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Artificial Intelligence in Language Education: Transforming Teaching, Learning, and Assessment

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Abstract

The use of artificial intelligence (AI) in language instruction portends a time when human skill and technology will work together to create competent people who are ready to function in a digitally linked, worldwide society. AI in language education is a paradigm shift that supports creativity and diversity. This study explores the role of artificial intelligence in revolutionising language education through instruction, learning and assessment. It covers a variety of AI applications in language teaching such as algorithms for speaking, listening, writing and reading skills that personalise teaching according to each learner's needs, recognise and structure teaching and learning actions based on a learner's potency, assess and provide ongoing feedback on a student's development, and create interactive learning environments. These state-of-the-art tools and software enhance learners' language production and comprehension skills, maximising the outcomes of language teaching, learning and assessment. However, the use of AI in language teaching also presents issues, such as fair assessment, overdependence on AI, and academic dishonesty, that may further widen the existing educational inequities. This study found that considering the possible advantages of AI in improving student learning, the adoption of AI in language teaching has become inevitable, but we need to be cautious in dealing with the complex issues that it raises for teachers, students, and educational institutions.

Keywords: Artificial Intelligence, Teaching, Learning, Assessment and Language Education

Introduction

Intense debate has been sparked by scholars in the emergence of artificial intelligence (AI). In education, AI may be both a strong ally and a possible enemy. For example, ChatGPT is a generative AI that can very accurately imitate and replicate human speech. It can do a wide variety of instructive tasks, such as answering questions, writing articles, producing music, and writing code. But, like with many technologies, its arrival has sparked a lively philosophical debate. AI in Language Teaching, Learning and Assessment tries to address these challenges with care and rigour. It discusses the undeniable detrimental effect of AI on language teaching and offers practical suggestions of how to circumvent it. It addresses the tools and safety measures needed for the ethical and safe application of AI in educational contexts (Pan, 2024).

There has been enormous scholarly interest in the last 10 years in how artificial intelligence is changing education, notably in the areas of language instruction, learning and evaluation. Consequently, Gutiérrez (2023) said that AI in language teaching is an interesting futuristic consequence that is transforming the educational environment and student participation. The infusion of AI in language education is currently transforming the old methodologies of teaching, learning and evaluation (Laksanasut, 2026) by introducing intelligent tools that enhance teaching and learning and learners' language acquisition experiences. Although AI-enabled educational technology can offer customised, flexible and interactive learning environments in which students can learn at their own pace and according to their own needs and skills, traditional teacher-centred techniques do not provide students with such environments. Cantos et al. (2023) present examples of AI applications that offer learners real-time feedback, customised learning pathways,

and opportunities for real-world language practice. These include intelligent chatbots, adaptive learning systems, speech recognition software, automated writing evaluation systems, machine translation tools, and virtual tutors. These technologies boost students' skills in listening, reading, speaking and writing and enhance students' autonomy and long-lasting involvement.

Recently, artificial intelligence (AI) technology has become an important element in language teaching. Some people consider that digital technology can be very useful; nevertheless, there are people who are worried about the risks. But despite the different perspectives, research shows a positive impact of technology on language acquisition, and some countries are already using it in their language teaching programs. The continued evolution of new technologies presents both opportunities and challenges for the enhancement of language training. One of the most interesting recent developments in language acquisition has to do with artificial intelligence (AI). For example, Kalidindi et al. (2025) explain that AI has been proven to be an effective tool for language learning as it can evaluate massive amounts of data and provide personalised courses for specific student needs.

The trick to learning a language is consistent practice and focusing on efficient procedures. But what if each student could do activities that are specific to their motivation, interests and level of proficiency? How can we push and support each individual student based on their own requirements so that we can allow them to accomplish some language learning goals independently? How might digital technologies facilitate individualised learning experiences in diverse classes with students of different ability levels? The paper addresses these topics in an effort to explore the ways in which artificial intelligence may impact teaching, learning and evaluation in language education.

Conceptual analysis

Artificial Intelligence: This can be defined in many ways and is used to describe how computers mimic human intelligence by interpreting language, learning, reasoning, seeing, and making decisions (Orlu & Okirika, 2025). Machines give human intelligence more power, so they can do what humans used to do. Artificial intelligence in the classroom is the use of computers and algorithms to simulate human intellect in activities like learning, reasoning, problem solving, and decision making. That is, systems that can solve issues and accomplish activities without requiring humans to constantly interact with them. These typically involve systems that learn from data and get better over time (Kalidindi et al., 2025). AI has proved itself an efficient language learning tool. It can handle vast quantities of data and build individual learning routes for each student.

