Generative AI in English Teaching and Learning in Non-English Speaking Countries.

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Abstract. This paper presents a literature review on using generative artificial intelligence (GenAI) in English as an additional language for teaching and learning. The research seeks to understand how emerging technologies, such as ChatGPT, have been integrated into pedagogical practices and what impacts they have on the experiences of teachers and students. The studies analyzed highlight the benefits of personalized teaching, instant feedback, and the promotion of autonomy in learners and the reduction of teachers' workload, in addition to demonstrating how GenAI can be utilized in text correction, lesson planning, and the creation of dynamic activities. At the same time, the challenges are discussed, such as the need for digital literacy, overreliance that can compromise both teachers' and students' critical thinking and creativity, the reliability of the information generated, and the ethical implications of using such tools. The review also stresses the importance of training educators in the critical and pedagogical use of GenAI, emphasizing that the effectiveness of these technologies depends directly on human mediation. In conclusion, GenAI serves best when positioned as a complementary pedagogical tool, without replacing the indispensable work of teachers. Finally, the study underscores the lack of research focused on the context of using GenAI in English teaching as an additional language in developing countries, suggesting the need for more empirical investigations on the topic.

Keywords. Generative Artificial Intelligence, English Teaching and Learning, ChatGPT, Education.

1. Introduction

Generative artificial intelligence (GenAI) presents exciting prospects for teaching and learning English in non-English speaking countries. Recent literature has revealed increased reliance on GenAI for lesson planning, transformation of teaching practices, challenges around relevance and curriculum alignment, and opportunities to support differentiated instruction [1]. By investigating the incorporation of GenAI tools, these developments can potentially transform language learning by providing novel approaches tailored to improve student experiences. Nonetheless, concerns remain regarding its implementation, as the integration of GenAI into English as a second language (ESL) and as a foreign language (EFL) education presents numerous challenges.

The study aims to explore the integration of GenAI in English teaching through a literature review, examining both the advantages and disadvantages of incorporating this new technology into educational practices. This paper also aims to answer how GenAI can personalize learning experiences for non-native English learners, tailoring instruction to meet individual needs and enhancing language acquisition. Furthermore, we seek to understand the potential of GenAI to transform English teaching, improving engagement, motivation, and proficiency among learners.

2. Research Methods

This study used the literature review method to investigate the role of Gen AI in teaching and learning English as an additional language. Thirteen academic articles published between 2023 and 2025

were analyzed and selected from the Google Scholar, Scopus, and JSTOR databases. The inclusion criteria included studies published from 2021 onwards that addressed the application of artificial intelligence, with an emphasis on generative AI, in the context of language teaching and learning. The selection prioritized works that included the following key terms: "artificial intelligence", "generative artificial intelligence", "language teaching", "language learning", "ESL", "EFL" or "EAL", with special emphasis on those that directly related "GenAI" to English language teaching and learning.

The review aims to answer three research questions:

RQ1: What are the main applications of generative AI in English teaching described in the academic literature?

RQ2: What benefits and challenges of integrating generative AI into ESL/EFL teaching are highlighted in current research?

RQ3: According to the studies reviewed, how has generative AI been used to personalize learning for ESL/EFL students?

3. Applications of GenAI in ESL/EFL Teaching

GenAI is a technology capable of creating texts, images, and other types of content based on commands and data provided. In contrast to classical Artificial intelligence (AI), GenAI creates new data samples instead of simply converting inputs to outputs. In the educational context, this innovation has proven to be especially useful in teaching English, facilitating access to new resources for students, and improving the learning process [2,3].

The ability of GenAI to generate texts with human-like fluency, offering support to students of ESL and EFL, since while classical AI is best at structured tasks like image recognition and language translation, GenAI uses models that can assist in language acquisition by transforming pedagogical practices by enabling new approaches to learning, provide realistic linguistic content, such as personalized exercises, contextually relevant responses, enrich learning materials, adaptive assessments, give immediate feedback, and provide interactive learning scenarios [2,3,4,5]. This feature promotes inclusion in language instruction by addressing a range of linguistic origins and enabling a more dynamic and student-centered learning environment. Besides that, GenAI has been highlighted for its potential in other applications. These tools can be used for activities such as grammar correction, translation, text summarization, and question answering, supporting student learning [6].

ChatGPT (OpenAI, 2023) is one of the most advanced GenAI tools and has gained prominence for its ability to produce real-time dialogues that resemble human communication. Virtual assistants such as Siri, Alexa, and Google Assistant face limitations due to their rule-based models, as they often have difficulty dealing with more complex questions. ChatGPT stands out as a more advanced conversational system, capable of offering more coherent and contextualized responses [3] since Gen AI models are characterized by their advanced ability to generate and understand natural language, which sets them apart from other traditional technologies [7].

