

The Role of Artificial Intelligence in English Learning: Potential vs Challenges

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ABSTRACT

The study of Artificial Intelligence (AI) in English learning has introduced a dynamic shift in educational methodologies, offering significant potential while presenting notable challenges. AI-powered tools such as language learning applications, trend digital assistants like ChatGPT, and adaptive learning platforms, have revolutionized personalized learning by addressing individual learners' needs. These technologies enhance vocabulary acquisition, pronunciation accuracy, and contextual understanding through real-time feedback and interactive modules. However, the adoption of AI in English learning is not without challenges. Ethical concerns, such as data privacy and the potential for over-reliance on technology, raise questions about student autonomy. This study uses a qualitative descriptive approach to explore the potential and challenges of using Artificial Intelligence (AI) in English learning. Additionally, the high cost of AI tools may limit accessibility for learners from underprivileged backgrounds, exacerbating educational inequalities. Another significant barrier is the lack of contextual nuance in AI systems, which may struggle with cultural and idiomatic expressions, potentially leading to miscommunication or incomplete understanding. This article explores the

dualistic role of AI in English learning, analyzing its transformative potential alongside the hurdles that educators and learners must navigate. The discussion highlights the importance of integrating AI with traditional pedagogical practices to maximize its benefits while mitigating risks. By addressing these challenges, AI can serve as a valuable complement to human instruction, fostering a more inclusive and effective language learning environment.

Keywords: Artificial Intelligence, English Learning, Personalized Education, AI Challenges, Language Acquisition

INTRODUCTION

The advancement of digital technology has brought significant changes in various aspects of life, including through the field of education. Artificial intelligence is one of the innovations that continues to grow rapidly is, which has shown its potential in helping English learning, both learning applications, online platforms, and tools such as chatbots and speech recognition. This technology allows students to learn independently, obtain instant feedback and access materials tailored to individual needs. However, despite these great opportunities, several challenges must be addressed. For example, limited access to technology for students in remote areas, a lack of digital literacy among educators and students and

concerns about the reduced role of human interaction in the teaching and learning process. In addition, questions remain about the effectiveness of using AI in developing productive English skills, such as speaking and writing, which require a personalized and creative approach. Considering these potentials and challenges, it is important to explore more deeply how AI can be optimally utilized to support English language learning, as well as how existing obstacles can be minimized. This article aims to identify the role of AI in English language learning, evaluate the opportunities offered, and analyze the obstacles that may be faced, resulting in a holistic view of the integration of AI in language education.

AI can be integrated into general teaching techniques as well as employed for students' individual learning (Chaudhry et al., 2023). The mission statement speaks due to it is the lack of research on the effects of AI-based tools on practices used by higher education institutions (HEIs) for continuous learning improvement, it is necessary to investigate how these tools, which are rapidly revolutionizing the field of higher education, may affect students' undergraduate degree programs. (Chaudhry et al., 2023). The effect of accessing a tool called AI in practice at higher education institutions (HEI) on enhancing learning outcomes effectively and efficiently. This indicates that AI influences students by increasing motivation to learn.

Within contemporary procedures for instructing and acquiring the English language, it is also essential to remain aware of the use of artificial intelligence in the classroom. The integration of AI into English language teaching activities has guided the teacher in implementing AI-driven instructional models. Moulieswaran and Kumar (2023) state that AI-powered apps are used in AI-Assisted Language Learning (AI-ALL) to enhance students' learning experiences. Similarly, Dewi et al (2021) suggest that AI has proven to be an effective tool in education. Furthermore,

Dewi et al. (2021) provide evidence that AI contributes to more efficient learning.

AI is one of powerful tools for use in the classroom. It can provide a real-time simulations as a writing assistant and facilitate discussion platforms for learning and teaching English. Furthermore, the AI system has the ability to enhance learners' language proficiency, helping them demonstrate excellence in language skills. In addition, AI is useful for students as a teaching model, particularly in developing writing and speaking skills. Students can improve their writing and speaking skills, enhancing their language competence. AI also strengthens their capacity to complete writing assignments and practice pronunciation more effectively than before.