Language Education: Language education is the systematic teaching and study of a language, including its grammar, vocabulary, pronunciation and cultural context. Language teaching refers to the process and methods of teaching a second or foreign language. Its study is frequently applied linguistics, and is evidenced by multidisciplinary methodologies. Language education is made up of four major learning categories: communicative competences, proficiencies, cross-cultural experiences and various literacies. Language is important in education because it enables students to think critically, connect across cultures, and communicate. Language acquisition is highly valued globally in schools to help children become more literate, develop their cognitive abilities and be ready for employment in a globalised society (Brent, 2025). Learning a language will improve your problem-solving, memory and flexibility. Moreover, it creates better relationships between students and others, which help in academic and career growth. Many schools now start language programmes early to allow pupils to develop fluency as they grow older. Language skills are important for success in school and for day-to-day living. Learning many languages helps students connect with people from different backgrounds and understand new ideas. Bilingual students often do better in courses that require critical thinking and problem-solving skills.

AI in Language Education: There are many uses of AI for language learning and teaching, but its capacity to tailor instruction is perhaps the most significant contribution of AI to the field. To personalize instruction to individual learners, to identify and sequence lessons and learning activities based on a learner's strengths, to assess and provide continuous feedback on a learner's progress, and to simulate interactive learning environments through the use of machine learning algorithms and learning analytics. These new materials enhance the students' ability to produce and understand the language, thus optimising the effects of language teaching (Akinsemolu & Onyeaka, 2025). Additionally, this flexibility allows students to proceed at their own pace, get targeted help in areas where they struggle, and review previously learned material as necessary.

AI supports teachers in designing learner-centred learning environments to improve learning outcomes and increase student motivation. With the further development of AI technologies, the role of AI in language teaching is growing. New technologies, such as multimodal learning platforms, generative AI, massive language models, and intelligent tutoring systems, are changing the way we teach and learn languages. They are used to enhance effective teaching and learning through content development, collaborative learning, simulation of real-world communication situations, and multilingual instructional support.

Consequently, AI is promoting adaptable learning environments that can satisfy the many educational requirements of students from various socioeconomic, linguistic, and cultural backgrounds. In the digital era, it is anticipated that these advancements would be crucial to attaining comprehensive, egalitarian, and superior language instruction (Kalidindi et al., 2025). The way languages are taught, learnt, and assessed has completely altered as a result of the quick development of AI technologies, such as machine learning, natural language processing (NLP), speech recognition, intelligent tutoring systems, and generative AI. The traditional teacher-centred instructional techniques in language education have given way to more learner-centred, flexible, and technologically enhanced learning settings as a result of these technological advancements. Because of this, scholars are concentrating more on comprehending the prospects, difficulties, and pedagogical ramifications of incorporating AI into language instruction.

Critical evaluation of AI applications in Language Education

Artificial intelligence tools can be applied as listed in the table below:

Reading	Listening	Speaking	Writing
Generative AI enables Teachers and students to quickly discriminate reading materials and link comprehension exercises with the use of text-based generative AI. It equally assists in translation and reading practice by increasing the translation speed.	AI voice generators can support teachers and learners to simply construct their own listening materials for a specific purpose, student need, or competence level.	AI chatbots give learners low-stakes discussion partners to improve verbal communication. Automated voice recognition software can help students pronounce words correctly by providing tailored feedback and simulating the formation of various sounds.	Automated evaluation, connective feedback, and editing tools. The quality of students' writing can be greatly enhanced with the help of automated evaluation, connective feedback, and editing tools. Text-based generative AI: Students can improve their written interaction abilities with the help of text-based generative AI. Additionally, it enables educators and learners to produce an infinite number of example texts to guide students' own writing. Machine transition Students can improve their language comprehension by working at the word and sentence level to construct a document with the help of machine translation.

Artificial Intelligence and Language Education

Artificial intelligence transforms teaching, learning and assessment in the following ways:

1. Increase effectiveness and ease of use: AI allows language learners to access learning materials at their own speed, at any time, and from any location. AI-enabled mobile applications and online platforms provide a convenient and adaptable learning environment by removing time and geographical constraints (Chisega-Negrila, 2023).
2. Personalised and adaptive instruction: Individual characteristics, personal growth, individual performance, and adaptive adjustment are the four main components that make up this. These mechanisms are essential for

customising the learning practice to each student's particular requirements, skills, and developmental stage. Consequently, a more effective and customised educational experience is offered.

