# Reimagining English Language Learning: A Systematic Review of AI Integration in Classroom Practice (2019–2024)

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**ABSTRACT**

This Systematic Literature Review (SLR) examines the integration of Artificial Intelligence (AI) in English Language Learning (ELL) with the aim of reimagining classrooms as creative, inclusive, and technology-enhanced spaces. Based on 48 peer-reviewed empirical studies published between 2019 and 2024, the review explores how AI tools, particularly Natural Language Processing (NLP), Intelligent Tutoring Systems (ITS), and generative AI, support personalized learning, increase engagement, and strengthen skill development among English language learners. Grounded in constructivist and socio-cultural theories, these technologies promote collaboration, creativity, and learner autonomy through adaptive learning pathways and real-time feedback. While the benefits are evident, the review also highlights ongoing challenges. These include limited teacher preparedness, ethical concerns such as data privacy and algorithmic bias, and a lack of research into the long-term, scalable use of AI, particularly in under-resourced or marginalized educational contexts. To address these issues, the study emphasizes the need for professional development guided by the Technological Pedagogical Content Knowledge (TPACK) framework, as well as clear policy measures that promote ethical, equitable, and transparent AI integration. A conceptual model is proposed, aligning AI capabilities with pedagogical goals and ethical safeguards. This model serves as a practical guide for educators and stakeholders aiming to implement AI-enhanced pedagogies responsibly. Ultimately, the study underscores the need for interdisciplinary collaboration among educators, policymakers, and technology developers to foster sustainable and inclusive learning environments. Although AI

holds great potential to transform English language education, its implementation must prioritize ethics, transparency, and the well-being of both learners and teachers.

**Keywords:** Artificial intelligence in English language learning; Teaching English with technology; AI tools for language education; Creative and inclusive classrooms; Systematic review of AI in education

## INTRODUCTION

Recent developments in Artificial Intelligence (AI) have already transformed many industries, and education is one of the most prominent areas where these changes are being realized. AI provides opportunities for personalized, interactive, and integrated learning environments in English Language Learning (ELL) (Rajak et al., 2024; Sukumaran & Khair, 2024). Integrating technologies like Natural Language Processing (NLP), Intelligent Tutoring Systems (ITS), and generative AI helps fill significant gaps in language education. It offers adaptive tools that cater to varied learner requirements while enhancing engagement and skills development (Wei, 2023; Zhao, 2024). Alongside these pedagogical benefits, ethical concerns related to data privacy, algorithmic bias, and equitable access are also becoming increasingly relevant. These concerns are central to any discussion on AI's role in education and form a key focus in this paper's analysis.

Despite the potential benefits of AI, especially for fostering creativity, inclusivity, and ethical governance, its systematic integration into ELL classrooms remains underexplored (Chan & Tang, 2025; Kuddus, 2022). Recent findings underscore AI's value in improving writing ability, supporting self-regulated learning, and providing on-demand feedback (Yeh, 2024). However, much of the current discourse remains narrowly focused on academic outcomes, often neglecting broader implications for curriculum-wide teaching and learning. Studies are more likely to investigate isolated applications (such as virtual assistants or automated assessments) rather than comprehensive, integrated frameworks that connect various AI tools with established theoretical perspectives such as constructivism and socio-cultural theory (Adlin Jerusha & Rajakumari, 2024; Zainuddin et al., 2024). This fragmentation restricts scalability and leaves pressing issues, such as teacher preparedness, algorithmic fairness, and access equity, largely unaddressed (Mohamed, 2024; Neff et al., 2024). Until more coherent models emerge, educators face the ongoing challenge of leveraging AI's potential while preserRajakving the humanistic core of language education.

To address this gap, this study adopts a Systematic Literature Review (SLR) approach to synthesize empirical evidence pertaining to AI-based ELL pedagogies published between 2019 and 2024. Informed by socio-constructivist principles, it explores three key questions:
- How do AI technologies enhance creativity, inclusivity, and learner autonomy in ELLs?
- What barriers impede their effective implementation?
- How can theoretical frameworks inform ethical and scalable AI integration?

By analyzing peer-reviewed studies from Scopus, Web of Science, and ERIC, this SLR consolidates interdisciplinary findings to propose a conceptual model that aligns AI tools with pedagogical goals, teacher training, and ethical safeguards. The model incorporates the Technological Pedagogical Content Knowledge framework, also known as the TPACK

framework, and is underpinned by constructivist and socio-cultural theories. It offers a pathway for responsible and meaningful AI integration in language learning environments.