MATERIALS & METHODS

This research used a qualitative method and theory ecological approach by Bronfenbrenner, which explains how the systems and the environments interact. Bronfenbrenner's approach has been considered in this research to holistically understand how various factors in the educational, social, and technological environment affect the adoption and use of artificial intelligence (AI) in the development of productive English skills (Bronfenbrenner, 2018). Ecological theory allows this research to analyze the context thoroughly, ecological theory puts individual (students) in the context of interrelated environmental systems, namely microsystems. This study uses a qualitative descriptive approach to explore the potential and challenges of using Artificial Intelligence (AI) in English learning. This approach was chosen because it allows for an in-depth analysis of complex phenomena as well as the collection of data from various perspectives. This research is exploratory and descriptive, aiming to describe the role of AI in English learning, both in terms of benefits and obstacles faced. Data collection methods include interviews and observation, complemented by an analysis of scientific journals,

research reports, and books. The selected literature focuses on recent studies on AI in education, particularly English language learning.

RESULT

Benefits of AI in English Learning

The findings indicate that AI has been integrated into English learning through various platforms, including chatbots, speech recognition software, and AI-driven writing assistants. These tools facilitate personalized learning experiences, helping students enhance their productive skills, particularly in speaking and writing. Benefits of AI in English Learning such as AI adapting to students' proficiency levels and offering tailored exercises and feedback. AI also provides real-time corrections, helping students improve their grammar, pronunciation, and writing structure. AI-based applications, such as virtual tutors and gamified learning platforms, enhance engagement and motivation. Moreover, AI provides flexible learning options, making education more accessible to students in remote areas. Six students stated that AI-driven tools are beneficial for learning English:

“I find AI helpful in improving my vocabulary through interactive flashcard apps. It helps me remember words better than traditional methods.” (Salamah)

“AI-based listening exercises have improved my ability to understand different accents, which is useful for global communication.” (Rita)

“I like using AI chatbots for conversation practice, but I sometimes feel that they lack human-like responses.” (Siti)

“AI-powered writing assistants are great for structuring essays, but I worry that relying too much on them might reduce my critical thinking skills.” (Lina)

“Using AI for pronunciation correction has boosted my speaking confidence, though I still prefer feedback from real teachers.” (Tuti)

“The best thing about AI learning is the flexibility. I can practice anytime,

anywhere, which is a big advantage over traditional classroom settings.” (Aminah)

Challenges in AI Adoption

Access to AI-powered gadgets and internet connectivity are problems for certain students. The inability of educators to effectively integrate AI-based tools into the curriculum results from their lack of training. Concerns about data privacy, biases in AI, and reliance on technology continue to be major obstacles. Some students struggle with AI-based learning due to a lack of digital literacy or a preference for traditional learning methods. However, interview results indicate that some students actively use AI in their English learning, as outlined below:

“AI has helped me a lot in improving my speaking skills. I use apps like ELSA Speak to practice pronunciation, and I can see a big difference in my confidence when speaking English.” (Lina)

“I often use AI-based grammar checkers like Grammarly to improve my writing assignments. It's helpful, but I sometimes feel like I rely too much on AI instead of learning the rules myself.” (Siti)

“One challenge I face is the inconsistency of AI-generated feedback. Sometimes, the corrections are useful, but other times, they don't consider the context of my sentences.” (Salamah)

“AI makes learning English fun, especially with chatbots and interactive lessons. But I think not all students are comfortable with technology, and some prefer traditional learning with teachers.” (Tuti)

Analysis Based on Ecological Theory Using Bronfenbrenner's Ecological Systems Theory, the study analyzed the impact of different environmental factors on AI adoption in English learning. In the first layer, the Microsystem, focuses on direct interactions between students and AI tools that have a beneficial influence on skill development and engagement. Most interviewed students reported that AI-driven feedback and interactive exercises improved their motivation and confidence in English.

