feedback, adaptive learning materials, and personalized recommendations. Moreover, AI technologies help create a more interactive and learner-centered educational environment, encouraging students to participate more actively in reading activities. However, the study also highlights several challenges associated with AI integration, such as students' overdependence on technology, limited critical analysis skills, and the inability of some AI systems to fully interpret cultural context and deeper textual meaning. Therefore, the research emphasizes that AI tools should complement rather than replace traditional teaching methods. Overall, this study demonstrates that the effective integration of AI technologies can play a significant role in enhancing reading skills among intermediate-level students and offers practical recommendations for educators seeking to incorporate AI into language instruction responsibly and effectively.

Keywords: artificial intelligence, reading skills, teaching, learner-centered roles, learning environments

AI has made substantial advancements in recent years, transforming various sectors, including education. The field of language learning, particularly EFL instruction, has experienced significant changes with the integration of AI technologies. Traditionally, language learning relied heavily on direct teacher involvement and manual feedback; however, AI tools now offer opportunities to enhance and personalize the learning experience in ways previously unimagined (Song, 2023). The application of AI in writing instruction, in particular, has garnered increasing attention due to its potential to offer individualized feedback, facilitate learner autonomy, and provide scalable instruction for large groups of students (Hwang et al.,

2023)The rapid advancement of artificial intelligence (AI) has generated substantial changes across numerous sectors, and education—particularly language learning—has experienced significant transformation as a result (Chen et al., 2022). In recent years, AI-powered applications such as ChatGPT, Grammarly, QuillBot, and other intelligent writing assistants have created new opportunities for teaching and learning English writing skills. These technologies are especially relevant because writing is widely regarded as one of the most demanding competencies for second-language (L2) learners, requiring the simultaneous use of grammar, vocabulary, organization, coherence, and critical thinking (Qassrawi & Al Karasneh, 2025; Jamshed et al., 2024).

In contrast to traditional classroom instruction, AI-based tools can provide instant feedback, personalized recommendations, and ongoing opportunities for practice. These features make them valuable resources for both students and teachers who are looking for more effective and flexible ways to enhance writing skills. For instance, grammar-checking systems can immediately detect and correct language mistakes, paraphrasing tools can support students in improving sentence structure, and generative AI platforms such as ChatGPT can assist learners with brainstorming, drafting, and developing ideas. Consequently, these technologies are gradually transforming the methods through which writing is taught and practiced across various educational settings.

Reading comprehension is widely recognized as a fundamental skill that plays a crucial role in academic achievement, lifelong learning, and participation in modern digital environments (National Reading Panel, 2000). In today's technology-driven world, students are not only expected to understand printed texts but also to develop digital literacy skills necessary for online learning and information processing. Despite its importance, many learners continue to experience difficulties in understanding and interpreting written texts, while traditional methods of reading instruction are not always effective in addressing the diverse learning needs of all students.

According to the National Assessment of Educational Progress (NAEP, 2019), only 35% of fourth-grade students in the United States achieved reading proficiency at or above the expected level. Furthermore, significant disparities in reading achievement continue to exist among students from low-income families and minority backgrounds (Reardon et al., 2012; National Center for Education Statistics, 2019). Learners with poor reading comprehension skills often face serious academic and social challenges, including restricted access to educational resources, limited academic success, reduced confidence, and lower future employment opportunities (Kirsch et al., 2011). Therefore, identifying innovative and effective strategies to improve students' reading comprehension abilities has become a major priority in contemporary education.

Recent educational research highlights the importance of personalized and adaptive learning approaches in supporting reading development (Fisher & Frey, 2020). In particular, technological advancements and AI-powered educational tools are increasingly recognized as valuable resources for addressing individual learning differences and enhancing student engagement (EdTech, 2021). Modern AI technologies such as ChatGPT and other intelligent reading platforms are capable of providing immediate feedback, personalized recommendations, interactive reading exercises, and adaptive learning materials based on students' proficiency levels and learning pace. These tools can help learners strengthen

vocabulary knowledge, improve comprehension accuracy, and develop critical reading and analytical thinking skills in a more engaging and learner-centered environment.

