

THE ROLE OF AI IN ENHANCING ENGLISH LANGUAGE LEARNING: EFFECTIVENESS AND CHALLENGES

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DOI:<https://doi.org/10.5281/zenodo.17129642>

Keywords

Artificial Intelligence, English Language Learning, language acquisition, benefits, challenges.

Article History

Received on 29 June 2025

Accepted on 21 August 2025

Published on 16 September 2025

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Abstract

Artificial intelligence AI is changing the way education works, especially in learning languages like the language of world English. this research looks at how AI is being used in English language learning and discusses it's both ends advantages and the problem that come with it. The study focuses on the tools like chatbots, smart learning apps and ai based tutors, how they help to learners, improve English language skills.it also talk about the difficulties that teachers and school face when using these tools. a mixed method approach was used to gather information from 185 people. The result show that most of the participants believe ai tools are helpful in improving language skills and increasing students' interest in learning English .at the same time they agreed that using ai tools can come with challenges. the study end with some useful suggestion for schools that how to use ai effectively to support English language learning.

INTRODUCTION

The advent of Artificial Intelligence (AI) has ushered in a new era in education, with significant implications for language learning (Kamalov, Calonge, & Gurrib, 2023). Traditional methods of language teaching, which often rely heavily on rote memorization and grammar-focused instruction, are being supplemented or even replaced by AI-driven technologies that offer more personalized, interactive, and effective learning experiences (Dhanapal, Asharudeen, & Alfaruque, 2024). AI's ability to adapt to individually learners' needs and provide instant feedback makes it an invaluable tool in English language education. It is obvious that AI-driven platforms analyze various data points, such as a learner's proficiency level, common errors, and learning pace, to tailor lessons and activities. For example, if a student struggles with pronunciation,

the AI can provide targeted exercises and real-time feedback to improve their speaking skills. If a learner excels in grammar but finds vocabulary challenging, the system can adjust the focus of lessons to emphasize vocabulary building. Additionally, AI can simulate natural language interactions and cultural contexts, helping learners practice conversational skills in diverse scenarios. By customizing the learning experience based on individual performance and preferences, AI enhances the efficiency and effectiveness of English language acquisition, making it more accessible and engaging for learners at all levels (Kumar, 2023).

The inclusion of AI in the language acquisition process is not merely a new technological feat but a change in pedagogy, which is more student-centered (Alghizzi, 2024). It has changed the language learning

process of students providing thrilling and real experiences that were impossible to achieve. The AI-based language learning systems also take advantage of natural language processing and machine learning techniques to offer customized education based on the individual learner proficiency level and learning style. They provide real time corrective input on issues like pronunciation, grammar and usage, and practice like a conversation with the virtual guru and some interactive situations. Moreover, AI will be able to review the progress of a learner and modify lesson plans to target particular challenges, which means the learning process will both be more efficient and interesting (Akavova, Temirkhanova, & Lorsanova, 2023). With the assistance of AI-based tools, a more responsive, flexible, and available method is provided to the language learners, which helps them be more effective and confident in learning new languages.

RESEARCH PROBLEM

Though the use of AI in education is increasing, comprehensive studies have not been done especially regarding its effects on English language learning. Most research on the topic of AI in education has restricted itself to the macro purposes of this technology with little or no investigation on its use in language learning. In addition, the issues that arise when incorporating AI to the sphere of English language instruction, like training of the teachers, its availability, and moral issues are not paid much attention. (Bibi & Shahzad, 2025). This paper seeks to address such gap with references to the novel ations and issues that are typical of AI in English language learning.

PURPOSE OF THE STUDY

The purpose of this study is to analyze the role of AI in enhancing English language learning outcomes, identifying the benefits, and challenges. By examining the current state of AI in language education, this paper seeks to provide educators, policymakers, and developers with insights that can help them maximize the potential of AI in this field.