ChatGPT also offers more comprehensive learning support. While tools such as Grammarly, a traditional grammar checker, identify grammatical errors and suggest on-the-spot corrections, generative AI provides detailed explanations and contextual examples, facilitating a deeper understanding of linguistic rules and promoting a more interactive approach to learning academic writing [8]. Besides that, other studies show that GenAI improves student proficiency by providing immediate and contextualized feedback. In addition, this technology can help build student autonomy, allowing them to refine their writing skills over time. Another important benefit is the ability of AI to personalize suggestions based on each student's specific style and difficulties, making the learning process more adaptable to individual needs [8].

4. Benefits and challenges of integrating GenAI into ESL/EFL teaching

4.1 Benefits of GenAI in English Language Instruction

The integration of GenAI in the teaching of the English language has proven to be a promising tool for enhancing the learning process, bringing significant benefits to both teachers and students. For teachers, the automation of repetitive tasks, such as the preparation of lesson plans and assessment activities, stands out, which contributes to the reduction of workload, offering practical and innovative solutions for contemporary education [1,3,4,6]. For students, the technology offers a series of resources that positively impact the development of language skills, especially in the areas of writing and reading, through instant feedback and personalized suggestions [5]. In addition, advanced GenAI models promote interactive support in textual comprehension and the use of reading strategies [9]. Another relevant aspect is the increase in student motivation and engagement, since learning becomes more dynamic and adapted to individual needs [7]. Thus, the personalization of teaching emerges as one of the main benefits of this technology [5], as well as the encouragement of autonomy, independent practice, and the active construction of knowledge [3].

ChatGPT has shown promise in reducing teacher

workload, especially in teaching English as an additional language. These tools use deep learning models capable of generating humanized content, including texts, images, and simulations, which allows the automation of repetitive tasks such as correcting activities, generating standardized materials, and providing feedback. Studies highlight that ChatGPT can support teachers by tracking student progress, assessing performance, offering personalized assistance, and assisting in the development of practical activities adapted to students' needs. In addition, there is evidence that the use of GenAI can benefit teachers who face limitations in resources or pedagogical experience, by facilitating the creation of effective educational tasks [1]. The literature also indicates that these technologies promote efficient and uniform feedback, reducing human bias in text correction and optimizing teacher response time [3].

GenAI has the potential to significantly transform EFL education, especially in writing and reading skills. In writing, this technology allows for greater interactivity in the teaching-learning process, offering students instant feedback, rewriting suggestions, and personalized corrections, which directly contribute to the development of linguistic competence [5]. Learners have widely adopted it to improve writing by offering support in brainstorming, grammar checking, and text structuring. In addition, the model stands out for its ability to provide real-time feedback, helping in the development of textual organization and cohesion. However, the effectiveness of GenAI depends on the way learners interact with the tool, requiring critical and guided use to maximize its pedagogical potential [3].

In addition, Advanced GenAI models can provide interactive and personalized support for students, facilitating the learning of reading strategies and textual comprehension. Studies show that the integration of GenAI-based chatbots allows two-way interactions, in which students can clarify doubts, receive immediate feedback, and improve their learning strategies more autonomously and effectively. This personalized support has been highlighted as an important differentiator for language teaching, especially in the development of self-regulation strategy in reading [9].

GenAI also significantly impacts motivation and learning outcomes by providing more efficient and engaging learning experiences. The beneficiaries of the new technology in English language instruction facilitate the development of listening, writing, and vocabulary [7]. Hutauruk says that Gen AI tools offer several advantages in teaching English, such as improving writing skills through automatic assistants that correct grammatical errors, suggest structural improvements, and help students choose vocabulary. In addition, intelligent chatbots allow students to practice speaking and listening skills dynamically, contributing to the development of fluency and making learning more efficient and motivating [10].

Another benefit of integrating GenAI into language teaching is that these tools can suggest supplementary materials such as articles, videos, and interactive exercises. GenAI also facilitates students' independent practice by providing immediate feedback on grammar, textual coherence, and writing style. With the ability to generate questions and answers, text summaries, and recommendations for teaching resources, GenAI expands learning opportunities and improves knowledge retention, making it an essential ally in modern education [4]. Besides that, in higher education, GenAI is already impacting teaching practices, from creating problem-solving scenarios to fostering creative thinking and a deeper understanding of content. This innovation is especially valuable in English language teaching, where authentic AI-driven interactions can motivate students to develop their language proficiency and enhance their learning experience [4].