However, some also highlighted the need for human interaction to complement AI-based learning, as AI tools sometimes fail to provide nuanced responses or contextual understanding. The second layer, the mesosystem, explains collaboration between teachers, peers, and AI platforms enhanced the learning experience, though teacher readiness remained a challenge. The third layer, the exosystem, highlights institutional policies and technological infrastructure that influenced AI adoption. Some universities provide strong support for AI integration, while others face limitations in resources and implementation. The fourth layer, the macrosystem, elucidates societal attitudes and ethical concerns played a role in how students perceived AI in learning. The fifth layer, the chronosystem, describes that AI tools continue to evolve over time, shaping the future of English language learning. However, this research focuses specifically on the microsystem, which examines direct interactions between students and AI tools, demonstrating a beneficial influence on skill development and engagement.

DISCUSSION

The use of AI in learning English shows considerable benefits for students, especially in improving productive skills (Rebolledo, Roxana, 2023). Many students have reported improvements in pronunciation, grammar, and writing due to the interactive nature of AI tools. However, these benefits come with certain challenges. The reliance on AI for learning may hinder students' critical thinking skills. Some students expressed concern that AI feedback was useful in learning, but sometimes lacking context related accuracy leads to potential misconceptions. From an education perspective, an integration of AI into English learning requires a balanced approach. On the other hand, Hu (2023) stated that with the development of artificial intelligence and the rapid expansion of the Internet, online lessons have become an increasingly popular teaching method. AI-driven platforms offer a personalized

learning experience but should not completely replace human interaction. In line with Fathi et al. (2024), AI Provides innovative opportunities to improve learning skills in English. However, little is known about the impact of AI-mediated activities on learners' speaking skills. Students emphasized the importance of teaching teachers to add AI learning, ensuring that this technology serves as an alternative and supportive tool to traditional teaching methods. However, teachers need additional training courses to implement AI in language learning attitudes effectively. Furthermore, Howard (2019) technical restrictions for some students remain a major obstacle, especially in remote areas with limited internet access. Gašević et al. (2023) argue that AI increases accessibility, but its effectiveness depends on the infrastructure. The infrastructure is not uniformly accessible to all learners.

Additionally, Huallpa et al. (2023) institutions must address these differences to ensure that AI control training is comprehensive and fair. Finally, the findings highlight both the potential and challenges of integrating AI into English learning. Swanson and Levine (2020) argue that ecological frame analysis highlights the diverse nature of AI introductions affected by technical, institutional, and social factors. As AI continues to evolve, its role in education will likely expand and will be decisive for educators, policymakers and students to navigate implementation. Future research should consider strategies to optimize AI integration while addressing limitations, ensuring the quality of English education rather than diminishing it.

CONCLUSION

This research highlights that AI plays an important role in learning English and offers many benefits, including personalized learning, immediate feedback, and improved accessibility. Many students benefit from AI-driven tools that improve productive skills, especially speaking and writing. The adaptability of AI allows students to learn at

their own pace while creating flexible and engaging learning environments. However, challenges remain in the widespread adoption of AI in English learning. Limited access to technology, a lack of motivation to teach, and concerns about AI dependency present significant obstacles. Some students reported inconsistencies in AI-generated feedback and expressed concerns about a potential decline in critical thinking skills when relying too heavily on AI-based writing assistants.

From an ecological perspective, the introduction of AI in English learning is influenced by various environmental factors, including direct interactions with AI tools, institutional support, and social attitudes towards AI in education. Although AI can improve the learning process, human interaction remains important to communicate context-related understanding and critical thinking skills that AI cannot completely replace. A balanced AI integration in language learning will be needed in the future. Teacher training programs, improving AI accuracy, and treating accessibility issues are key steps to maximize the benefits of AI and, at the same time, reducing limitations. A mixed approach that combines AI-driven learning with traditional teaching methods can provide the most effective solution. Future research should focus on the long-term impact of AI in learning languages and examine opportunities to optimize its implementation. By addressing these challenges and leveraging their potential, AI acts as a powerful tool to improve your English education in an integrated and effective way.

Declaration by Authors

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