Moreover, AI-supported learning environments allow students to practice reading independently and receive individualized assistance without the limitations of traditional classroom settings. Through features such as text simplification, automatic summarization, question generation, pronunciation support, and comprehension analysis, AI tools can make reading activities more accessible and effective for intermediate-level learners. As a result, the integration of AI into reading instruction has the potential to transform traditional educational practices and create more flexible, inclusive, and efficient learning experiences.

Nevertheless, while AI technologies offer numerous educational benefits, researchers also emphasize the importance of balanced implementation. Overdependence on digital tools may reduce learners' independent critical thinking and analytical reading abilities if not guided appropriately by teachers. Therefore, AI should be viewed as a supportive educational resource that complements rather than replaces traditional teaching methods. Understanding the opportunities and limitations of AI-assisted reading instruction is essential for educators, curriculum designers, and policymakers seeking to integrate technology responsibly into modern language education.Recent developments in artificial intelligence (AI) and natural language processing (NLP) have demonstrated considerable potential in addressing persistent challenges in reading education. In particular, personalized and adaptive learning systems offer tailored instructional approaches that respond to individual learners' needs, abilities, and learning pace (Xie et al., 2018). By integrating AI technologies into reading instruction, educators can create more flexible and supportive learning environments that help students improve their comprehension skills, engage with more complex texts, and expand their academic knowledge and cognitive development.

Empirical research has increasingly supported the effectiveness of AI-driven personalized learning platforms in improving reading outcomes across different educational contexts. For example, Liu et al. (2020) found that an AI-based adaptive reading platform significantly enhanced the reading comprehension abilities of primary school students in China. Similarly, Iwata et al. (2020) reported that an AI-supported writing feedback system contributed indirectly to improved reading comprehension by providing learners with individualized feedback that strengthened their understanding of language structure and meaning. These findings suggest that AI tools can play a meaningful role in supporting both direct and indirect pathways to reading development.

Further evidence is provided by Akiba et al. (2020), whose study showed that an AI-based reading support system improved the comprehension skills of Japanese middle school learners. The system recommended reading materials based on students' proficiency levels and interests while also offering feedback to help them better understand assigned texts. In a similar vein, Khan and Mutawa (2021) examined an AI-powered personalized reading platform for Arab learners of English as a foreign language and found significant improvements in reading comprehension, motivation, and learner engagement. The platform's ability to adjust content according to learners' language proficiency and interests was identified as a key factor contributing to its effectiveness.

Despite these promising results, the existing literature still highlights the need for further investigation into how AI-based personalized reading systems can be optimally designed and implemented in diverse educational settings. Questions remain regarding the most effective instructional models, the role of teachers in AI-supported environments, and the long-term impact of such technologies on students' independent reading abilities. Moreover, additional research is required to understand how these platforms influence learner motivation, engagement, and critical reading skills over time.Therefore, the present study aims to explore the effectiveness of AI-based personalized reading platforms in enhancing students' reading comprehension skills. In addition, it seeks to examine how these systems can be designed to maximize learning outcomes and to investigate their impact on student motivation, engagement, and overall reading development in educational contexts.Recent advances in artificial intelligence (AI) and natural language processing (NLP) have significantly improved the development of personalized and adaptive reading instruction. These technologies allow learning platforms to adjust reading materials, feedback, and learning pathways according to individual students' proficiency levels, interests, and learning needs. As a result, students can better understand complex texts, improve reading comprehension skills, and develop stronger academic performance.

Previous studies have demonstrated that AI-based personalized reading systems can positively influence students' learning outcomes. Research by Liu et al. (2020) showed significant improvement in primary school students' reading comprehension using an adaptive AI reading platform. Similarly, Akiba et al. (2020) found that AI-based systems that recommend reading materials based on learner ability improved comprehension among middle school students. Khan and Mutawa (2021) also reported that AI-supported reading platforms increased motivation, engagement, and reading performance among EFL learners. Additionally, Iwata et al. (2020) highlighted that AI feedback systems can indirectly support reading comprehension through improvements in writing and language understanding.

Despite these positive findings, there is still a need for further research to determine how AI-based reading platforms should be designed and implemented effectively across different educational contexts. In particular, more studies are required to examine their long-term impact on reading proficiency, learner motivation, and independent reading skills. The role of teachers and the balance between AI support and traditional instruction also remain important areas for future investigation.

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