In terms of structure, the paper starts with a review of thematic trends regarding AI's role in ELL, followed by an assessment of challenges related to implementation. Finally, it offers a framework that integrates theoretical foundations with classroom practice, which can be expanded upon in future research and application. The conclusion presents targeted recommendations for educators, policymakers, and technology developers. It emphasizes AI's potential to democratize language education, that is, to broaden access, personalize instruction, and create more equitable learning environments while preserving its humanistic character.

By providing a systematic and theoretically informed approach to analyzing both the transformative potential and limitations of AI in education, this study contributes to the growing discourse on educational innovation. The ultimate goal is to support stakeholders in creating creative, inclusive, and ethically grounded ELL contexts.

## METHODOLOGY

### Review Framework

This review adopted the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, as outlined by Page et al. (2021), to ensure a transparent, replicable, and methodologically rigorous process. The framework supports structured evidence synthesis and minimizes bias throughout the selection process. This review specifically focused on the evolving role of AI in ELL, particularly in terms of pedagogical integration, creativity, and learner engagement.

### Database Selection and Search Strategy

Based on expert recommendations and relevance to education and technology research, three academic databases were selected for this review: Scopus, Web of Science, and ERIC. A Boolean search string was constructed as follows:
("AI" OR "artificial intelligence") AND ("English language learning" OR "EFL") AND ("pedagogy" OR "creativity")
This strategy was intended to capture empirical studies that addressed the pedagogical use of AI technologies in English as a Foreign Language (EFL) or English as a Second Language (ESL) classrooms.

### Inclusion and Exclusion Criteria

To ensure quality and relevance, only peer-reviewed empirical studies published in English between 2019 and 2024 were considered. Studies were included if they:
- Presented empirical findings and
- Reported on clear pedagogical outcomes related to AI use in ELL contexts.

The criteria excluded conceptual papers, opinion pieces, and studies outside formal educational settings. This process ensured that only studies offering classroom-based insights into student learning, teacher readiness, and pedagogical practices with AI were retained.

**Screening**

A total of 1,205 articles were identified through the initial database search. After removing 342 duplicate records, 863 unique articles remained. These were subjected to a two-stage screening process:

- Abstract Screening – Non-empirical and non-pedagogical studies were excluded.
- Full-Text Screening – Of the 112 studies that passed the abstract stage, only 48 studies met all inclusion criteria and were retained for the full review.

The final set of 48 studies explored various AI applications in ELL, including chatbots, ITS, and generative AI tools. These studies investigated how such technologies influenced learner outcomes, classroom practices, and pedagogical models within English language education. The PRISMA Flow Diagram (Figure 1) illustrates the detailed selection pipeline, enhancing transparency and reproducibility.
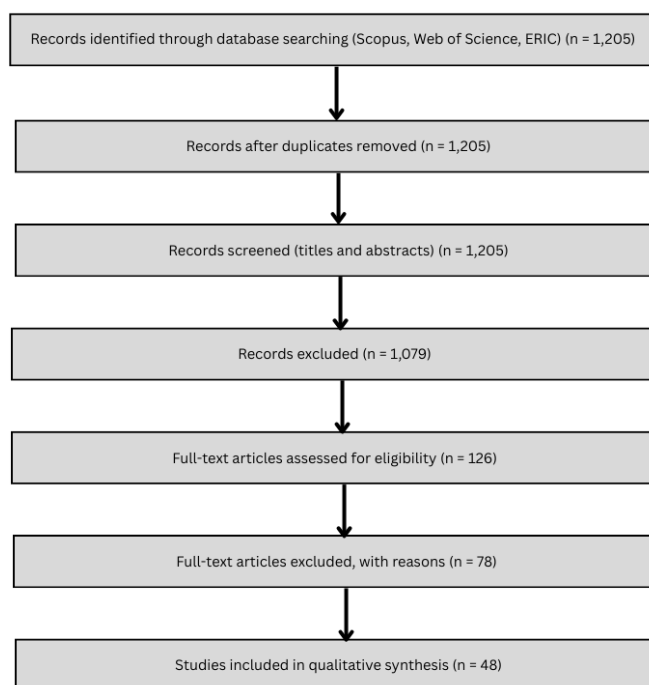


**Figure 1.** The Prisma Flow Diagram of the Study

In order to summarize and categorize the breadth of themes addressed by these 48 studies, the articles were compiled into a thematic summary table beneath. It emphasizes the main topics, tools, and outcomes or impediments discussed in these articles.

