

THE ROLE OF ARTIFICIAL INTELLIGENCE IN ENGLISH LANGUAGE TEACHING

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Abstract

The integration of Artificial Intelligence (AI) into English Language Teaching (ELT) represents a transformative paradigm shift, offering personalized, adaptive, and efficient learning experiences while simultaneously presenting pedagogical, ethical, and technical challenges. This article synthesizes empirical evidence from recent meta-analyses, systematic reviews, and primary studies to explore AI's multifaceted role in enhancing linguistic skills such as speaking, writing, reading, and self-regulation, as well as affective factors including motivation, engagement, and anxiety reduction. Drawing on grounded theory and quantitative syntheses, it highlights AI's affordances in areas like speech recognition for pronunciation improvement and chatbots for conversational practice, alongside limitations such as technological biases and over-reliance risks. The discussion underscores the need for context-sensitive implementations, teacher training, and ethical frameworks to maximize AI's potential in diverse ELT contexts, particularly in non-English-dominant regions like Asia. Ultimately, AI is positioned not as a replacement for human educators but as a collaborative tool fostering inclusive, learner-centered education aligned with global sustainable development goals.

Keywords: Artificial Intelligence, English Language Teaching, Affordances, Challenges, Affective Factors, Personalized Learning, Speech Recognition, Chatbots, Meta-Analysis, Systematic Review.

Introduction

The rapid advancement of Artificial Intelligence (AI) technologies has profoundly influenced various educational domains, with English Language Teaching (ELT) emerging as a particularly fertile ground for innovation. As global demand for English proficiency intensifies—driven by economic globalization, migration, and digital connectivity—AI offers scalable solutions to address longstanding challenges in language acquisition, such as limited access to native speakers, individualized feedback, and motivational barriers. Recent scholarly syntheses, including meta-analyses and systematic reviews, reveal that AI interventions yield substantial effect sizes in EFL outcomes, with Hedge's g values as high as 1.10, indicating large improvements in writing accuracy, speaking fluency, and learner motivation. This article delves deeply into AI's role, drawing on empirical evidence to illuminate its affordances, challenges, and implications for pedagogy, while advocating for a balanced, evidence-based integration that prioritizes equity and human-AI synergy.

At the core of AI's contributions to ELT lies its capacity for personalization, enabling adaptive learning systems that tailor content to individual learner profiles. For instance, AI-powered platforms like intelligent tutoring systems and virtual reality (VR) environments dynamically adjust difficulty levels based on real-time performance data, fostering self-regulated learning.



In speaking skills, AI's speech recognition technologies provide immediate feedback on pronunciation, intonation, and fluency, addressing subskills that traditional classrooms often overlook due to time constraints. Studies demonstrate that tools incorporating spectrograms visualize pitch variations, significantly reducing pronunciation flatness and enhancing consonant-vowel retention among higher education learners in non-English-speaking contexts, such as Taiwan. Conversational AI agents, such as Amazon Alexa or customized chatbots, serve as tireless practice partners, simulating real-world dialogues and boosting vocabulary acquisition through contextual cues like gestures and multimedia inputs. In one quasi-experimental study involving Turkish EFL students, an AI model for recording and analyzing pronunciations led to marked improvements in memory retention and reduced speaking anxiety, with participants reporting higher self-efficacy post-intervention.

Shifting to writing, AI tools like Grammarly and neural machine translation systems (e.g., Google Translate) revolutionize feedback mechanisms by offering real-time corrections, lexical suggestions, and syntactic enhancements. Empirical evidence from systematic reviews indicates that these applications not only reduce grammatical errors but also encourage lexical diversity, enabling learners to incorporate complex structures and specialized expressions that might otherwise remain inaccessible. For example, in South Korean college settings, integration of translation tools facilitated reflective practices, where students compared AI-generated outputs with their own, resulting in improved proficiency and self-editing skills. Meta-analytic data further corroborates this, showing strong effect sizes in writing complexity and accuracy when AI feedback is employed, with revisions leading to sustained gains in autonomous writing abilities. However, this affordance extends beyond mechanics; AI promotes metacognitive awareness by prompting users to evaluate AI suggestions critically, thus bridging the gap between passive correction and active skill development. Reading comprehension, though less frequently addressed in AI-ELT research, benefits from immersive technologies such as AI-mediated gaming environments. Platforms like World of Warcraft, augmented with AI characters and adaptive narratives, contextualize vocabulary in dynamic scenarios, transcending textbook limitations. Japanese EFL learners, for instance, acquired decontextualized terms through in-game quests and chats, demonstrating enhanced retention and application in real-life contexts. This gamification element aligns with constructivist theories, where AI algorithms generate personalized challenges, fostering deeper semantic understanding and incidental learning.

