

## Integration of Artificial Intelligence in Teaching English as a Foreign Language: a Systematic Review

La integración de la inteligencia artificial en la enseñanza del inglés como  
lengua extranjera: una revisión sistemática

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### ABSTRACT

**Introduction:** The integration of artificial intelligence (AI) into the teaching and learning of English as foreign language (EFL) is rapidly transforming pedagogical practices by enabling more personalized, efficient, and engaging teaching-learning experiences.

**Objective:** to analyze the integration of artificial intelligence (AI) in teaching English as a foreign language.

**Methods:** A literature review of recent scientific studies on the integration of AI in EFL was conducted. A total of 35 research papers were initially identified through databases such as Google Scholar, Scopus, and Web of Science; after applying inclusion and exclusion criteria, 22 relevant and updated studies published between 2020 and 2025 were selected for analysis.

**Development:** Findings demonstrated that AI tools improve professors' efficiency in lesson design, assessment, and giving feedback, favoring language acquisition by supporting individualized learning, fostering student motivation.

**Conclusions:** The evidence indicated that AI can significantly optimize the teaching-learning process of English as a foreign language. When combined with teachers' pedagogical expertise the outcomes of the teaching -learning process is enhanced to meet contemporary educational demands.

**Keywords:** Generative artificial intelligence; Information Technology; Adaptive Learning; Blended Education; language Teaching; Teachers; Educational Assesment; Motivation; Student Participation.



## RESUMEN

**Introducción:** La integración de la inteligencia artificial (IA) en la enseñanza y el aprendizaje del inglés como lengua extranjera (ILE) están transformando rápidamente las prácticas pedagógicas al permitir experiencias de enseñanza -aprendizajes más personalizadas, eficientes y atractivas.

**Objetivo:** analizar la integración de la inteligencia artificial (IA) en la enseñanza del inglés como lengua extranjera (ILE).

**Métodos:** Se realizó una revisión de la literatura de estudios científicos recientes sobre la integración de la inteligencia artificial (IA) y el inglés como lengua extranjera (ILE). Se identificaron inicialmente 35 artículos de investigación a través de bases de datos como Google Scholar, Scopus y Web of Science, entre otros; tras aplicar criterios de inclusión y exclusión, se seleccionaron para el análisis 22 estudios relevantes y actualizados, publicados entre los años 2020 y 2025.

**Desarrollo:** Los hallazgos demostraron que las herramientas de inteligencia artificial mejoran la eficiencia del profesor en el diseño de clases, la evaluación y la retroalimentación, favoreciendo la adquisición del idioma al apoyar el aprendizaje individualizado y fomentar la motivación de los estudiantes.

**Conclusiones:** La evidencia indicó que la IA puede optimizar significativamente el proceso de enseñanza-aprendizaje del inglés como lengua extranjera. Cuando se combina con la experiencia pedagógica de los profesores, los resultados del proceso de enseñanza-aprendizaje son mejores como se requiere en la actualidad.

**Palabras clave:** Inteligencia artificial generativa; tecnología de la información; aprendizaje adaptativo; educación combinada; enseñanza de lenguas; docentes; evaluación educacional; motivación; participación del estudiante.

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## Introduction

The world, society and foreign language teaching are being changed by technology and artificial intelligence. Teachers and students count on a very wide range of tools and aids that can make the teaching-learning process easier and more motivating. To do this, there is a variety of platforms, websites and apps, many of them are free and easy to work with. AI is not a recent discovery, but lately, its use in foreign language teaching is gaining ground due to all its advantages.



Since foreign language teaching is influenced by technology and artificial intelligence swift rise, traditional learning environments are required to evolve in order to go forward as needed due to the current and fast development.

Teaching English as a Second Language (TESL) is one of many fields in education where AI is having a significant impact. AI-powered tools and technologies are being used to provide more immersive and engaging learning experiences for students of all grade levels, personalized learning, and offer quick feedback. It is thought that AI has the power to improve education for every student by making it more equal, efficient, and enjoyable. <sup>(1)</sup>

Consequently, integrating technology advancements into daily classroom practice presents a major challenge for English language professors. While AI is emerging as a powerful instruction tool, professors must assess its influence in the English lesson; its advantages and benefits for both, teachers and students.

In order to adapt to the students' own development, future education should pay more attention to the diversified development of students, provide project practice of real problem scenarios based on AI, stimulate students' interest in learning and cultivate their innovative thinking. <sup>(2)</sup>

While the rapid evolution of AI promises greater improvements in learning and teacher support, its successful application hinges on two critical factors: not just access to the technology, but also its deliberate integration into curriculum and the essential role of the professor. This research aims to analyze, and synthesize the use of AI in the English language as a foreign language teaching-learning process.

