Contemporary Applications Of Artificial Intelligence In English Language Teaching: A Review Of Current Research And Empirical Evidence

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Abstract: Artificial Intelligence (AI) has emerged as a transformative force in English Language Teaching (ELT), reshaping instructional approaches, learner engagement and assessment practices across diverse educational contexts. This article provides a comprehensive review of contemporary AI applications in ELT, synthesizing empirical evidence and conceptual insights from recent systematic reviews and empirical studies. Drawing from the latest research on generative AI, intelligent tutoring systems, natural language processing tools, virtual agents and adaptive learning platforms (e.g., Lee et al., 2025; Kundu & Bej, 2025; Lo et al., 2024), the review evaluates trends, outcomes, challenges and pedagogical implications. Findings demonstrate consistent improvements in language proficiency, motivation, autonomy, feedback quality and engagement across speaking, writing, reading and vocabulary domains. However, issues related to digital inequity, teacher readiness, ethical use, cognitive load and contextual adaptability persist. The study proposes a holistic model of AI-enhanced ELT grounded in cognitive, sociocultural and pedagogical perspectives and offers recommendations for research, policy and classroom practice. This review contributes to ongoing debates about AI's role in education and provides a consolidated evidence base for stakeholders seeking to integrate AI responsibly and effectively in English language education.

Introduction: Artificial Intelligence (AI) is rapidly transforming the landscape of English language teaching (ELT), reshaping instructional design, assessment practices, interactive learning and the role of both learners and teachers. The infusion of AI technologies such as generative AI (GenAI), large language models (LLMs), intelligent tutoring systems (ITS), virtual agents, NLP-driven feedback systems, adaptive learning platforms and predictive analytics has catalyzed a paradigm shift from teacher-centered pedagogy toward personalized, data-informed and learner-driven modes of learning (Lee et al., 2025; Lo et al., 2024). The demand for AI-supported pedagogies has intensified due to increasing class sizes, globalized communication needs and expectations for individualized feedback. AI tools can provide real-time corrective feedback, simulate conversation partners, generate adaptive tasks, evaluate student writing,

personalize learning trajectories and support metacognition functions historically difficult to achieve at scale. As Kundu and Bej (2025) argue, AI represents an instructional add-on and a structural transformation of school-based EFL ecosystems. Despite growing interest, the empirical evidence on AI's effectiveness remains fragmented across diverse contexts. Recent systematic reviews on GenAI in language classrooms (Lee et al., 2025), ChatGPT applications (Lo et al., 2024), AI-enabled EFL teaching in schools (Kundu & Bej, 2025) and broader AI-enhanced language learning trends reveal both opportunities and substantial implementation challenges. A phenomenological study on learner experiences with AI tools further highlights complex affective and behavioral dynamics. This article consolidates insights from seven influential, contemporary studies to illuminate the landscape of AI-enhanced ELT, addressing the following research

questions:

1.   What types of AI technologies are currently used in English language teaching?

2.   What empirical evidence exists regarding AI's impact on language learning outcomes?

3.   What pedagogical approaches and conceptual frameworks underpin AI-mediated ELT?

4.   What challenges and contextual constraints influence AI adoption?

5.   What implications emerge for theory, practice and future research?

METHODOLOGY

This article follows an integrative review methodology, synthesizing findings from high-quality scholarly works published between 2019 and 2025. The included sources comprise:

1.   Two systematic reviews of Generative AI in language classrooms (Lee et al., 2025)

2.   Two systematic reviews of AI-enabled EFL teaching (Kundu & Bej, 2025; earlier iteration)

3.   A systematic review of ChatGPT applications in ESL/EFL settings (Lo et al., 2024)

4.   A phenomenological study of learners' experiences with AI tools

5.   A meta-review of AI-enhanced language education research trends

These studies collectively examine over 180 empirical articles from 2014 to 2025, encompassing diverse educational levels (K-12, tertiary), geographic contexts (Asia, Middle East, Africa, Europe) and language domains. The synthesis adopts thematic, conceptual and comparative strategies to integrate evidence, aligning with interactive model of qualitative synthesis.

TYPES OF AI TECHNOLOGIES USED IN ELT

Across the reviewed studies, a clear taxonomy of Artificial Intelligence applications in English Language Teaching (ELT) emerges, reflecting the diversity of digital tools currently transforming instructional practices. These technologies can be organized into six major categories, each offering distinct pedagogical affordances and addressing different dimensions of language learning and teaching.