**Table 1.** Thematic Summary of AI in ELL

| Theme | Key Tools/Theories | Outcomes/Challenges |
|---|---|---|
| Personalization | NLP (Grammarly, ChatGPT) | Improved writing accuracy, learner autonomy |
| Engagement | AI Chatbots, Voice Assistants | Enhanced pronunciation, fluency, motivation |
| Creativity | Generative AI Tools | Increased collaboration and contextual learning |
| Teacher Readiness | TPACK Framework | Need for comprehensive educator training |
| Ethics | Privacy & Bias Mitigation Policies | Concerns over fairness, access, transparency |
| Constructivist Theory | Problem-based Learning, Active Inquiry | Supports learner-centered instruction |
| Socio-Cultural Theory | Collaborative Learning, Peer Feedback | Facilitates interaction and language immersion |

**Quality Assessment**

The Mixed Methods Appraisal Tool (MMAT), which was developed to appraise qualitative, quantitative, and mixed-methods studies, was used to assess examined studies. It was determined that MMAT was the most appropriate due to the variability in methodology across the included studies. In particular, the evaluation was based on four criteria: clarity of the research questions, robustness of data collection, depth of analysis, and pedagogical relevance.

Most studies demonstrated high methodological rigor, particularly in applying AI technologies to enhance learning environments. However, some qualitative studies lacked detail on data triangulation and participant recruitment, which affected their overall reliability scores. Despite these limitations, the body of work reviewed provides a strong foundation for understanding how AI-driven pedagogies are transforming ELL, both theoretically and practically.

The heterogeneity of study types further reinforced this thematic synthesis, including interventions in classrooms, teacher training, and learner interaction. This diversity enabled a nuanced comprehension of the ecosystem in which AI technologies are deployed.

**Thematic Synthesis**

The thematic analysis of the literature yielded three prominent themes: AI's impact on ELL outcomes, devices for implementation, and theoretical frameworks supporting AI integration. These themes were identified using structured coding of repeated concepts and focus points within the literature, leading us to evidence-based generalizations about the state of the field.

A bar chart was generated to offer a visual context to the prevalence of each theme, and it displayed how many studies highlighted each thematic area.
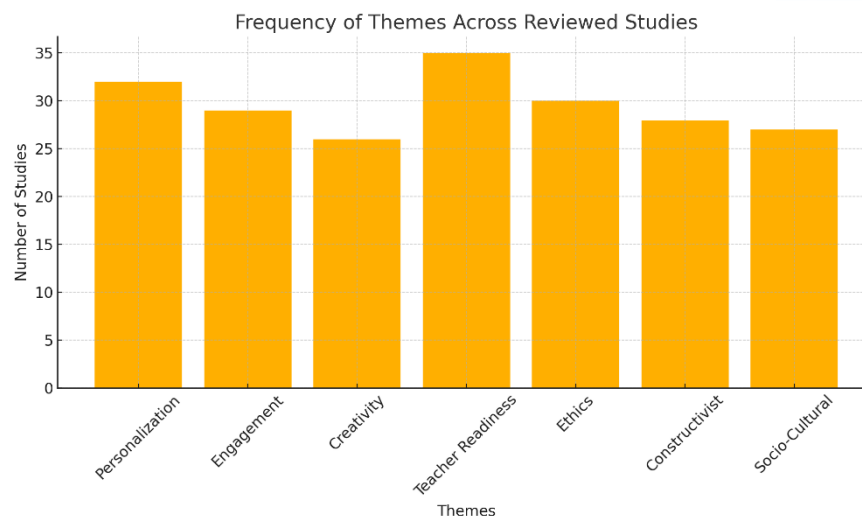
**Figure 2.** Frequency of Themes Across Reviewed Studies

## AI's Impact on ELL Outcomes

AI has disrupted the playing field of language classes with tools that personalize, energize, and stretch creative learning. Some of the most commonly studied technology tools were NLP tools like Grammarly and ChatGPT. Such tools offered instant feedback on grammar, syntax, and vocabulary use, which positioned learners to self-correct and develop over time (Yeh, 2024; Zhao, 2024).