## Methods

A systematic literature review was conducted to analyze the integration of artificial intelligence (AI) in teaching English. The current research constitutes a qualitative approach designed to study, analyze, and synthesize various studies on the use of AI in the English language teaching-learning process.

Research was performed in some databases such as Google Scholar, Scopus, and Web of Science, using keywords such as AI in English teaching and learning. Among the vast number of articles found, it was stated as a range those publications in English from 2020 to 2025, in order to have updated studies.

The review process involved three key stages:

1. Identifying relevant literature related to the objective of this research: An electronic search yielded 35 research papers with characteristics suitable for potential inclusion. After a preliminary screening of titles and abstracts against the objective of this research, the pool was reduced. Of the 35 results, a total of 13 articles were removed, considering just 22 of them.



2. Screening and selection of the most adequate bibliography: The following criteria were applied to select the most appropriate studies for full-text review:

**Inclusion Criteria:** Studies focusing on the application of AI in English teaching and learning; Articles exposing the benefits and advantages of AI in this context; Peer-reviewed articles conference papers, and book chapters.

**Exclusion Criteria:** Studies not directly related to English language teaching and learning and artificial intelligence; Articles published before 2020; Articles not written in English; Duplicate articles.

Taking these criteria into account, the initial 35 articles were further reduced. A detailed review of the full texts of the remaining articles, guided by the research objective, resulted in a final selection of 22 studies for synthesis.

3. Analysis and extraction of data: The most important aspects from the selected literature were extracted and organized into two main thematic areas:

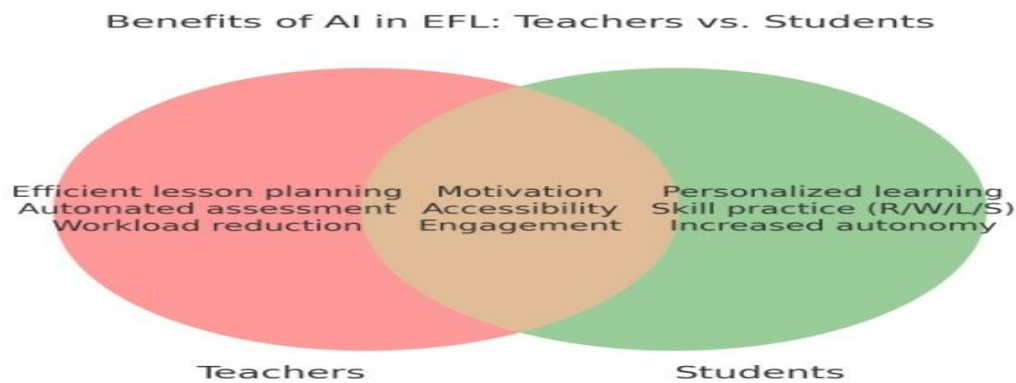
- Benefits and advantages of AI in English language teaching and learning.
- Specific benefits for teachers and for students.

The Table1 below presents the Summary of Selected Studies on AI in EFL.

**Table 1-** Summary of selected studies on AI in EFL.

Author(s) and Year	Country/Context	Focus of Study	Key Findings
Sotomayor et al., 2023	Latin America	AI in EFL Classrooms	AI provides immersive, motivating experiences; enhances equality and efficiency in learning.
Rao, 2024	India	Classroom integration	AI enhances students' engagement, autonomy, and participation in English learning.
Karagucuk, 2024	Turkey	AI in evaluation	AI assists in detecting exam anomalies, reducing teacher workload.
Hidalgo, 2023	Spain	AI in translation	AI enhances translation teaching by providing real-time solutions and boosting motivation.
Various Studies (2020-2025)	Different countries	The integration of AI in EFL enables personalized learning, helps students develop language skills. AI integration enriches cultural learning, content creation, saving time and providing rich content resources.	AI is a transformative complementary tool, but its success depends on pedagogical integration and teacher's guidance. It does not replace the teacher, acts as a powerful aid for teachers in lesson design.





**Fig. 1-** Benefits of AI in EFL for teachers and students.

### Development

The increasing rise of AI use in English language teaching it is essential to understand that AI must be used as a technological support for the teaching-learning of English. AI tools are not a replacement for teachers; teachers are the guide of the teaching-learning process, and can use AI tools as a valuable support for preparing lessons, activities and exercises. There are real limitations, but AI tools can make the teaching-learning process more accessible for both teachers and students.