Generative AI (GenAI) and Large Language Models (LLMs)

Generative AI tools such as ChatGPT, GPT-based writing assistants and a range of AI-driven content generators constitute the most rapidly expanding category of AI technologies in contemporary ELT (Lee et al., 2025; Lo et al., 2024). These systems are capable of performing sophisticated natural language generation tasks, including producing preliminary drafts, offering linguistic scaffolding, summarizing and paraphrasing texts, reorganizing content structures and simulating conversational exchanges for speaking practice. They also provide highly personalized feedback and can function as interactive tutors capable of delivering tailored explanations. The advanced natural language generation capabilities of LLMs afford learners opportunities for unprecedented levels of interaction, enabling hybrid forms of human-AI collaboration that extend traditional pedagogical boundaries (Jeon & Lee, 2023).

Intelligent Tutoring Systems (ITS)

Intelligent Tutoring Systems represent another core category of AI in ELT, offering adaptive, sequenced instruction informed by real-time learner performance. Prominent examples include Google Dialogflow chatbots, the Lyra Virtual Assistant and AI-based dynamic assessment modules. These systems emulate aspects of individualized human tutoring, providing structured support for vocabulary development, grammar exercises and guided speaking practice (Jeon, 2022). Their underlying adaptive algorithms allow them to adjust instructional content and difficulty levels, making them valuable tools for differentiated instruction.

Natural Language Processing (NLP) Tools

A significant proportion of AI-supported writing and speaking interventions rely on Natural Language Processing technologies. NLP-based tools include Automated Writing Evaluation (AWE) systems such as Grammarly, Pigai and iWrite; speech recognition tools such as Google Assistant and EchoDot; pronunciation scoring algorithms; and a variety of text analysis tools. These technologies offer detailed corrective feedback, facilitate iterative drafting and support learners in refining both written and oral production (Woo et al., 2024; Han, 2020). Their capacity to analyze large quantities of learner language makes them central to current innovations in data-driven language instruction.

Adaptive Learning Platforms

Adaptive learning systems employ AI-driven analytics to personalize instruction by adjusting task complexity, pacing, sequencing and activity types according to individual learner proficiency. These platforms identify learner strengths and weaknesses in real time and modify learning trajectories to optimize progress (Yang & Zhao, 2024). Such systems reinforce personalized learning and contribute to sustained engagement by ensuring that instructional materials remain appropriately challenging.

Virtual Reality (VR) and Augmented Reality (AR)

Although comparatively less prevalent, VR and AR tools constitute an emerging category in AI-enhanced ELT. These immersive technologies enable learners to engage with vocabulary and communication tasks in simulated environments that approximate real-world communicative contexts. VR/AR-supported ELT applications have been shown to foster deeper engagement and facilitate experiential learning, particularly in vocabulary acquisition and conversational practice (Tai et al., 2020).

Gamified AI Learning Environments

Finally, AI-enhanced gamification represents a distinctive instructional approach that integrates game-based elements with AI-driven analytics to support motivation and engagement. Examples include adaptive, game-based vocabulary applications such as the Jungle Animals vocabulary game, which leverages AI to track learner performance and dynamically adjust task difficulty. These environments combine motivational game mechanics with data-informed scaffolding, offering a complementary pathway to vocabulary and language skill development.

EMPIRICAL EVIDENCE OF AI'S IMPACT ON LANGUAGE LEARNING OUTCOMES

A substantial body of recent empirical research consistently demonstrates that Artificial Intelligence exerts a positive and multifaceted impact on language learning outcomes across core language domains. The studies reviewed indicate that AI-supported tools enhance both cognitive and affective dimensions of English language learning, contributing to measurable gains in proficiency, engagement and learner autonomy.

WRITING DEVELOPMENT

AI-powered writing tools such as Automated Writing Evaluation (AWE) systems, generative AI applications and NLP-based writing assistants have been shown to significantly support the development of learners' written proficiency. These tools facilitate improvements in writing accuracy, structural coherence and lexical richness by providing immediate, detailed and iterative feedback on grammar, vocabulary and organization. In addition, the presence of automated feedback mechanisms enhances self-efficacy, as learners become more confident in revising their work and aids in cognitive load management by reducing the burden associated with complex writing tasks. Research further indicates that writing supported by large language models enhances idea generation and encourages more substantive revision behaviors, particularly among less proficient writers (Lo et al., 2024; Woo et al., 2024).