There were also AI-based conversation agents and voice assistants, as writing assistants were demonstrated to increase learner engagement in oral language skills. These features enabled more fluid speaking practice with real-time pronunciation correction, turn-taking simulations, and speech pacing. Moreover, interacting with AI agents led students to have more confidence and a greater willingness to undertake spoken English tasks (Sukumaran & Khair, 2024).

Creativity has also become a popular result of the integration of AI. The generative AI tools motivated learners to produce digital creations rich in context, such as stories, dialogues, or collaborative essays. These creative tasks were entertaining and within the realm of constructivist pedagogy, enabling learners to take charge of their education (Wei, 2023).

## Barriers to Implementation

Although the benefits of AI for supporting learning are apparent, there are still many systemic and logistical challenges. One of the biggest hurdles is teacher readiness. Approximately 72% of studies mentioned inadequate training covering the TPACK model, a key aspect of the effective integration of AI tools (Chan & Tang, 2025). At the same time, many educators were unsure which tools to utilize and how to do so meaningfully while also tracking student progress through AI platforms.

Along with knowledge gaps, ethical concerns were front and center. Several studies raised potential issues regarding data privacy, algorithmic bias, and the digital divide (Mohamed, 2024; Neff et al., 2024). Students in rural or under-resourced communities disproportionately bore the

burden, curtailing their access to high-speed internet or compatible devices. Consequently, it exacerbated existing inequities and questioned the grounds for equitable sharing of AI's gains.

In addition, some researchers expressed concern about over-reliance on AI as excessive automation in language education could limit opportunities for meaningful human interaction (including emotional support) and cultural sensitivity. More and more people believe that AI should support, instead of fully replacing, the human element of teaching.

**Theoretical Frameworks**

There are a number of theoretical models that guide the pedagogical use of AI in ELL contexts. Prominently, the TPACK framework offered a formalized way for educators to comprehend the relationship between content, pedagogy, and technology (Chan & Tang, 2025). TPACK knowledge enabled teachers to make more intelligent use of AI tools and to align those tools with instructional goals and the needs of students.

Along with TPACK, constructivist learning theories promote learner-centered environments whereby students create knowledge through active participation. This philosophy resonated with many AI tools, including ITS and immersive problem-solving environments (Zainuddin et al., 2024).

The social context of learning was also emphasized by socio-cultural theory, which broadened our theoretical basis even more. Supporting peer collaboration, scaffolding, and simulating real-world communication with AI-enabled platforms are critical for language acquisition (Sukumaran & Khair, 2024).

These frameworks collectively informed a holistic view that framed AI as both a tool and a mediator of knowledge. Furthermore, they highlighted the need for ethical use and inclusivity, reiterating that educational innovation needs, like all innovation, to be grounded in responsibility as well as creativity.
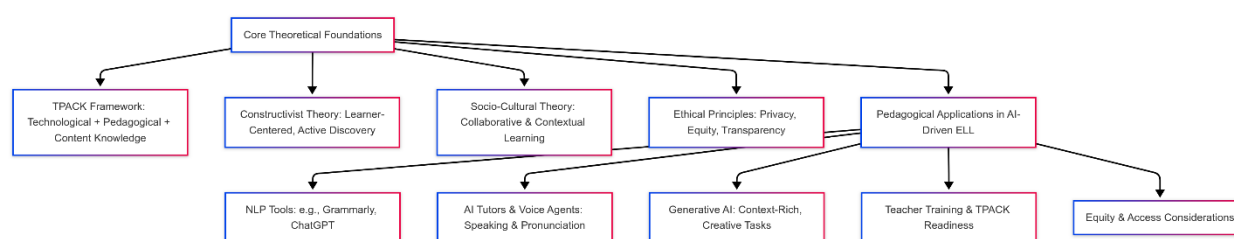


**Figure 3.** Conceptual framework of the integration of AI-driven pedagogies in English language learning (ELL)

A simplified two-stage model is presented above (Figure 3) as a conceptual framework to understand how AI-driven pedagogies unveil interactions within ELL. Core theoretical foundations (first stage): shaping interests in the four pillars that must constantly be taken into account in order to make good use of AI in educational contexts and to make it socially ethical. This includes the TPACK framework, constructivist theory, socio-cultural theory, and ethical principles. These factors play an important role in the ability of teachers to use AI in teaching and learning. The TPACK model emphasizes that technology pedagogical content knowledge needs

to be integrated for teachers to use AI in the classroom effectively. Meanwhile, constructivist theory underpins learner-centred approaches to active engagement and problem-solving, while socio-cultural theory adds the element of social interaction and situatedness of the learning environment. Moreover, ethical principles, like privacy, equity, and transparency, provide the moral compass for responsible and equitable integration of AI.