The use of new technologies to teach English as an applied language at university level is becoming increasingly important, and although the amount of research on its practical implications is increasing, it is still very limited and its growth is not happening at a sufficient pace compared to college level. Fundamentally, most researches assume that technology improves the quality of the language learning process.<sup>(3)</sup> One of the primary benefits of integrating AI into language education is its potential to support personalized learning experiences. AI-based technologies can analyze student performance data and adapt learning content to meet individual students’ specific needs and learning styles.<sup>(4)</sup> Personalized learning experiences through AI tools contributed to increased engagement, motivation, and participation among students, fostering a more effective learning environment and aligning with the growing trend of hybrid learning environment.<sup>(5)</sup>

AI has the power to improve language learning outcomes by giving a wide range of personalized learning experiences, enhancing speaking and listening skills, and increasing students’ engagement in their own language. All this can be appreciated in the great varieties of output, activities and exercises, using audiovisual support, which is relevant when teaching and learning a foreign language.

Based on the prompt, that output can be text, images, audio, video, and other content such as code. For example, when a GenAI system is given the prompt: ‘You’re a language teacher. I’d like you to create a reading text and comprehension questions on the topic: “Unusual world



foods” with illustrations supporting the reading topic, it can produce output which resembles that developed by a teacher.<sup>(6)</sup>

It is necessary to have a clear and reflective understanding of ICT use as technological mediations, not as a substitute for teachers; ICT can fulfill many purposes, such as improving the interrelationship among students and teachers, motivating the creation of a more real scenario for knowledge acquisition and the simulation of new learning situations. The teachers’ role in teaching using AI tools demands them to be motivators, intermediaries, and guides in the teaching- learning process.

Lesson design and content creation is the category where most AI-tools were found. They serve as a valuable asset to EFL teachers by simplifying the process of creating captivating and effective teaching materials. These innovative tools offer a range of features and functionalities that empower educators to enhance their pedagogical practices and meet the diverse needs of their students.<sup>(7)</sup> Additionally, this automation outspreads into the critical area of assessment and evaluation. AI tools are progressively adept at supporting professors not only in generating content but also in managing and grading student work.

Teachers can save time by using AI technology to detect suspicious or blank exam papers and fix them...Its benefits extend beyond just learning; it also assists in evaluation, making it valuable for educators and students alike.<sup>(8)</sup>

The implications of this theme suggest that AI can significantly reduce the workload of language teachers while simultaneously improving the quality of feedback given to learners, fostering a more personalized and efficient learning environment... AI enables educators to deliver more efficient and individualized training by facilitating exams, generating writing prompts, supporting adaptive learning, and offering tailored feedback. Regarding the teaching of English as a foreign language, AI is being substantial in improving students ‘quality of learning process and increasing their knowledge.<sup>(9)</sup>

The advantages of artificial intelligence are undeniable: the ability to process vast amounts of information in a short time, increase efficiency, and convenience, eliminate long-term processes and automate the usual with no fatigue.<sup>(10)</sup> Realizing this potential in an educational context is tense with significant challenges. Teachers can have access to a great variety of class activities, because they can ask for what they exactly want regarding the activities or exercises, their level, length, number of items, the apps also give the answers. Teachers can ask the AI tools to give a complete lesson, with its objective and methodological components.

The AI is capable of producing multiple lesson ideas for one topic that require varying skill sets. The generated activities range from applying basic topic knowledge to analyzing more complex ideas and creating multimodal projects.<sup>(11)</sup> The great variety of options of activities and exercises, gives the teacher the chance to meet and work with the differences in learning of every student in every classroom.



Given the active penetration of AI in the educational process, traditional methods of foreign language learning are now seen as a resource-intensive process requiring quite a lot of additional material, whereas digital tools utilizing AI can provide an individual learning plan to each student. <sup>(12)</sup>

The AI opportunities reach also the development of individual skills inside the teaching-learning process; it means a way to work on each individual skill when necessary.

As stated by Ganeesh and Abisha: “Artificial intelligence (AI) has the potential to assist pupils in many areas, including reading comprehension, vocabulary, pronunciation, and grammar. Additionally, it can aid in pupils' vocabulary growth, speaking practice, and comprehension of colloquialisms. Students can have a better learning experience and become more involved with the language by using AI”. <sup>(13)</sup> AI tools offer the students a chance to be active and the protagonists in the learning process, taking control of the process while seeing the results, then the professor's role is the mediator between the students and the AI tools, being responsible in using these tools to create situations where students can act as protagonists of their own process of learning the English language. Furthermore, GenAI can empower students to take greater control of their learning by facilitating self-regulated study, encouraging the development of critical skills, goal setting, and the use of various organizational tools and feedback mechanisms to enhance learning outcomes. AI tools that lack human emotions may well offer a less intimidating and more tolerant environment if they reduce the fear of embarrassment and negative reactions and, consequently, encourage the kind of playful experimentation that should support language learning. <sup>(14)</sup>

Translation and interpretation are language learning aspects that can benefit from AI tools. One main advantage is its efficiency, making the process quicker and easier, having the ability to process huge volumes of text and information in a short amount of time.