Speaking Skills

AI-driven speaking tools such as speech recognition systems and conversational chatbots play an increasingly important role in the development of oral proficiency. Studies consistently report improvements in pronunciation accuracy, spoken fluency, learner confidence and willingness to communicate among students who engage with such tools regularly. Generative AI-driven conversational scaffolds create low-anxiety, low-stakes environments in which learners can practice oral communication without fear of judgment, thereby fostering more sustained engagement and encouraging risk-taking essential for language development (Han, 2020; Jeon, 2022; Lee & Jeon, 2022).

Reading Comprehension

AI content generators and adaptive reading support systems have been found to positively influence reading outcomes by enhancing reading engagement, text comprehension and vocabulary development. AI systems can simplify, summarize, or modify texts to match learners' proficiency levels, while adaptive algorithms track individual progress and dynamically adjust reading tasks. These affordances help maintain an optimal cognitive challenge level, improving comprehension and promoting deeper textual interaction (Lee, S., Park, M., & Kim,J. 2023).

Listening Skills

Intelligent personal assistants, such as AI-enabled smart speakers and voice-based interfaces, contribute meaningfully to the improvement of listening comprehension. These tools offer authentic auditory input, allow immediate repetition of content and employ adaptive questioning techniques that adjust to the learner's listening performance. Such features replicate the benefits of individualized listening instruction and foster incremental improvements in comprehension.

Vocabulary Acquisition

Research demonstrates strong evidence of AI's effectiveness in vocabulary learning, particularly through AI chatbots, VR-based vocabulary applications and tools using multimodal cues. These technologies support enhanced word retention, incidental vocabulary acquisition and long-term memory encoding, largely due to their interactive, immersive and repetitive design. VR environments, for instance, provide contextualized exposure that promotes deep semantic processing, while chatbots deliver personalized lexical feedback and spaced repetition (Lin et al., 2022).

Overall Achievement and Affective Outcomes

Beyond linguistic proficiency, the reviewed studies highlight AI's positive influence on several affective and motivational variables. AI-supported learning environments enhance motivation, engagement, learning autonomy and self-regulation, promoting more sustained and strategic learning behaviors. Importantly, AI tools also help to reduce language-learning anxiety, offering nonjudgmental, supportive environments that encourage experimentation and persistence. These outcomes underscore AI's capacity to catalyze both emotional and academic benefits in language learning (Kundu & Bej, 2025; Yang & Zhao, 2024).

Taken together, empirical evidence demonstrates that AI substantially improves a wide range of language learning outcomes, fostering gains in writing, speaking, reading, listening, vocabulary and affective engagement. The convergence of findings across multiple studies suggests that AI-enabled instruction offers a robust and transformative set of tools for contemporary English language education.

PEDAGOGICAL APPROACHES UNDERPINNING AI-ENHANCED ELT

The reviewed research highlights that the integration of Artificial Intelligence into English language teaching is not merely a technological intervention, but a catalyst for the evolution of multiple pedagogical paradigms. Across these studies, AI tools were consistently shown to reinforce or transform several established instructional approaches, each aligned with specific learning objectives and contexts.

Personalized Learning

AI has become central to personalized learning, offering learners tailored pathways that accommodate individual strengths, weaknesses and learning trajectories. Adaptive engines embedded within intelligent personal assistants and learning platforms continuously analyze learner performance and adjust task difficulty, pacing and feedback accordingly. This personalized scaffolding allows learners to progress at an optimal rate and receive targeted support when needed, making learning more responsive and efficient.

Task-Based Language Teaching (TBLT)

AI tools enhance the implementation of Task-Based Language Teaching by enabling dynamic simulations, interactive role-play and dialogic engagement unavailable through conventional classroom means. Chatbots and intelligent conversational agents facilitate authentic communicative tasks, allowing learners to engage in meaning-oriented exchanges that mirror real-world interaction. These tools provide immediate feedback and iterative practice opportunities, strengthening learners' communicative competence within a TBLT framework (Jeon, 2022).