RESEARCH QUESTIONS

1. How does AI improve the effectiveness of English language learning?

2. What are the main challenges in integrating AI into English language education?

LITERATURE REVIEW

AI IN EDUCATION

Artificial Intelligence (AI) is playing a major role in the educational process by proposing unique solutions to improve the teaching and learning process. Perhaps, among the most prominent ones are personalized learning, in which AI-based models adjust instructions to address the needs of specific students. National Academy of Education (2013) states that adaptive learning technologies uses information on how students interact and perform in order to create lessons, deliver interventions through responsive assessments, and create a more personalized learning path. Such customization contributes to meeting different learning styles and rates, and therefore, makes the education more effective and interesting. Moreover, Intelligent Tutoring Systems (ITS) have become very effective in the field of education. Akyuz (2020) points out such AI application in ITS is used to emulate one-on-one tutoring because they offer real-time support and guidance, and thus it can greatly enhance student understanding and retention. More so, AI improves administrative practice in educational institutions. According to (Owan, Abang, Idika, Etta, & Bassey, 2023), automated grading systems and scheduling tool are an administratively lessening tool and enables educators to concentrate more on initiative teaching strategies. Additionally, AI facilitates educational data analytics, which helps in identifying learning patterns and predicting student outcomes (Aga Maulana, 2023). Despite these advancements, challenges such as data privacy, algorithmic bias, and the need for educator training must be addressed to fully leverage AI's potential in education (Awad & Oueida, 2024). Overall, AI holds great promise in advancing educational practices, but careful consideration is required to ensure equitable and effective implementation.

AI AND LANGUAGE ACQUISITION

Artificial Intelligence (AI) has dramatically reshaped language acquisition by offering advanced tools and methodologies that enhance learning efficiency and engagement. AI-powered language learning platforms utilize sophisticated algorithms to deliver personalized

instruction, adapting lessons to the individual learner's proficiency and learning pace. According to (Sunar & Khalid, 2024), these systems use natural language processing to analyze students' input and provide real-time feedback on pronunciation, grammar, and vocabulary, making language practice more interactive and tailored. As an example, AI-powered tools, such as Duolingo, use machine learning to make exercises progressively more customized to each individual user and with time, optimize the learning process and maximize the ability to retain vocabulary (Tiwari, Jain, Kumar, Soni, & Negi, 2024). The AI also allows creating a dialogue-based immersive and engagement learning experience: conversational agents and virtual tutors present users with a simulated real-world interaction and cultural context, which is essential to achieve fluency (Antony & Ramnath, 2023). In spite of these progresses, existing issues, like the imperative of cultural sensitivity of AI tools and possible biases, are essential (Varsha, 2023). On the whole, AI is a huge step towards the concept of language acquisition that offers learning environments based on personalization, adaptivity, and immersion and is in the process of constant transformation.

EXISTING RESEARCH

AI tools are found to be very useful in promoting learning of English language through individualized, interactive, and adaptable educational approaches. According to research, AI-based language acquisition systems, including the ones using natural language processing (NLP) and machine learning algorithms, provide personalized instructions, which adapt and evolve based on individual learners and the level of their proficiency (Dwivedi, 2021). To give an example, AI services such as Grammarly or Duolingo can be used to scan the input of the user and provide corrections and suggestions in real-time, greatly enhancing writing and speaking abilities. Furthermore, conversational agents can be powered by artificial intelligence, including chatbots and virtual tutors, who can be used to create an immersive practice because learners participate in simulated communication that resembles a real-life process (Zhai, 2023). Such tools assist learners in the confidence and fluency development because they will experience both the prompt feedback and repetitive

practice in the supportive setting. Research has also demonstrated that AI systems may bring significant enhancements in the language skills, in refinement of the vocabulary knowledge, grammatical accuracy, and conversational skills.

Although the expectations of the AI tools in regards to English language learning are positive, there is a need to resolve a few obstacles to optimize their effectiveness and provide equitable access to them. The problem of algorithmic bias is one of the primary ones. The AI systems learn based on comprehensive data sources and when the sources have biases the AI system may unwittingly encourage and perpetuate such biases. This aspect is of great concern especially in language acquisition where diversity of culture and language has to be devoid of oppression. As an example, (Ferrara, 2023) identifies the possibility of informing using AI tools to give false or culturally insensitive answers, which may create a misunderstanding or even stereotypes. The answer to it lies in continued improvement of algorithms and training datasets with the hope that the AI tools provide support that is ethically on equal footing and propose culturally acceptable solutions.