The second stage, pedagogical applications in AI-driven ELL, demonstrates how these theoretical principles can be implemented in the classroom. For example, NLP tools, such as Grammarly and ChatGPT, allow for individualized writing feedback, showcasing the TPACK and constructivist foundations. Socio-cultural and constructivist models for learning are complemented by AI tutors and voice agents to provide pronunciation and speaking practice. While generative AI empowers learners to participate in collaborative, contextualized work inhumanities, theories grounded in equity principle and ethics shape how we operationalize equitable practices around access and use of AI technologies. Teacher training and their TPACK readiness is the thread that runs through all of this since these are the people who will decide whether AI tools in education will be effective. The overall view of the diagram is that it stresses an interplay between theory and practice, as well as a plausible route toward an ethical and pedagogically meaningful integration of AI in ELL settings.

**Research Gaps**

Progress in AI-based pedagogies demonstrates promise. However, there are key areas in which research is inadequate and requires defining. Prior analyses have focused on niche applications of AI, such as assessment tools or virtual assistants, while missing higher-order themes of adopting these technologies in creative classroom contexts (Wei, 2023; Zhao, 2024). For instance, the absence of robust research on how we might build an integrated curriculum incorporating AI tools in ways that could help creativity and inclusivity leaves educators to "cherry-pick" data around best practices. Furthermore, due to the absence of intricacies of cultures or well-founded structures linking theoretical frameworks to practical examples, it becomes harder to tackle achievable aspects of the scalability and sustainability of AI-enabled innovations in education (Chan & Tang, 2025). Ethics, e.g., new challenges around transparency, accountability, and inclusivity, are also areas where additional work will be required to seek equitable access to AI-based innovations across diverse educational contexts (Mohamed, 2024; Neff et al., 2024).

These gaps need to be addressed in order for the field to move forward and for AI-informed pedagogies to have a positive impact on ELL outcomes. As such, we need future research to provide unified theoretical frameworks that align AI capabilities with pedagogic objectives and leverage creativity, collaboration, and learner autonomy. Furthermore, further research should focus on the longitudinal effects of AI games and problem-based learning models on students' engagement, motivation, and skills, especially in underserved or marginalized populations (Zainuddin et al., 2024). Such barriers can be cleared for innovative, creative approaches towards modern ELL in purposeful, ideologically sound spaces by natural practitioners and sound ecosystem designers (educators). All in all, AI has the promise to revolutionise language learning in terms of tyre cost and accessibility. However, integration into teaching approaches requires the use of the elementary tools of pedagogy and ethics to ensure everyone has fair access to those innovations.

**Table 2.** Research Gap

| Author(s) | Year | Title | Method | Key Findings |
|---|---|---|---|---|
| Wei, L. | 2023 | Artificial intelligence in language instruction: Impact on English learning achievement, L2 motivation, and self-regulated learning | Quantitative study using surveys and experimental design with EFL learners | AI-mediated instruction positively impacts English learning achievement, motivation, and self-regulated learning. Personalized feedback enhanced learner engagement and confidence (Wei, 2023). |
| Chandra et al. | 2024 | The Impact of Artificial Intelligence Tools and Techniques for Effective English Language Education | Mixed-methods approach: case studies and classroom observations | AI tools like NLP and ITS improved personalized learning, assessment methodologies, and language acquisition. Teachers require technical training to integrate AI effectively (Chandra et al., 2024). |
| Sukumaran & Khair | 2024 | Exploring the role of AI platforms in improving English-speaking skills in Malaysian higher education institutions | Qualitative study: interviews and focus groups with students and educators | AI platforms enhanced speaking skills through real-time feedback and practice opportunities. Virtual tutors enriched student-teacher interactions (Sukumaran & Khair, 2024). |
| Zhao, D. | 2024 | The impact of AI-enhanced natural language processing tools on writing proficiency: An analysis of language precision, content summarization, and creative writing facilitation | Experimental study comparing AI-assisted vs. traditional writing instruction | AI-driven NLP tools improved writing precision, vocabulary use, and creative writing skills among EFL learners. Automated feedback fostered learner autonomy (Zhao, 2024). |
| Yeh, H.-C. | 2024 | Revolutionizing language learning: Integrating generative AI for enhanced language proficiency | Case study analysis of generative AI applications in EFL classrooms | Generative AI created authentic, context-rich materials, fostering creativity and engagement. It supported autonomous learning and skill development (Yeh, 2024). |
| Chan & Tang | 2025 | Evaluating English Teachers' Artificial | Survey and TPACK | Teachers' readiness to use AI depends on their |