Project-Based Learning (PBL)

Project-Based Learning benefits significantly from AI-enabled writing assistants, research support tools and collaborative platforms. AI applications assist learners in generating ideas, drafting texts, organizing content and synthesizing information which are core components of collaborative project work. These tools also support peer collaboration by streamlining task distribution and providing automated feedback on drafts, thereby enriching the collaborative inquiry process (Woo et al., 2024).

Blended Learning and Flipped Models

AI technologies complement blended and flipped learning approaches by integrating seamlessly with Learning Management Systems (LMS) and providing supplementary practice outside classroom hours. Adaptive content delivery, automated formative assessment and AI-generated learning recommendations support flipped learning sequences in which learners engage with content autonomously before applying knowledge in teacher-facilitated sessions. This synergy promotes deeper engagement and more flexible learning opportunities (Lee, S., Park, M., & Kim, J. 2023)

Collaborative Learning

The introduction of LLM-powered tools has enabled new forms of collaborative learning that merge human and AI agents into hybrid learning teams. Chatbots and generative AI applications support joint meaning-making, problem-solving and co-construction of knowledge by mediating discussion, offering alternative perspectives and assisting with conflict resolution. Such AI-human collaboration fosters dialogue-rich environments aligned with socio-constructivist principles (Jeon & Lee, 2023).

Competency-Based Learning

AI-enabled assessments contribute to competency-based learning by tracking fine-grained language micro-skills and generating data-rich learner profiles. Intelligent systems can identify patterns in learner performance, diagnose areas of difficulty and recommend targeted interventions. This targeted assessment strengthens the alignment between instructional outcomes and specific linguistic competencies, enabling more purposeful, criteria-driven instruction. Overall, these pedagogical approaches demonstrate that AI not only supports but also expands instructional design possibilities. By

facilitating personalized pathways, multi-modal engagement and rich formative feedback, AI shifts ELT toward more learner-centered, data-informed and autonomy-enhancing pedagogies.

CONCEPTUAL AND THEORETICAL FOUNDATIONS

The integration of AI into English language education is grounded in multiple theoretical frameworks that collectively explain how and why AI tools influence language learning. The reviewed studies draw on several complementary perspectives, each illuminating different aspects of cognition, motivation, social interaction and instructional design.

First, sociocultural theory provides a foundation for understanding why AI-based scaffolding supports learners' development. Through mediated assistance and guided participation, AI tools serve as semiotic resources that scaffold learners' performance beyond their current ability, aligning closely with Vygotskian notions of assisted development and the Zone of Proximal Development.

Second, interactionist theory underscores the importance of input, output and feedback in second language development. AI tools amplify opportunities for comprehensible input, negotiation of meaning and immediate, form-focused feedback, the mechanisms which are central to interlanguage growth. Chatbots and conversational agents operationalize interactionist principles by enabling repeated, low-anxiety communicative practice.

Third, cognitive load theory explains AI's potential to offload complex processing demands by automating certain tasks (e.g., error detection, idea generation), thereby freeing cognitive resources for higher-order learning. This theoretical lens helps account for empirical evidence showing improvements in revision behavior and writing performance when learners use AI writing assistants.

Fourth, self-determination theory highlights motivational constructs such as autonomy, competence and relatedness. AI contributes to these by enabling self-paced learning, providing continuous feedback and supporting personalized learning pathways, all of which enhance intrinsic motivation and sustained engagement.

Fifth, Bloom's Taxonomy, as applied in Kundu and Bej (2025), provides a hierarchical framework for categorizing learning outcomes influenced by AI. AI supports all levels from remembering (through spaced repetition) to creating (through generative tasks) demonstrating its relevance across cognitive skill domains.

Finally, the concept of double-loop learning (Kim, 2022, as cited in Lee et al., 2025) adds a metacognitive dimension, suggesting that AI can prompt learners to reflect not only on task performance but also on their underlying assumptions, strategies and learning processes. This reflective orientation expands AI's role beyond routine task support to deeper conceptual change.

Collectively, these theoretical frameworks highlight AI's capacity to reinforce adaptive scaffolding, increase multimodal input, facilitate automated feedback and enhance dialogic engagement. They provide a robust conceptual basis for understanding AI's pedagogical value and guide the design of more theoretically informed AI-mediated learning experiences.