Pedagogically, AI reshapes instructional design by enabling diagnostic assessments that predict scores and prescribe tailored interventions, such as customized lectures or practice tests. In Korean TOEIC preparation contexts, systems like Soljam utilized learner-generated content (LGC) to promote autonomy, with multimodal interfaces (text, audio, video) adapting to preferences and yielding positive outcomes in engagement and independence. Systematic reviews emphasize AI's role as a teaching assistant, automating tedious tasks like grading and material creation, thereby freeing educators to focus on higher-order facilitation. Yet, this integration demands a shift toward hybrid models, where AI complements rather than supplants human interaction. Affective dimensions represent another critical frontier, where AI mitigates barriers like foreign language anxiety and boosts intrinsic motivation. Systematic reviews of 21 empirical studies from 2017-2023 reveal that chatbots and AI tutors significantly enhance



motivation ($p < 0.001$ in multiple cases), engagement, and positive attitudes, while reducing anxiety through low-stakes practice environments. For example, in EFL higher education, AI platforms like ChatGPT and SIRI fostered eagerness and confidence, with cumulative anxiety reductions noted in quasi-experimental designs. However, isolated cases reported increased anxiety, underscoring the need for context-specific adaptations. These findings align with self-determination theory, as AI's immediate, non-judgmental feedback satisfies autonomy and competence needs, leading to heightened enjoyment and persistence.

Geographical patterns in AI-ELT research highlight disparities, with Asia dominating (72% of studies), particularly China, Taiwan, and Japan, reflecting regional investments in technology-driven education. This Asian-centric focus contrasts with broader AI education trends led by the US, suggesting opportunities for cross-cultural expansions. Learner demographics skew toward higher education (65%), with K-12 and adult contexts underrepresented, indicating gaps in addressing diverse age groups and professional needs. Despite these affordances, AI's implementation in ELT is fraught with challenges that demand rigorous scrutiny. Technical limitations, such as breakdowns in speech recognition accuracy or unnatural chatbot dialogues, can lead to learner disinterest and frustration. Ethical concerns loom large, including data privacy fears where learners worry about personal information storage—and biases in AI training data that standardize language ideologies, marginalizing non-standard varieties like World Englishes. For instance, Google Translate's default categorizations (e.g., labeling Tagalog as "Filipino") reinforce hegemonic norms, potentially eroding linguistic diversity. Over-reliance on AI risks diminishing critical thinking and creativity, with meta-analyses noting high heterogeneity ($I^2 = 92.66\%$) due to contextual variances, emphasizing the moderating roles of tool type and measurement methods. Furthermore, affective reviews caution against unguided use, as some AI interactions may inadvertently heighten anxiety without proper scaffolding.

To navigate these challenges, future directions must prioritize ethical frameworks, teacher professional development, and inclusive research designs. Systematic literature reviews advocate for longitudinal studies with mixed methods to capture nuanced impacts, expanding beyond chatbots to explore emerging tools like generative AI (e.g., LLMs post-2023). Pedagogical implications include fostering AI literacy among educators to mitigate digital divides and ensure equitable access, aligning with UNESCO guidelines for sustainable education. In multilingual contexts, customizing AI prompts with Global Englishes data can counteract biases, promoting ELF-aware feedback and interactions. Ultimately, AI's true potential in ELT lies in human-AI collaboration, where technology amplifies pedagogical efficacy without supplanting the irreplaceable elements of empathy and cultural nuance in language learning.

In conclusion, AI stands as a catalyst for revolutionizing ELT, evidenced by robust empirical syntheses demonstrating its efficacy in skill enhancement and affective support. By addressing challenges through principled integration, educators can harness AI to create adaptive, engaging, and inclusive learning ecosystems, paving the way for equitable global language proficiency in an increasingly interconnected world.



References

1. Ekizer, F. N. (2025). Exploring the impact of artificial intelligence on English language teaching: A meta-analysis. *Acta Psychologica*, 260, 104378.
2. Lee, S., Jeon, J., & Choe, H. (2025). GenAI limitations in ELT. *Computers & Education: Artificial Intelligence*, 6, 100200.
3. Abdelhalim, S. M. (2024). An investigative study on speaking anxiety among first-year students. *Journal of Language Teaching and Research*, 15(1), 1–10.
4. Boonsuk, Y., Wasoh, F., & Ambele, E. A. (2024). ELF-aware feedback in ELT. *Annual Review of Applied Linguistics*, 44, 1–20.
5. Choi, J., Kim, S., Lee, J., & Moon, Y. (2024). AI in instructional design. *Computers in Human Behavior*, 150, 107987.
6. Crompton, H., Song, D., & Burke, D. (2024). AI and English language teaching: Affordances and challenges. *British Journal of Educational Technology*, 55(3), 796–820.
7. Ghafouri, M. (2024). GenAI as feedback provider. *Computers & Education: Artificial Intelligence*, 5, 100175.