The introduction of AI into translation teaching can create translation situations for students and provide guidance and help for students' translation. In this process, students can solve a large part of the difficulties and doubts of translation through artificial intelligence, which to a certain extent will stimulate students to explore the fun of deep learning and enhance their enthusiasm for translation. <sup>(15)</sup> This pedagogical shift is not simply about convenience; it is a necessary preparation for a renovated marketplace. Under the teacher's guidance, English language students can use AI to solve their tasks in an easier and more successful way.

The swift development of AI is redesigning professional expectations; translators nowadays need to hold complementary proficiency to face the industry demands, due to the huge volume of increasing and new information that arises every day. With the exponential growth of AI in many expertise fields, professional translators and interpreters are expected to have additional knowledge and experience in relevant and complementary areas that can benefit companies and clients. <sup>(16)</sup> Additionally, AI empowers translation, a key feature in time-sensitive contexts, like international trade and business, crisis response, and live media broadcasts.



AI tools on the other hand are capable of translating text almost in real time. This speed is desirable mainly in cases where it is required to have immediate access to information and/or materials such as in cases of international purchases and sales, response to disasters, or LIVE broadcasts. <sup>(17)</sup> English teachers can aid students to integrate translations AI tools to their process of learning and practicing translation as a subject during their major. It is time for the students to learn to correct mistakes and errors that can arise from machine translation, or to give life to translated texts that can lack of human sensibility that AI tools, sometimes are not able to express.

Culture is a matter of such a huge importance when learning a foreign language for their strong relationship. Culture and English language learning are inseparable, as each shape and reflect the other. The cultural context is essential in order to comprehend essential meanings, nuances, understanding customs, values, and history. All these aspects expose authentic communication and deeper connection. Consequently, true language proficiency is essentially a cultural endeavor.

AI's profound knowledge of the cultures and customs of diverse English-speaking countries can be used to build significant connections with students. By integrating this cultural knowledge into lessons, AI can make learning English more engaging and relatable, which can considerably boost students' motivation and interest in mastering the language; <sup>(18)</sup> the deep role of culture must be taken into consideration in the integration of artificial intelligence into English language teaching. Linguistic competence and cultural understanding are closely related. AI tools can be used to teach beyond mere grammar and vocabulary, entrenching cultural nuances, practical norms, and sociolinguistic contexts into teaching and learning. This permits students to engage not only with the language's structure and rules but also with the cultural values, humor, and unspoken rules that give it genuine sense in a natural way.

Most academic institutions aim to foster the growth of skilled faculty to drive innovation, look for practical insights into how institutions can strengthen academic integrity to build an ethical future, and prepare for future challenges, ultimately engaging in world-class research. <sup>(19)</sup>

As learners explore AI-driven language tools, they not only develop essential language skills but also gain critical digital literacy skills, aligning with UNESCO's emphasis on education for sustainable development; <sup>(20)</sup> achieving these goals, however, requires crossing the new intricacies introduced by artificial intelligence in education. Institutions must establish clear and ethical frameworks and pedagogical strategies that integrate AI tools transparently, ensuring they boost rather than undermine the core values of learning and original thought.

Future opportunities lie in integrating AI with traditional methods and leveraging immersive technologies to create holistic learning systems... However, AI cannot replace human teachers. The most effective approach combines the unique strengths of AI tools with traditional classroom instruction, ensuring both adaptability and interpersonal connection. For example, teachers can use AI to handle repetitive tasks, such as grading or practice feedback, while focusing on providing emotional support and cultural insights in the classroom. <sup>(21)</sup> The route



on the way to the required combination is complex. In the end, success involves navigating the complex scenery of intellectual and digital challenges.

These challenges include technical barriers to using AI-driven platforms, pedagogical concerns about aligning technology-enhanced activities with instructional objectives, and equitable access to technology. Not to forget balancing technological integration with traditional teaching methods and addressing learners' diverse needs and preferences. <sup>(22)</sup>

Directing the current and future English language teaching-learning process demands a balanced strategy. Professors must harness AI's fruitful competences to enhance students' proficiency.

## Conclusions

The current bibliographic review confirms AI's significant benefits for the English language teaching process. It allows personalized learning, develops core language skills, and empowers teachers with resources. Effectiveness, however, depends on strategic integration, proper training for professors. AI is a powerful complementary means, not a replacement for professors, which boosts the teaching -learning at levels required at present.

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#### **Conflicts of interest**

The authors have no conflicts of interest to declare.

#### **Authors' contributions**

Mirelys Espinosa Harris, Guillermo Ronda Velázquez: Conceptualization, data curation, formal analysis, investigation, writing-review and editing, methodology, writing- original draft, visualization and supervision.