CHALLENGES AND CONTEXTUAL CONSTRAINTS

Despite the substantial pedagogical promise of Artificial Intelligence in English language teaching, the reviewed studies collectively underscore a series of enduring challenges and contextual constraints that shape the feasibility and effectiveness of AI integration. These constraints are systemic, pedagogical, ethical and cultural in nature, indicating that the successful implementation of AI-enhanced ELT requires sustained institutional, policy-level and infrastructural support.

Digital Divide

One of the most significant barriers to broad AI adoption is the persistent digital divide, which manifests in unequal access to devices, stable internet connectivity and robust technological infrastructure. Research reports that disparities across schools and regions directly hinder learners' ability to engage with AI-enhanced learning tools, particularly those requiring high-bandwidth, multimodal, or cloud-based functionalities (Lee & Jeon, 2022). In developing educational systems, the lack of institutional investment, limited classroom technology and infrastructural fragility further exacerbate inequities in learning opportunities (Kundu & Bej, 2025). Consequently, while AI has the potential to democratize access to high-quality language resources, it may conversely deepen existing inequalities when infrastructural standards are insufficient.

Teacher Readiness

Teacher readiness remains a central pedagogical challenge. Multiple studies report that teachers often lack AI literacy, technical proficiency and the pedagogical strategies required to integrate AI tools effectively within curriculum objectives (Jeon & Lee, 2023). Teachers express uncertainty about how to interpret AI-generated feedback, how to balance AI input with human instruction and how to manage classroom workflows that incorporate multiple

technological tools. Professional development programs remain limited in scope and depth and many teachers report low confidence in adopting AI-enabled instructional practices (Yang, Li, & Zhao 2024). This suggests that successful AI integration is inseparable from continuous teacher training, guided practice and institutional support structures.

Ethical and Privacy Concerns

The rapid proliferation of AI in educational settings has outpaced the establishment of clear ethical, legal and data governance frameworks. Issues surrounding student data privacy, algorithmic opacity and the potential for biased or inaccurate AI outputs remain insufficiently addressed in the reviewed literature. Many AI systems store sensitive student data, including voice samples, writing logs, behavioral metrics and performance analytics, without transparent disclosure or clear privacy protections. These concerns point to the urgent need for ethical guidelines, regulatory oversight and accountability mechanisms that ensure safe, responsible use of AI in ELT environments.

Cognitive Load and Prompt Engineering

The introduction of generative AI and LLM-based tools has created new cognitive challenges for learners. While these tools offer powerful support for writing and communication, they may also impose excessive cognitive load, particularly for novices unfamiliar with prompt construction, error analysis, or AI-mediated revision processes (Woo et al., 2024). Prompt engineering, an essential component of LLM-based learning, requires metacognitive awareness and linguistic precision that many learners have not yet developed. Without careful instructional scaffolding, learners may experience frustration, dependency, or superficial engagement with AI-generated content.

Cultural and Linguistic Adaptation

Another recurring challenge concerns the limited cultural and linguistic adaptability of many AI tools. Studies reveal that AI systems trained primarily on English-dominant, Western-centric datasets often fail to accommodate local communicative practices, linguistic norms, or culturally specific usage patterns. Learners may encounter unnatural phrasing, culturally irrelevant examples, or feedback misaligned with local curricula and assessment frameworks. In immersive learning scenarios such as VR vocabulary environments, the absence of culturally contextualized language scenarios can undermine learning authenticity (Tai et al., 2020). This highlights the need for localized datasets, culturally sensitive design and AI tools attuned to diverse linguistic ecologies. Collectively, these challenges emphasize that AI implementation in ELT is shaped by far more than technological innovation alone. Effective adoption requires a coordinated effort across policy, institutional leadership, teacher training, infrastructure development and ethical governance. Without such systemic interventions, the potential of AI to transform language education may remain unevenly realized.

DISCUSSION

The reviewed research demonstrates that AI in ELT is not a singular innovation, but a constellation of pedagogically meaningful tools that interact with learner characteristics, teacher practices and institutional conditions. Across the studies analyzed, three interdependent factors consistently shape AI's educational effectiveness: technological affordances, pedagogical alignment and contextual readiness.