GenAI is increasing student engagement, improving the use of metacognitive and cognitive strategies, and providing ongoing support throughout the learning process. Research indicates that students who interact with GenAI chatbots experience increased motivation and engagement with content, as the technology allows for real-time adjustments, offering suggestions tailored to each learner's individual needs. In addition, this approach enables more dynamic and immersive learning, strengthening language skills and promoting the active construction of knowledge [9].

Among the benefits of using GenIA in language teaching, personalized learning stands out. The technology allows students to receive explanations and exercises adapted to their specific difficulties, promoting more dynamic and adaptive teaching. In addition, AI can provide continuous feedback, helping students identify errors and improve their writing skills. The use of ChatGPT, for example, also contributes to building student autonomy, as it allows them to practice writing independently, without the need for constant supervision from the teacher [5]. The benefits of using AI in English teaching are notable, especially in increasing student engagement. Studies show that the personalization provided by these technologies allows students to receive instruction appropriate to their proficiency level, resulting in more efficient learning. In addition, the availability of AI to assist outside the school environment contributes to student autonomy and continuous learning [3].

4.2 Challenges and Limitations

The main challenges of incorporating GenAI into teaching include content reliability, as it can generate inaccurate or inadequate information [1,3,5,6]; ethical issues, such as data privacy and equity in access [3,6,10]; excessive dependence on technology, which can compromise critical thinking, student autonomy, and teacher creativity

[3,4,6,9,10,11]; difficulty in adapting to the curriculum, since the material generated is not always aligned with pedagogical objectives [1]; lack of adequate training for teachers, making its strategic use difficult [1,3,7]; and the lack of human interaction, essential for language learning, which involves social and cultural aspects [7].

The reliability of AI-generated content is one of the biggest challenges in the educational context, as it can result in inaccurate or inappropriate information for certain contexts, compromising the quality of learning [1,3,6]. In addition, ethical issues related to the use of AI in education are also a recurring concern [6,10]. Such issues include data privacy, equity in access to premium resources, and the misuse of AI-generated content, which can compromise both the security of student information and human interaction in the educational environment [6,10]. Studies indicate that educational institutions must provide clear guidelines and adequate support to ensure the responsible use of generative AI in education [8].

The phenomenon of "technostress" arises when teachers struggle to integrate new technologies into their teaching practice. The rapid evolution of AI can generate anxiety among educators who feel unprepared to deal with these tools. In addition, issues such as the perpetuation of linguistic biases that can lead to discrimination and stereotyping, limiting students' exposure to authentic human interactions, and over-reliance on automated responses must be considered [4].

The excessive use of Gen AI on critical thinking skills [6,10,11] leads to dependency, reducing the development of critical review and self-editing skills[8] by teachers, which can lead to a decrease in creativity when creating lesson plans and activities [6], and also for the learners, which can compromise students' autonomy [3,11]. Students who are overly dependent on the tool can hinder the development of independent writing and metacognitive regulation. In addition, another challenge is ChatGPT's lack of contextual and cultural sensitivity, which can generate inappropriate feedback for certain linguistic and pragmatic contexts [3]. Thus, the use of GenAI in education must be balanced, ensuring that students maintain their independent learning skills and creativity.

Another challenge lies in adapting the resources produced by AI to existing curricula, as the automatically generated material is often not fully aligned with pedagogical goals [1]. Pandey warns of the lack of clear institutional guidelines on the use of these tools, which can create uncertainty among teachers and students about the best practices for incorporating them into teaching [5]. Therefore, the effective incorporation of GenAI requires ongoing training of teachers [1,7] so that they can employ the technology strategically, balancing its advantages with traditional pedagogical approaches [1]. Teachers also report technical difficulties and a lack of adequate training, which can limit the effective application of these tools in the classroom [10].

There is a need to strike a balance between automation and human interaction in learning [9]. Despite its potential, implementing Gen AI in education requires careful use because of the lack of human interaction. Although Gen AI, like AI chatbots, can assist students, they cannot replace the role of the teacher. Language learning involves social and cultural elements that require the active participation of a teacher or other students for a more complete experience [7]. Thus, Gen AI should be seen as a complementary resource, capable of improving language teaching without replacing the essential role of teachers.

Therefore, it is evident that Gen AI is impacting education and will continue to do so. Depending on how it is used, it could even profoundly transform teaching. The key to maximizing its potential lies in the balance between technology and human interaction and investing in teacher training [7]. In this way, Gen AI can improve education and make language learning more accessible and efficient for students, but it is evident that for these resources to be applied critically, effectively, and ethically, both teachers and students must have an adequate level of digital literacy, ensuring the conscious and productive use of these tools [4,5].

