

Artificial Intelligence as a Stimulus for English Language Teaching and Learning among ESL Learners: A Review

Julius Olaolu BILEWUMO PhD¹, Olajide Felix OGIDAN^{2*}, Gbenga Nelson ADEYEMO³, & Love Olufunke SABA⁴

¹ Department of English, Joseph Ayo Babalola University, Osun State, Nigeria

^{2, 3, 4} Department of Languages, Rufus Giwa Polytechnic, Owo, Ondo State, Nigeria

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ABSTRACT

Original research paper

This paper reviews scholarly literature on the use of Artificial Intelligence (AI) in the teaching and learning of the English language among second-language users and learners. The extent to which AI is useful for both the teachers and the learners is examined vis-a-vis the challenges in an ESL society. The adoption and application of AI in English language teaching can greatly assist the learners of English language as a second language. It should be noted that the teaching of English language has received scholarly attention globally and this has led to various approaches, including artificial intelligence. This has not only enhanced but also supported English language teaching and learning among the second users of English language. The review specifically answers the question of barriers in learning the language. Artificial intelligence aids and supports learners with extra academic needs which make learning an interesting undertaking. Despite the gap identified so far and the limitations in the teaching and learning of English language among English second users, artificial intelligence creates dynamic and effective lesson contents and planning for students' learning progress.

Keywords: Artificial intelligence, English language, English second learners, Teaching, Learning.

*Corresponding author: Olajide Felix OGIDAN

Department of Languages, Rufus Giwa Polytechnic, Owo, Ondo State, Nigeria

Introduction

Recent researches on artificial intelligence AI have made the concept a tool in modern trend. In the teaching and learning of English as a second language, Artificial Intelligence (AI) is increasingly being explored as a transformative tool. According to Macinska and Vinkler (2024), AI is a branch of computer science dedicated to developing systems capable of performing tasks that typically require human intelligence (p. 4). They further assert that AI in education focuses on tools that enhance both teaching and learning processes for example, by offering adaptive learning features, automating administrative tasks, and providing insights into student

learning behaviors (p. 4). Similarly, Loo et al. (2024) define artificial intelligence as the development of computer systems capable of executing tasks that traditionally require human cognitive abilities. These tasks include learning, reasoning, problem-solving, perception, and language understanding (p. 12).

Worthy of note is the opinion of another scholar on AI is all about. Another perspective on AI, Lee and Lee (2024), defined AI as "intelligence or machine ability to demonstrate some level of intelligence and perform a wide range of functions and capabilities that require human-like abilities" (134).

It is imperative to examine the English language in the context of this review. English language has become a world language which is adopted and spoken by two categories of users across the world. In a study by Laurie (2002), there are two very different types of English speakers; the native speakers of English and the varieties by the second language learners of English. It must be noted that the second type of the users of English attracts our attention for this review. These varieties were modified in a model by Kachru (1985). The model explicitly identified three categories of users of English: The Inner Circle, which consists of countries where English is spoken as a native language; the Outer Circle, which includes countries where English functions as a second language, often due to a colonial past; and the Expanding Circle, which refers to countries where English is learned as a foreign language.

Objectives: The following are the specific objectives:

- i. To identify various perspectives and techniques on AI and English teaching
- ii. To provide scholar with adequate reviews of relationship between AI and the teaching of English language in ESL society.
- iii. To identify the gaps and challenges associated with the use of AI in using AI and language teaching.
- iv. To investigate AI can be used to improve the teaching and learning of English in an ESL society.

A Review of Related Scholars

The debate on the You've compiled a rich and detailed literature review on the use of Artificial Intelligence (AI) in teaching English as a Second Language (ESL). However, your draft contains several grammatical, stylistic, and formatting issues that need refinement to enhance clarity, coherence, and academic tone.

The teaching and learning of English among second-language users is an ongoing area of academic interest. In recent years, the integration of Artificial Intelligence (AI) into education has drawn considerable scholarly attention, particularly regarding its role in enhancing English language learning for non-native speakers.

According to Macinska and Vinkler (2024), AI is a branch of computer science dedicated to creating systems capable of performing tasks that typically require human intelligence (p. 4). They emphasize that, in education, AI is used to enhance learning and teaching through features such as adaptive learning, automation of administrative tasks, and data-driven insights into learning behaviors. In agreement, Loor et al. (2024) note that AI encompasses systems capable of human-like processes such as learning, reasoning, problem-solving, perception, and language understanding (p. 12). These capabilities are increasingly being applied in language teaching, offering both educators and learners more effective tools and resources to improve language acquisition and proficiency.

Macinska and Andrea (2024) argue that language learning is a complex process involving cognitive and social dimensions. As a result, AI and other technological tools have been developed to simplify and enhance the learning experience. Crompton et al. (2023) further note that while English is widely desired as a second language, learners often face challenges such as limited exposure to the language, restricted opportunities to use English in real-life contexts, and difficulties in managing their own learning processes.

On the nature of second-language learners, Panwar et al. (2007) explain that ESL students are individuals who initially acquired a language other than English and whose proficiency in English limits their full participation in academic experiences. Raja Panwar et al. add that learning a second language after a first language has been firmly established is often a difficult experience. By the age of five, children have internalized most of their native language grammar, and any subsequent language learning is filtered through this foundation.

