

## The Potential of AI as a Digital Tutor in Language Teaching English: A Review of the Literature

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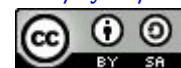
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**Abstract:** The increasing demand for personalized and effective English language learning remains a major challenge in conventional classrooms. This study aims to examine the potential of artificial intelligence (AI) as a digital tutor in English language teaching. This research employed a systematic literature review method by analyzing peer-reviewed journal articles, institutional reports (e.g., UNESCO and British Council), and empirical studies published between 2019–2024. The findings indicate that AI significantly improves English learning in five key areas: (1) personalized learning through adaptive systems, (2) increased student motivation and confidence, (3) enhancement of speaking skills via speech recognition technology, (4) improved teacher efficiency in assessment and material preparation, and (5) expanded access to quality education. Empirical studies show improvements in student performance ranging from 30–45%. However, challenges such as infrastructure limitations, digital literacy, data privacy, and over-reliance on technology remain critical concerns. In conclusion, AI functions effectively as a pedagogical partner rather than a replacement for teachers, with blended learning emerging as the most optimal approach for future English education.

**Keywords:** artificial intelligence, digital tutor, english learning, learning personalization, educational technology, blended learning

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### INTRODUCTION

Imagine a student named Rina, sitting in the 10th grade of a high school in a small town. Every time the English lesson started, she felt anxious. Not because I don't like it, but because I'm afraid of saying the wrong word, afraid of being laughed at by friends, and afraid of not being able to keep up with the teacher's pace. Rina is not the only one. In various parts of Indonesia, even the world, millions of students feel the same way. However, imagine if Rina had a personal tutor who was patient, never angry, available 24 hours a day, and able to adapt her teaching style to her learning pace ([Karatas et al., 2024](#); [Shi et al., 2023](#)). These tutors are non-judgmental, do not compare, and always give you the opportunity to try again. This is not a fantasy it is a reality

offered by artificial intelligence (AI). English teaching is currently undergoing a fundamental transformation ([Cui, 2024](#); [Feng et al., 2025](#); [Z. Sun et al., 2021](#); [Xu & Margeviča-Grinberga, 2021](#)). AI technology is no longer just an unfamiliar and complicated tool, but has become a part of everyday life. From virtual assistants on mobile phones to interactive learning apps, AI is here to make learning English easier, more fun, and more effective ([W. Sun, 2023](#)).

In an increasingly globalized world, English is no longer just a plus-it's a necessity. English opens the door to international education, global careers, and unlimited access to information. However, traditional education systems are often incapable of giving individual attention to each student. Large classes, limited time, and differences in students' abilities are a big challenge for teachers. This is where AI comes into play. This technology offers personalized learning something that is almost impossible to achieve in a conventional classroom. AI can analyze each student's strengths and weaknesses, adjust the material, provide appropriate exercises, and provide instant feedback. More so, AI helps students learn without fear, as they can practice as often as possible without social pressure. However, many educators are still hesitant. They asked: Will AI replace teachers? Is this technology really effective? Will students lose the human touch in learning? These questions are natural, and this article is here to answer them with evidence from various recent studies.

Artificial intelligence (AI) has gained increasing attention in language education due to its ability to provide adaptive, interactive, and personalized learning experiences ([Budiyanto et al., 2025](#); [Chisega-Negrilă, 2023](#); [Umar, 2024](#); [Urbaite, 2025](#)). Recent studies highlight that AI-based tools significantly improve learners' engagement, autonomy, and language performance ([Dwivedi et al., 2023](#); [Wei, 2023](#)). Furthermore, AI-driven platforms such as chatbots and speech recognition systems have been shown to enhance speaking proficiency and reduce learning anxiety ([W. Sun, 2023](#); [Zou et al., 2023](#)). Despite these advancements, there remains a lack of comprehensive synthesis that integrates pedagogical benefits and implementation challenges of AI in English language learning, particularly in developing contexts. Previous research tends to focus on specific tools or outcomes rather than providing a holistic perspective ([Crompton et al., 2024](#)). Therefore, this study aims to analyze the effectiveness of AI in English language learning, identify its pedagogical contributions, and examine implementation challenges. This study contributes by offering an up-to-date synthesis of recent research to inform educators, researchers, and policymakers.

## RESEARCH METHOD

This study employed a systematic literature review (SLR) to analyze the role of AI in English language learning. The data were collected from peer-reviewed journals, institutional reports (e.g., UNESCO, British Council), and relevant publications from 2019–2024. The inclusion criteria were studies focusing on AI in English language learning, publications within the last five years, and sources from reputable journals or institutions. The procedure consisted of three main steps: identifying and selecting relevant studies, categorizing findings based on themes such as personalization, motivation, and learning outcomes, and synthesizing and evaluating the results to identify patterns and implications. This method allows for a comprehensive understanding of AI's effectiveness and challenges in language education.

## RESULT AND DISCUSSION

The review of scientific literature reveals six main findings demonstrating AI's significant transformation in English language learning, along with pedagogical implications and implementation challenges.