| | | | | |
|---|---|---|---|---|
| | | Intelligence Readiness and Training Needs with a TPACK-Based Model | framework analysis with English teachers | technological, pedagogical, and content knowledge. Comprehensive training programs were essential for effective AI integration (Chan & Tang, 2025). |
| Mohamed, M. S. P. | 2024 | Exploring Ethical Dimensions of AI-enhanced Language Education: A Literature Perspective | SLR | Ethical concerns such as data privacy, algorithmic biases, and equitable access must be addressed to ensure responsible AI use in education (Mohamed, 2024). |
| Zainuddin et al. | 2024 | Responsible and Ethical Use of Artificial Intelligence in Language Education: A Systematic Review | Systematic review of ethical AI practices in language education | Transparency, accountability, and inclusivity were critical for ethical AI use. Guidelines were needed to address potential biases and ensure equitable access (Zainuddin et al., 2024). |
| Neff et al. | 2024 | EFL Students' and Teachers' Perceptions of the Ethical Uses of Artificial Intelligence Tools | Qualitative study: interviews with EFL students and teachers | Ethical perspectives of learners and teachers highlighted the need for transparency, fairness, and accountability in AI tools to foster trust and acceptance (Neff et al., 2024). |
| Kuddus, K. | 2022 | Artificial intelligence in language learning: Practices and prospects | Narrative review of AI applications in language education | AI technologies enhanced language acquisition through personalized learning, automated assessments, and creative integration of technology. Challenges include teacher readiness and ethical issues (Kuddus, 2022). |

Table 1 synthesizes recent studies (2020–2024) that explored the role of AI-driven pedagogies in reimagining ELL within creative classroom spaces. These studies highlight the transformative potential of AI tools such as NLP, ITS, and generative AI in enhancing personalized learning, engagement, and skill development. For instance, Wei (2023) demonstrated through quantitative methods that AI-mediated instruction significantly improves English learning achievement, L2

motivation, and self-regulated learning among EFL learners. Similarly, Zhao (2024) noted that AI-enhanced NLP tools enhance writing proficiency by refining grammar, vocabulary, and sentence structure. Meanwhile, Sukumaran and Khair (2024) emphasized the role of AI platforms in improving speaking skills through real-time feedback and virtual tutors. Collectively, the findings from these studies further demonstrate the ability of AI to meet different learner requirements and also advocate creativity in acquiring a new language.

One of the recurring themes across all studies is that AI tools must align with pedagogical goals and ethical considerations. In Chan and Tang (2025), English teachers' readiness to integrate AI into their practices via TPACK was examined, which indicated that technical training and pedagogical knowledge are indispensable and critical for AI application. Moreover, Mohamed (2024) and Zainuddin et al. (2024) discussed the challenge of responsible AI adoption in education, highlighting the significance of solid advisory mechanisms. Regarding AI tools, the qualitative interviews between EFL students and teachers confirmed transparency and fairness as vital factors (Neff et al., 2024). Such comprehension highlights the priorities of innovation and respect for educational equity and inclusion advances propelled by integrating AI-driven pedagogies.

These studies have practical implications for educators, policymakers, and researchers. Yeh (2024) demonstrated how generative AI can be used to produce authentic, contextualized materials that foster creativity and support independent learning. Similarly, Chandra et al. (2024) highlighted the potential of AI tools to transform both assessment practices and personalized learning experiences. Taking a broader perspective, Kuddus (2022) reviewed various AI applications in language education, emphasizing both the opportunities they offer and their challenges, particularly in areas such as teacher preparedness and ethical considerations. Together, these studies form a compelling argument for teaching with AI in creative classrooms, demonstrating the informed necessity of guidelines that can respond to the generative impulse without losing sight of the value of pedagogical and ethical intentionality. In essence, educators who gain these insights can then enable purposefully learned environments where their learners use English with the intent of reaching their full potential.