Ahmed (2024) highlights the transformative potential of AI in ESL education, particularly in providing personalized and immediate feedback. He emphasizes the importance of designing AI tools that are culturally sensitive and linguistically appropriate for Nigeria's diverse population (p. 43). Lionel et al. (2024) focus on the impact of AI on lecturers' proficiency in English language teaching. Their study underlines AI's transformative influence on English language assessment, pedagogy, and research, ultimately benefiting both students and educators.

Similarly, PenaAcuña and Fernandes (2024) discuss how AI improves assessment by combining traditional pedagogical methods with advanced technology. They argue that AI facilitates real time feedback and personalized support, leading to more equitable teaching and learning experiences. Their research also shows that AI tools are becoming increasingly attractive to future language teachers (pp. 2–3).

Canto et al. (2023) observe that English language teaching is one of many educational fields being reshaped by AI. Their study highlights AI's role in enhancing language acquisition across all age groups and proficiency levels (p. 5631). Rani et al. (2023) echo this, outlining how AI can assist learners in key language areas such as vocabulary, grammar, pronunciation, and reading comprehension. They conclude that AI tools enhance the effectiveness of English language instruction in ESL contexts.

Atoi (2024) supports these findings, noting that AI contributes positively to second-language acquisition by improving learners' vocabulary, grammar, and reading comprehension (p. 141). Rahmanto and Nur Indah (2023) reinforce the importance of AI in ESL, stating that its integration supports student interest and participation in English learning. Their study suggests that, when properly implemented, AI significantly aids second-language instruction.

Olatunde-Aiyedun (2024) stresses the growing need to integrate AI in education to meet evolving demands and

foster innovation. He finds that AI enhances student engagement, improves learning outcomes, and promotes a deeper understanding of academic content (pp. 11, 20). Bali et al. (2024) similarly report a positive correlation between AI integration and improved learning in Nigerian higher education, including enhanced use of technology and increased student engagement.

Ji et al. (2024) note that AI has long been explored in education, starting with rule-based intelligent tutoring systems. They emphasize that AI improves learners' speaking and writing skills while increasing their confidence to communicate in foreign languages (p. 93). Their findings also underscore the continued importance of teacher presence in AI-integrated classrooms.

Agboola and Solomon (2023) observe that traditional teaching methods in Nigeria are rapidly evolving due to AI, leading to broader access to quality education. They note that AI enhances efficiency in teaching, learning, and research, offering access to vast educational resources (pp. 2, 8). They conclude that AI is becoming a permanent feature of the Nigerian education system at all levels.

Al-Midlij and Alotaibi (2023) focus on the benefits of AI in ESL instruction, emphasizing that it reduces teacher workload while improving feedback quality. They argue that AI encourages students to take risks and engage actively with language learning, ultimately improving fluency and proficiency (p. 5).

Coanca (2023) explores how AI can support ESL learners by generating engaging educational materials that foster curiosity. However, he maintains that AI cannot replace human teachers, who provide essential guidance, explanations, and feedback necessary for effective learning (p. 81).

Finally, a recent study by Crompton et al. (2024) underscores that AI supports the development of specific language skills such as reading comprehension. They affirm that AI serves as a valuable tool in the teaching and learning of English as a second language in ESL environments (p. 3).

The literature reviewed demonstrates a strong consensus on the positive impact of artificial intelligence in teaching English as a second language. From personalized feedback and adaptive learning to enhanced student engagement and efficient assessment, AI is reshaping ESL education. However, scholars also caution that AI should complement not replace human instruction, particularly in culturally diverse and linguistically complex contexts like Nigeria.

Conclusion and Recommendations

It should be noted at this juncture that the employment of artificial intelligence the teaching and learning of English as a second language has recently attracted significant scholarly attention, particularly regarding the application of Artificial Intelligence (AI) in education. This paper presents a comprehensive review of relevant academic research on the use of AI in facilitating English language instruction.

However, despite its potential, the integration of AI into ESL classrooms faces numerous challenges that must be addressed to ensure its effectiveness in supporting teaching and learning processes.

The paper recommends further research on this trend. Based on the findings from the reviewed papers so far, it is recommended as follows.

1. Our institutions of learning should embrace t"The use of technology in the teaching and learning of the English language has significantly transformed educational practices, providing innovative tools and resources that enhance language acquisition, engagement, and learner autonomy as a second language.
2. Artificial intelligence has the potential to revolutionise English language teaching to second users of the language.
3. Artificial intelligence can be employed to enhance English language teaching as it assists learners in learning new language quickly at all levels.
4. Educational institutions and policy makers should consider the benefits of artificial intelligence in formulating the contents of the teaching contents.
5. AI-based content has the potential to significantly enhance the teaching and learning of English as a second language in ESL contexts.
6. English language teachers should encourage learners of the language to use technology to develop language skills.
7. Theories and practice in second language teaching and Learning can be effectively incorporated into the content delivered through artificial intelligence.
8. Learners' needs should be noted and incorporated into the design of artificial intelligence to solve some learning challenges.
9. Artificial intelligence will enhance an intervention session for both the teachers and the learners, this will easy effective and efficient feedback
10. Government should invest in the development of the local-based contents of artificial intelligence for our language learning institution.
11. Training and retraining of teachers of English language on the use of AI will enhance the teaching of the language in a ESL society.

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