First, technological affordances including accuracy, adaptability and feedback quality directly influence the extent to which AI tools can support authentic language learning. High-performing systems such as generative AI and large language models provide sophisticated scaffolding capable of enhancing comprehension, revision behaviors and productive language use (Kundu & Bej, 2025; Lee et al., 2025). When these affordances align with learner needs, AI becomes a powerful mechanism for personalized learning and linguistic development. However, issues of dependency, authenticity and assessment integrity highlight the need for informed and critical adoption of such tools.

Second, pedagogical alignment determines whether AI enriches or disrupts instructional design. Effective integration occurs when AI supports established frameworks such as task-based, project-based or blended learning—by facilitating authentic communicative tasks, iterative feedback and multimodal engagement. Conversely, when AI is introduced without strategic alignment, it may increase cognitive load, displace substantive instructional work or create superficial forms of engagement. Ensuring coherence between AI-mediated activities and instructional objectives is therefore essential for maximizing pedagogical benefit.

Third, contextual readiness, including digital infrastructure, teacher training and ethical governance, remains fundamental to equitable and sustainable implementation. Institutions with limited resources or insufficient teacher preparedness face significant barriers in adopting AI at scale (Kundu & Bej, 2025). Concerns related to data privacy, algorithmic transparency and ethical use of learner data further underscore the need for clear policy frameworks and responsible governance practices.

Within this broader landscape, generative AI emerges as the most transformative and disruptive technology.

Its ability to generate text, simulate dialogue and provide analytic feedback opens new possibilities for writing development, argumentation and collaborative learning. Empirical evidence consistently indicates that AI supports improvements across both lower-order linguistic skills (e.g., vocabulary, reading fluency, grammatical accuracy) and higher-order cognitive skills (e.g., critical thinking, extended writing, problem solving), reinforcing cognitive progressions described in Bloom's taxonomy (Kundu & Bej, 2025; Lee et al., 2025). Moreover, AI tools have been shown to enhance motivation, reduce anxiety and foster greater learner autonomy by offering responsive, low-stakes interaction.

Overall, the findings affirm that AI holds substantial potential to reshape ELT when implemented strategically, grounded in theory and supported by institutional capacity building. Nonetheless, AI's benefits remain unevenly distributed and contingent on contextual, pedagogical and ethical conditions. A balanced approach is integrating technological innovation with thoughtful instructional design, robust teacher preparation and strong governance that will be essential to ensuring that AI enhances rather than exacerbates inequities in English language education.

IMPLICATIONS

The synthesis of findings across the studies yields several implications for teachers, institutions, policymakers and researchers. These implications underscore the need for a coordinated and multi-level approach to the ethical and effective integration of AI in English language education.

Implications for Teachers

Teachers play a central role in determining how AI tools are interpreted and utilized within instructional settings. Therefore, teachers should:

• Integrate AI as a complementary resource, using it to enhance their pedagogical expertise and professional judgment.

• Develop AI literacy, including skills in prompt engineering, critical evaluation of AI-generated content and strategic interpretation of automated feedback.

• Learn to design AI-supported learning tasks that maintain cognitive rigor, encourage creativity and promote learner autonomy.

Teacher preparedness remains the most influential human factor shaping AI's pedagogical impact.

Implications for Institutions

Educational institutions carry responsibility for providing the structural and professional foundations necessary for responsible AI adoption. Institutional leaders should:

• Invest in equitable digital infrastructure, ensuring that all learners can benefit from AI-enhanced instruction regardless of socioeconomic background.

• Provide sustained, research-informed professional development that equips teachers not only with technical competence but also with pedagogical strategies for AI integration.

• Establish support systems for instructional design, data governance and troubleshooting to ensure the long-term sustainability of AI initiatives.

Implications for Policymakers

Policy frameworks must keep pace with the accelerating development of AI in education. Policymakers should:

• Develop clear ethical guidelines, standards and regulatory safeguards to protect student privacy, ensure algorithmic transparency and prevent misuse of learner data.

• Promote policies that align AI implementation with national curriculum standards, ensuring coherence between technological adoption and educational objectives.

• Support large-scale capacity-building initiatives that bridge inequities in technological access and teacher readiness.

Implications for Researchers

A richer empirical foundation is required to understand AI's long-term and cross-contextual effects. Researchers should conduct longitudinal, cross-cultural and theory-driven studies that examine AI's evolving role in language learning over time, investigate the impact of generative AI on creativity, higher-order reasoning, metacognition and learner identity and explore AI-teacher co-orchestration models, examining how human and artificial agents jointly shape learning environments and instructional processes. Research must also address emerging questions concerning ethics, authenticity and the pedagogical boundaries of AI-mediated learning.