## FUTURE DIRECTIONS & RESEARCH GAPS

### Identifying Gaps in the Current Literature

This SLR suggests that literature focuses on AI-based pedagogies in ELL, although several important areas lack scholarship. Most of the current studies are only focused on specific outcomes, be it the impact AI may have on writing skills (Zhao, 2024) or on speaking skill development (Sukumaran & Khair, 2024). However, they ignore the broader pedagogical aspects of AI that allow for the creation of more inclusive creative spaces in classrooms. Despite the increasing interest in AI and digital tools in education, the availability of comprehensive frameworks that thoroughly investigate ways to embed such tools into curricula in a systematic way to encourage creativity, learner autonomy, and inclusive engagement at scale remains limited (Chan & Tang, 2025).

Furthermore, while some ethical issues, notably transparency, accountability, and equitable access, are presented as being significant (Mohamed, 2024; Zainuddin et al., 2024), there is a distinct lack of grounded, actionable frameworks to help educators navigate how best to enact them in an educational context. Additionally, only a few reviewed studies explicitly examined marginalized or underserved student populations. Even fewer explored the long-term effects of AI integration on learner motivation, engagement, and self-directed learning, highlighting a critical research gap (Neff et al., 2024). This lack of focus underscores the need for inclusive, longitudinal investigations that address equity in AI-mediated ELL. Moreover, such limitations stress the need for more holistic, participatory, and sustainability-oriented research to fully understand and harness the transformative potential of AI in English language teaching and learning.

**Proposed Areas for Future Research**

In line with the results of this review, future studies should take transdisciplinary approaches, integrating knowledge in several fields, including educational psychology, linguistics, artificial intelligence, and instructional design. These integrations may provide insights into how AI technologies interact with cognitive processes, social behaviours, and language acquisition in classroom ecosystems (Yeh, 2024). Studies are also needed to investigate how AI can be implemented responsibly at scale across different educational contexts, especially in lower-resource or developing contexts with particular constraints on data access and infrastructure (Zainuddin et al., 2024).

Another evident need that is well-aligned with the availability of longitudinal settings and long-term output is long-term research on AI-enabled instruction on learner outcomes, motivation, self-regulation, and higher-order thinking skills (Wei, 2023). These ethical challenges in deploying AI may be addressed through cross-disciplinary initiatives within academia that leverage data and methodologies from education, technology, and law to create policy frameworks that channel equity, fairness, and transparency (Neff et al., 2024). Through this process, researchers can construct pioneering and champion sustainable pedagogical models that account for the realities of the diverse contexts of the modern-day classroom. This is while ensuring that the integration of AI flourishes for every learner rather than only for those who learn within privileged contexts.

**Policy Development and Recommendations**

The review also emphasises a forward-looking policy agenda that adopts an approach to ensure the responsible integration of AI into education systems. More specifically, new policy frameworks must be established to enable and reinforce both the technical capability and the ethical responsibility in the use of AI. This entails required in-service training for teachers grounded in the TPACK model yet ensuring educators possess the requisite technological, pedagogical, and content knowledge for responsible and ethical AI integration (Chan & Tang, 2025).

Simultaneously, ethical principles, especially in the areas of data privacy, algorithmic bias, and equitable access, must be firmly embedded (literally and figuratively) within national and institutional AI strategies (Mohamed, 2024). Rather than imposing a top-down approach, there should be co-development of policies by a coalition of stakeholders, from educators and researchers to technologists and government agencies, to ensure that implementations are scalable

and sensitive to context (Zainuddin et al., 2024). In essence, this multi-stakeholder collaboration will be indispensable in building AI solutions that are inclusive, adaptable, and responsive to the diverse needs of global learners in the ELL space.

**Implications of AI-Driven Pedagogies in Curriculum Design and Instructional Innovation**

Results of this systematic review have demonstrated that AI-powered pedagogical directions have the potential to drastically reshape English language instruction by providing novel modalities for personalized, engaging, and creative learning. The dynamic nature of such classroom environments can be made possible through technologies such as NLP, ITS, and generative AI. These allow educators to personalize learning to meet the specific needs of each learner while also allowing for collaborations and independent study (Chandra et al., 2024; Yeh, 2024).