### **Adaptive Personalized Learning**

AI transforms the one-size-fits-all paradigm into individual learning through adaptive systems that identify ability levels, adjust material difficulty in real-time, and create unique learning paths for each student. Applications like Duolingo use machine learning to analyze error patterns and provide targeted remedial exercises. Wei (2023) found that AI-mediated language instruction significantly enhanced learners' achievement scores and motivation, with students in AI-supported classes showing markedly faster progress compared to conventional instruction. The implication is that teachers can now focus on facilitation and mentoring, while AI handles instructional differentiation that has been nearly impossible to achieve in large classes.

### **Enhanced Motivation and Confidence**

AI creates non-judgmental learning environments that free students from social anxiety. Sun's (2023) mixed-methods investigation found that students who practiced with AI-based automatic speech recognition tools showed significantly greater confidence and willingness to speak English, as the absence of social judgment substantially reduced speaking anxiety. Gamification through points, levels, and badges transforms learning into an enjoyable experience. Dwivedi et al. (2023) note that digital natives feel more engaged with AI-based interactive learning that aligns with how they interact with the digital world. Further research confirms that AI-mediated practice significantly reduces language anxiety while boosting learner confidence and self-regulated learning (Wei, 2023).

### **Revolution in Speaking Skills Learning**

Limited speaking practice time in conventional classes is overcome through AI speech recognition providing unlimited practice. Zou et al. (2023) demonstrated that AI speech evaluation programs with automatic feedback significantly improved EFL learners' pronunciation accuracy, fluency, and intonation within structured practice periods. Applications like ELSA Speak evaluate pronunciation, intonation, and fluency with high accuracy, providing visual feedback that motivates students to continue practicing. Conversational AI can conduct natural dialogues, provide exposure to various accents (British, American, Australian, Indian), and facilitate global language exchange with AI mediation to overcome communication breakdowns (Godwin-Jones, 2023).

### **Teacher Efficiency and All-Skills Enhancement**

Automated grading for objective tests and preliminary feedback for writing substantially reduces teacher workload (Shi, 2023), freeing time for higher-order thinking activities like critical discussions and project-based learning. AI content curation recommends materials matching student levels and interests, identifies learning gaps, and generates relevant exercises. For reading, adaptive apps provide texts with appropriate difficulty levels and instant vocabulary definitions. Listening exercises can be adjusted for various accents and speeds, with subtitles facilitating comprehension. Writing assistants provide real-time feedback on grammar and style. Jeon et al. (2023) found that AI-mediated instruction integrating multiple language skills through speech-recognition chatbots produces balanced development across all language dimensions.

### **Education Access Democratization**

AI becomes an education equalizer by providing quality learning without geographical or economic limitations. Time flexibility allows self-paced learning suited to each student's conditions. UNESCO (2023) emphasizes that this democratization is educational technology's greatest contribution in reducing quality education access gaps, a claim further supported by meta-analytic evidence that AI tools produce positive effects on both language proficiency and learner motivation across diverse contexts (Guan et al., 2024)

### **AI as Pedagogical Partner, Not Teacher Replacement**

Literature consistently shows that AI strengthens rather than threatens teachers' roles. Crompton et al. (2024) describe the emerging model of "pedagogical partnership" where AI handles technical and repetitive aspects, while teachers focus on character building, creativity, emotional connection, and moral guidance. The optimal blended learning model integrates AI (personalization, immediate feedback, unlimited practice) with teachers (wisdom, empathy, contextual understanding). Shi (2023) found that AI-optimized blended learning in English education led to improved learning outcomes and student satisfaction, with teachers reporting greater instructional efficiency and empowerment.

### **Implementation Challenges and Strategic Solutions**

Despite its great potential, implementation faces five critical challenges:

1. Not all schools have stable internet and adequate devices. Solutions include government subsidies, partnerships with tech companies, allocated time in computer labs, and prioritizing offline or low-data requirement applications.
2. Teachers and students require comprehensive capacity building through gradual training, technical support, and developing open mindsets toward technology.
3. Platforms must have clear privacy policies complying with regulations, transparency to parents, and opt-out options for those with concerns.
4. AI must be a supplement, not a replacement. Teachers need to maintain balance between screen time and face-to-face interaction and design collaborative activities preserving the human element in learning.
5. Teachers must critically evaluate applications (grammar accuracy, speech recognition, curriculum alignment), provide feedback to developers, and supplement AI learning with human verification.

Empirical evidence shows AI has transformative potential in English language learning through personalization, motivation enhancement, speaking practice effectiveness, teacher efficiency, and access equalization. However, successful implementation depends on comprehensive strategies involving all stakeholders adaptive teachers, responsible students, supportive parents, investing governments, and education-focused developers. The optimal future is a blended learning model balancing technological strengths with humanistic touch, creating accessible, engaging, and meaningful learning for all students.

### **CONCLUSION**

This study concludes that artificial intelligence has strong potential as a digital tutor in English language learning, particularly in enhancing personalization, motivation, speaking skills, teacher efficiency, and educational access. However, its implementation must address key challenges such as infrastructure readiness, digital literacy, data privacy, and balanced usage to avoid over-dependence on technology. Future research is recommended to conduct empirical classroom-based studies to measure long-term impacts and explore context-specific AI integration strategies, particularly in developing regions.

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