The other threat is the possibility of excessive dependency on the AI tools, which would take away the experience of human communication and immersion in learning a language. It is stated that so far AI tools such as chatbots and virtual tutors might not introduce such insights into economics and emotional intelligence that human instructors can provide to learning (Zawacki-Richter, V. I. Marin, & Gouverneur, 2019). Excessive use of AI may deny learners a chance to acquire a conversational fluent language and cultural competence, which is more available in real-life interactions. It is necessary to balance AI-assisted learning and human-dictated instruction, as the former cannot be the only way of ensuring a comprehensive language education. Another area of concern when using AI tools is privacy and security of data. The platforms that support language learning usually ask to share personal information in order to customize the learning process and measure the progress. Its collection, storage, and use also brings to question the privacy of the users and possibility of data breach. The necessity to take effective measures in terms of protecting the data of users and the transparency of

the method, in which this information is utilized, was stated by (Dilmaghani, et al., 2019). In the absence of proper protection measures, Sensitive information might be released, and this can jeopardize the security and user confidence. Moreover, it might contribute to the digital divide expansion, when advanced AI technologies can only be accessed due to socioeconomic reasons. It is important to note that, although AI-tools can produce significant opportunities, their access and performance could be limited in the underfunded educational environments or among the learners (Sharma, 2024). having little access to technology. To guarantee the fair distribution of AI tools, it is necessary to resolve the issue of tech infrastructure inequality and support the underprivileged communities. This will involve spending funds in cost-effective technologies and educators on how to successfully apply AI tools to different learning experiences.

METHODOLOGY

RESEARCH DESIGN

The method of the study is mixed in the sense that it uses both a qualitative and a quantitative approach to evaluate the contribution of artificial intelligence to English language learning. The study is a mix between the quantitative and qualitative approach to achieving a more thorough analysis of the role AI plays in

language education. The quantitative section features a list of eleven statements on which the strength of agreement, the degree of agreement to the benefits and challenges of AI-based tools among the participants will be measured. The qualitative dimension includes the investigation of students in addition to educators, lengthy discussions with them, and having an insight into their opinion about AI in English language learning.

PARTICIPANTS

Participants in this study include 185 university students enrolled in English language courses, as well as educators who have integrated AI tools into their teaching. The sample is diverse in terms of age, proficiency level, and educational background, providing a broad perspective on the impact of AI in different learning contexts.

DATA COLLECTION

Data was collected over a one-month period using a variety of methods. The questionnaire was administered to measure participants' agreement with benefits and challenges of AI tools. The study also analyzed the data from the interview which was conducted to have further perspectives from the participants.

FINDINGS AND DISCUSSIONS

EFFECTIVENESS OF AI TOOLS

Table 1. Participants' agreement with the effectiveness of AI tools

No	Statements	N=185	
		Mean	SD
1	AI tools help me improve English language skills, especially speaking and listening skills.	3.57	.800
2	Learning with AI tools is more effective than traditional learning methods.	3.55	.768
4	AI tools provide me useful feedback to improve English language skills	3.72	.850
5	I feel more motivated to learn English thanks to AI tools.	3.65	.822
6	I can arrange my learning schedule flexibly.	3.66	.756

3	AL tools help me become confident in communicating.	3.60	.787
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As can be seen in Table 1, it is clear that participants admitted that AI tools helped students improve English language skills, especially speaking and listening skills (item 1: $M=3.57$; $SD=.800$). The results also revealed that the majority of participants agreed that learning with AI tools was more effective than other traditional learning methods (item 2: $M=3.55$; $SD=.768$). Besides, participants realized that AI tools helped students become confident in communicating (item 3: $M=3.60$; $SD=.787$). Participants also agreed that AI tools provided students feedback to improve English language skills (item 4: $M=3.72$; $SD=.850$). What is more, participants also admitted that students felt more motivated to learn English (item 5: $M=3.65$; $SD=.822$). Further to this, students found it easy to arrange their learning time (item 6: $M=3.66$; $SD=.756$).

Concerning the data collected from the interview, participants who took part in the interview thought that AI tools bring many benefits to learning and teaching English at universities. Some perspectives of participants were interpreted as follows:

"AI tools have made learning English more engaging. I can practice speaking and get instant feedback, which helps me improve faster."

"Using AI apps, I can learn English at my own pace and focus on the areas where I need the most help, like grammar or pronunciation."

"AI chatbots give me the confidence to practice English without feeling embarrassed about making mistakes."

"The personalized recommendations from AI-based platforms help me focus on vocabulary that I actually use in conversations."