5. Personalized teaching for non-native English students

The evolution of English language teaching requires the adaptation of traditional pedagogical methods to meet the diverse needs of students. The rigidity of standardized curricula hinders this individualization, resulting in inequalities in educational outcomes. Given the scenario of globalization and multiculturalism, the need for innovative pedagogical solutions for an increasingly heterogeneous audience becomes evident. In this context, personalization of teaching, which consists of adapting the educational process to the individual characteristics of learners, plays a fundamental role in allowing pedagogical strategies to be adjusted according to the linguistic, cognitive, and cultural differences of each student [2].

Personalization is one of the most promising features of GenAI, since it makes it possible to adapt content and teaching methodologies according to the specific needs of each student. Tools based on artificial intelligence can adjust the degree of complexity of activities, provide targeted support for individual difficulties, and offer instant feedback, promoting more accessible, efficient, and engaging learning [10]. This type of approach is especially valuable in teaching writing, allowing students to understand and retain more complex grammatical and stylistic concepts autonomously [8]. Unlike traditional correction systems, which operate with fixed rules, GenAI can generate adaptive and interactive content. The use of platforms such as

ChatGPT, for example, contributes to a more personalized learning environment by providing immediate feedback and simulating human dialogues, especially helping with text production, vocabulary, and grammar. Furthermore, by reducing the fear of making mistakes, these tools promote confidence in oral communication and language comprehension [13].

The integration of GenAI with technologies such as the Internet of Things (IoT) further expands the potential for personalization. An innovative example is the use of IoT devices to collect data in real time, enabling detailed analysis of learning patterns and the generation of specific feedback. Transformer-based models are used to assess speech, correct pronunciations, and adapt to the student's linguistic profile, promoting greater engagement and inclusion in English language teaching [2].

Practices such as microlearning, which propose challenges and exercises in small, structured steps, and the use of interactive chatbots also strengthen the personalization process [5]. These tools allow students to practice reading, comprehension, and writing at their own pace, receiving suggestions and activities suited to their level of proficiency and interests. In this way, the educational experience becomes more meaningful and effective [5,9].

For this personalization to be successful, educators must be trained in the use of AI, especially in mastering techniques such as prompt engineering and adapting models to the specific needs of students [3]. Educational institutions should also invest in ongoing teacher training, promote collaborative learning communities, and establish clear guidelines for the ethical and responsible use of AI in the educational context. Thus, GenAI can consolidate itself as a valuable resource for innovation in language teaching [4].

6. Conclusions

GenAI has been rapidly establishing itself as a powerful tool in the field of language teaching, especially in the teaching and learning of English as a foreign, second, or additional language. Based on the literature review presented here, it is clear that this technology offers numerous pedagogical possibilities, from personalizing teaching based on the individual needs of students to automating teaching tasks such as text correction, activity planning, and generation of interactive materials. Such resources have the potential to make the teaching-learning process more efficient, motivating, and accessible, especially in educational contexts in which time and human resources are limited.

However, the benefits of GenAI are also accompanied by challenges. The literature points to the urgent need to develop digital literacy and critical thinking among teachers and students to ensure the conscious and effective use of these tools. In addition, the reliance on algorithm-based technologies can raise ethical concerns, such as the reproduction of biases, the risk of misinformation, and the reduction of the active role of the teacher as a mediator of knowledge. Therefore, the inclusion of artificial intelligence in the educational environment should be accompanied by constant pedagogical and ethical reflection, as well as by public policies that ensure adequate training for education professionals.

Another relevant point is the scarcity of empirical studies on the use of GenAI in English Teaching as an additional language teaching in developing countries. Most of the existing literature focuses on educational contexts in countries with extensive technological infrastructure and consolidated access to digital resources, which limits the understanding of the challenges and potential of GenAI in diverse socioeconomic realities. Given this, it is urgent to carry out empirical research that considers the specificities of these contexts, listening to the experiences of teachers and learners, as well as analyzing the concrete conditions of implementation and pedagogical use of these technologies. Only with a solid evidence base and a contextualized perspective will it be possible to develop effective, inclusive, and sustainable strategies for the meaningful integration of GenAI in English teaching in developing countries.

In conclusion, GenAi should not be seen as a threat to teaching practice, but as an ally that, if used well, can significantly enrich the educational process. Reports indicate that tools like ChatGPT are promising in language teaching, with many benefits, such as convenience and immediacy, but also with considerable challenges that need to be faced to meet the diverse demands of teachers in different contexts. In addition, teachers will need adequate training and ongoing support to integrate it effectively into the classroom [1]. The role of the teachers in this new scenario becomes even more crucial, they are agents who humanize, contextualize, and give meaning to the use of technologies in the classroom. By promoting a critical, ethical, and creative approach to the use of GenAI, it is possible to build innovative and transformative pedagogical practices that contribute to a more personalized, democratic, and relevant education for the challenges of the 21st century.

7. References

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