3. **Language assessment:** AI systems can evaluate students' language proficiency objectively and offer automated comments on vocabulary, grammar, and pronunciation (Vo, 2025). Thus, intelligent language assessment is encouraged. AI may check individuals' speaking, writing, listening, and reading abilities through automated testing, giving them immediate feedback on areas that require development. For instance, automated essay scoring (AES) is a technology-driven procedure that rates students' essays using artificial intelligence (AI) algorithms.
4. **Continuous Practice:** One benefit of chatbots as language-learning partners is their availability for ongoing practice. AI-powered chatbots and online language tutors support learners with possibilities for interactive language practice (Fryer et al., 2020).
5. **Cultural compliance:** Learners are exposed to a range of dialects, customs, and cultural norms from many nations worldwide through AI-driven platforms. In an increasingly global society, this aids students in developing cultural conformity.
6. **Progress tracking:** AI can monitor students' development over time and offer tailored suggestions for more study. By tracking students' progress, it may also encourage lifelong learning by recommending educational resources and exercises that will help them advance their language proficiency.
7. **Support for instructors:** AI has become a major factor in helping instructors by streamlining a variety of administrative and instructional duties, which improves the teaching, learning, and assessment process as a whole. Teachers have several chances to increase their proficiency and productivity with AI language technologies, which also help curriculum creation, implementation, and evaluation (Khanam & Saafi, 2025).

Emerging issues in the use of Artificial Intelligence

Notwithstanding AI's encouraging advancements in language learning, integrating it into classroom environments is fraught with difficulties. These consist of, but are not restricted to:

1. **Accuracy and Dependability:** AI chatbots may provide biased answers or false information. It could provide interesting and thought-provoking answers while simultaneously spreading false information or concepts that could mislead students and hinder their academic success (Sedaglat, 2023).
2. **Ethical Dilemmas:** The majority of academics cited ethics as one of the difficult problems that arise when utilising AI techniques in language instruction. These ethical issues are more precisely related to data security, privacy, and responsible AI use (Khanam & Saafi, 2025).
3. **Fair Assessment:** Evaluating students' work, particularly when it comes to written assignments or answers, is a major hurdle instructors face when utilising AI technologies in educational settings. AI is still not flawless and can provide erroneous assessments. Confusion results from this circumstance, which raises concerns about fair evaluation procedures and academic integrity (Alafnan et al., 2023).
4. **Academic Dishonesty:** The quick development of artificial intelligence systems that can produce text and comprehend natural language like humans is one of the main threats to academic integrity. Some academics who use artificial intelligence (AI) to write their study only produce 100% AI content, which lacks the integrity of research writing. To complete the tasks of teaching, learning, assessment, and reliable research, educators, particularly those in higher education, should uphold the concept of academic integrity.
5. **Over-reliance on AI:** Concerns about the possible loss of human contact are raised by education's blind reliance on AI (Chaushi et al., 2024). The teacher-student and peer interactions that are crucial for all-encompassing learning may be compromised by personalised learning experiences enabled by AI algorithms. As a result, social skills, which are seen as essential among students, may suffer (Khanam & Saafi, 2025).

Way forward: the use of Artificial Intelligence

1. The use of AI in language instruction should be done carefully and ethically to guarantee that it only enhances rather than replaces the human components of the educational process.
2. To complete the tasks of teaching, learning, and evaluation, our educational institutions should uphold the idea of academic integrity.
3. Teachers should get professional development that includes focused instruction on AI, literacy, and digital advancements.
4. To successfully implement and adapt AI in language instruction, educational institutions should work with technological specialists.

Conclusion

This study concludes that the use of AI in language education has resulted in revolutionary developments in learner engagement, instructional design, and evaluation techniques. AI has improved educational outcomes because it offers a promise of a return to the way we teach, learn and evaluate language instruction. AI helps to increase efficiency and accessibility through personalised and adaptive training, instructor assistance, cultural conformity, ongoing learning, progress tracking and interactive language practice, to name a few. Teachers can teach lessons, students can take charge of their own learning, and assessments can be improved through timely intelligent language evaluation. However, the issues of academic dishonesty, accuracy, ethical issues, fair evaluation, dependability, and an overreliance on artificial intelligence must be addressed immediately.

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