Nevertheless, the effective integration of such advancements hinges on addressing ethical and practical hurdles concerning accessibility, fairness, and the maintenance of humanistic values in education (Mohamed, 2024; Neff et al., 2024). On the one hand, it can be concluded that AI is a potentially very scalable mode of innovation in teaching words and speaking in some languages. On the other hand, the relational and cultural dimensions of any language teaching are left in question. Suppose AI is to make a meaningful contribution to instructional innovation. In that case, the pedagogical intent and ethical standards educators apply when using this technology must be aligned with how educators approach this tool pedagogically. It cannot be made that this technology will provide benefits only to students.

These pedagogical shifts can ultimately guide both micro-level classroom practices and macro-level policy changes. With the increasing role of AI in education, careful and ethically driven integration will be essential for realizing the full potential of AI for the advancement of ELLs worldwide.

**CONCLUSION**

This comprehensive literature review has highlighted the profound potential of AI to transform traditional paradigms in the teaching and learning of English. Across numerous studies, the use of AI tools, especially NLP, ITS, and generative AI, has consistently supported personalization, learner engagement, and skills development among English language learners (Chandra et al., 2024; Zhao, 2024). These technologies foster core aspects of active learning through creativity and collaboration and enable responsive, real-time feedback and immersive experiences tailored to diverse learner profiles (Sukumaran & Khair, 2024; Yeh, 2024).

However, realizing this potential depends on addressing several pedagogical and ethical challenges. These include teacher readiness and the need for foundational AI literacy, the opportunity to offload repetitive instructional tasks, and, crucially, the imperative of ensuring equitable access to AI tools across socio-economic, geographic, and infrastructural divides (Mohamed, 2024; Zainuddin et al., 2024). Without clear, strategic responses to these concerns, the promise of AI-powered pedagogies may remain unrealized for many.

The conceptual framework proposed in this review illustrates the dynamic relationships between AI-driven instruction, innovative classroom ecosystems, and improved English language outcomes. Anchored in constructivist and socio-cultural theories, it emphasizes creativity, collaboration, and learner autonomy as foundational principles. Furthermore, the framework advocates for ethically grounded implementation and targeted professional development to ensure educators are supported throughout this technological transition. Accordingly, we envision this framework as a practical tool for educators and policymakers to inform evidence-based, future-ready instructional strategies.

Notably, the review identifies a gap in studies addressing long-term AI impact on learner motivation, engagement, and self-directed learning, particularly among marginalized or underserved student populations. Only a small subset of the 48 reviewed studies explicitly focused on such contexts, indicating an urgent need for expanded research efforts. This observation reinforces the notion by Neff et al. (2024) to investigate scalable and equitable AI integration strategies that benefit all learners.

To meet these challenges, future work must adopt an interdisciplinary approach, drawing insights from educational psychology, linguistics, and computer science. There is a critical opportunity to develop cross-sectoral knowledge and build holistic, scalable models that make AI relevant and accessible across diverse educational settings.

Policy development is central to this effort. AI adoption must be governed by frameworks rooted in transparency, accountability, and inclusivity (Zainuddin et al., 2024). However, such efforts require close collaboration among governments, institutions, educators, and industry leaders to craft policies and tools that are context-sensitive and adaptable. In line with this, employers and technology developers also have an essential role in ensuring that AI tools support equitable and long-term educational progress, particularly in resource-constrained environments.

Ultimately, the future of AI in English language education lies not in the hands of a single stakeholder but in a collaborative ecosystem where educators, researchers, policymakers, and technology providers co-create ethically responsible, learner-centered innovations. By aligning AI's capabilities with pedagogical integrity and inclusive policy, the field can move toward a future where AI enhances instruction and fundamentally reimagines learning environments. This, ultimately, empowers all learners to thrive in a globally connected and linguistically diverse world.

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## Conflict of Interest

The authors have no conflicts of interest to declare.

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## Authors' Contributions

The author conceptualized, designed, executed, and analyzed this systematic literature review on the integration of Artificial Intelligence (AI) in English Language Learning (ELL). The author was responsible for the methodology, which included adopting the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) framework, selecting Scopus, Web of Science, and ERIC as academic databases, constructing a Boolean search string, and defining the inclusion and exclusion criteria. The author also performed a two-stage screening process of identified articles and used the Mixed Methods Appraisal Tool (MMAT) for quality assessment of the studies. The author also performed the thematic synthesis of the literature, identifying key themes, and developing the conceptual framework for AI integration in ELL. Additionally, the author identified research gaps and proposed areas for future research and policy development. The author also drafted and refined the manuscript, ensuring a clear and comprehensive presentation of the finding.