Hereby to conclude, the findings of this study conducted provide evidence that AI tools are helpful to improve language proficiency especially in speaking

and listening skills greatly. Students who enrolled in the learning process with AI-driven apps significantly improved their level of communicating in English as opposed to the students who employed common learning practices. The research conducted has shown that chatbots and other forms of AI, especially virtual assistants, proved to be especially useful in the enhancement of oral communication skills due to their ability to give immediate feedback and because they enabled the learners to train without the fear of taking a risk and making mistakes. Besides making the level of language proficiency improve, AI tools enhanced the engagement of learners as well. The respondents said that they feel more motivated and interested in AI-based application development, and they explain it by the so-called interactive character of the tools and the high level of personalization of the learning process via the mentioned development. It was also discovered that learners liked the freedom of AI tools, which enabled them to learn as pleased and at their own time.

CHALLENGES IN IMPLEMENTATION

As can be noted in Table 2, most participants admitted that English teachers must have knowledge to implement AI tools (item 7: $M=3.77$; $SD=.722$). Furthermore, participants agreed that English teachers need to have skills to implement AI tools (item 8: $M=3.82$; $SD=.758$). Besides that, participants agreed that students must have suitable technologies when they want to use AI tools for learning (item 9: $M=3.70$; $SD=.705$). Furthermore, participants claimed that to implement AI tools, students must have good internet connection (item 10: $M=3.86$; $SD=.745$). Participants also thought that AI tools cannot replace the roles of teachers in giving feedback to English learning (item 11: $M=3.81$; $SD=.769$).

Table 2. Participants' agreement with the challenges of AI tools

No	Statements	N=185	
		Mean	SD
7	English teachers must have essential knowledge to implement AI tools in teaching English.	3.77	.722
8	English teachers must have skills to implement AI tools effectively and properly.	3.82	.758
9	To implement AI tools, it requires students to have suitable technologies.	3.70	.705
10	To implement AI tools, students must ensure the internet connection available.	3.86	.745
11	AI tools provide valuable feedback but cannot replace the roles of teachers.	3.81	.769

Concerning the data collected from the interview, participants who took part in the interview thought that AI tools also have some challenges when being implemented in English language learning. Some perspectives of participants were interpreted as follows:

There are moments when I feel like the AI doesn't pick up on cultural nuances, which is important for learning a language like English."

"The AI-generated feedback is helpful, but it can feel impersonal. I still miss the human interaction you get with a teacher."

There are other times when the AI was at loss with the context of what I am trying to say, which would prove frustrating when I am in the middle of practicing a conversation.

Part of the AI tools is very cumbersome and I end up taking a lot of time cracking my head over these tools rather than learning English.

When I am overly dependent on AI, I fear being lazy in terms of training with actual people and that is essential studying a language. In a nutshell, although AI has many advantages with regard to language learning, numerous issues with its deployment have been mentioned in the research. Teacher training is one of the greatest problems. Teachers should have the peculiarities and information, that would help them to implement AI in their classes. This covers the knowledge regarding the usage of AI tools, how to interpret data that can be produced using these kinds of tools, and the application of these tools in the lesson plans to introduce improvements in learning. The accessibility of the AI technology is another challenge. As language learning with the help of AI-driven tools could make it more accessible, there is also the need of proper internet connection and correct devices that do not necessarily fit all the

students. This is likely to worsen the educational inequalities, especially under low-income/ rural settings where the exposure of technology is also limited. The research also established that a section of educators and learners had apprehensions that the application of AI in classrooms would eliminate the human touch. Although AI tools have the potential to offer significant support, they do not allow to replace the non-obvious feedback, emotional response, and cultures context provided by human teachers. Another danger that is likely to happen is that overreliance on AI may decrease the level of critical thinking and learning and solving capability as learners may use AI as the means to always get an answer instead of digging deep.

RECOMMENDATIONS

AI-enabled platforms allow the needs of various individual students to be addressed, and schools ought to use them to develop a personalized learning experience. Such platforms could draw conclusions based on the student performance and adjust the lessons to the specific points of improvement, e.g. grammar, vocabulary, or pronunciation. In addition to that, they ought to provide their teachers with professional development opportunities to acquire skills on how to effectively adopt AI in their teaching plans. The training should be both technical and pedagogical, concerning the applications of AI. What is more, they ought to introduce concrete policies and direction instructions that can serve to safeguard

student data as he or she adopts AI resources. It means making sure that AI platforms adhere to the data protection laws but also ensuring that students and parents are aware of the use of data. Lastly, schools are expected to constantly evaluate the efficiency of AI-based tools in the classroom by accepting the feedback of students and teachers.

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