CONCLUSION

The integration of AI into English language teaching represents one of the most significant pedagogical transformations of the past decade. Across the studies reviewed, compelling evidence demonstrates that AI enhances multiple dimensions of language learning, including personalization, feedback quality, learner engagement and multimodal instruction. These benefits translate into measurable gains across key linguistic domains including writing, speaking, reading, listening and vocabulary while also strengthening

affective outcomes such as motivation, confidence and willingness to communicate. However, the findings also underscore that AI is not a neutral or universally accessible innovation. Its successful adoption depends on teachers' readiness to integrate AI tools purposefully, institutions' capacity to provide robust digital infrastructure and policymakers' commitment to addressing issues of equity, privacy and ethical governance. Moreover, learners' ability to navigate AI systems, manage cognitive load and interpret AI-generated feedback remains a critical determinant of learning effectiveness. As AI technologies continue to evolve, particularly with advances in generative AI, large language models and adaptive learning systems, stakeholders in ELT must adopt a balanced, critically informed approach. This involves leveraging AI's strengths in scaffolding, personalization and interaction, while maintaining a firm commitment to human-centered pedagogical values, academic integrity and culturally responsive teaching. Ultimately, the future of English language education lies in enabling synergistic human, AI collaboration that enhances instructional capacity, empowers learners and expands opportunities for meaningful communication. Continuing research - longitudinal, cross-contextual and theoretically grounded will be essential for guiding this transformation and ensuring that AI contributes to equitable, ethical and pedagogically sound language learning experiences.

REFERENCES

1. Han, D. (2020). The effects of voice-based AI chatbots on speaking competence in EFL settings. Computer Assisted Language Learning, 33(5), 567-589.

2. Jeon, J. (2022). Exploring AI chatbot affordances in the EFL classroom: A phenomenological analysis. Interactive Learning Environments, 30(6), 1021-1040.

3. Jeon, J., & Lee, S. (2023). Large language models in education: Human-AI complementarity. Computers & Education: Artificial Intelligence, 4, 100134.

4. Kim, H. (2022). Double-loop learning in AI-supported instructional design. In S. Park (Ed.), Advances in AI-based Education (pp. 55-74). Springer.

5. Kundu, A., & Bej, T. (2025). Transforming EFL teaching with AI: A systematic review of empirical studies. International Journal of Artificial Intelligence in Education, 35(1), 1-32.

6. Lee, S., Choe, J., Zou, D., & Jeon, J. (2025). Generative AI in the language classroom: A systematic review. Interactive Learning Environments, 33(2), 215-240.

7. Lee, S., & Jeon, J. (2022). Conversational AI and pronunciation development in secondary EFL classes. ReCALL, 34(3), 295-312.

8. Lee, S., Park, M., & Kim, J. (2023). AI English learning support systems and reading interventions for EFL students. Language Learning & Technology, 27(1), 140-162.

9. Lin, X., Huang, L., & Wen, Y. (2022). AI-generated multimodal cues and their effects on vocabulary acquisition. Journal of Educational Computing Research, 60(8), 1981-2003.

10. Lo, Y., Luo, S., & Hsu, T. (2024). Exploring the application of ChatGPT in ESL/EFL education: A systematic review. Computers and Education: Artificial Intelligence, 5, 100178.

11. Tai, T., Chen, X., & Huang, Y. (2020). Immersive VR for vocabulary learning: Effects on engagement and retention in EFL contexts. Journal of Computer Assisted Learning, 36(6), 850-865.

12. Woo, J., Kim, H., & Lee, D. (2024). AI-generated text in EFL writing classes: Impacts on revision behavior. System, 125, 102999.

13. Yang, W., & Zhao, X. (2024). AI-induced emotions in L2 education: A mixed-methods analysis. Language Teaching Research, 28(2), 239-260.

14. Yang, W., Li, Q., & Zhao, X. (2024). Teachers' readiness and beliefs about AI in foreign language education. Teaching and Teacher Education, 137, 104588.

15. Zheng, L., & Yang, Y. (2024). Research perspectives and trends in AI-enhanced language education: A review. Heliyon, 10, e38617.