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Artificial Intelligence-Supported English as a Foreign Language Learning: A Narrative Review of Personalisation, Feedback, Engagement and Pedagogical Collaboration

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Abstract

The rapid advancement of artificial intelligence (AI) has substantially reshaped educational practices substantially, particularly within English as a Foreign Language (EFL) learning contexts. This narrative review synthesises peer-reviewed research published between 2020 and 2025 to examine how AI supports EFL learners across six key dimensions: learning personalisation and adaptation; assessment and feedback; student engagement and motivation; study support and skills development; teacher–student–AI pedagogical collaboration; and critical challenges and ethical considerations. Drawing on recent high-quality peer-reviewed journal articles, the review employs a thematic synthesis approach to integrate diverse theoretical perspectives, empirical evidence and pedagogical insights. The findings indicate that AI-supported technologies can enhance EFL learning by enabling adaptive instruction, delivering timely and formative feedback, fostering learner engagement and motivation, and supporting self-regulated learning and language skill development. Simultaneously, the review underscores the importance of human-centric pedagogical design, highlighting that AI is most effective when positioned as a complement to, rather than a substitute for, teacher expertise and learner agency. Key challenges – including academic integrity, ethical concerns, data privacy, algorithmic bias, over-reliance on technology and inequitable access – also are identified as significant constraints on effective AI integration. Overall, this review offers an integrative and pedagogically grounded account of AI-supported EFL learning and poses implications for instructional practice, teacher education and future research aimed at promoting responsible, equitable and sustainable uses of AI in language education.

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Introduction

The increased use of artificial intelligence (AI) in education globally has changed how English is taught as a foreign language dramatically. It has generated new ways for teachers and students to use technology to help each other learn the language, as well as provided teaching support (Al-Bogami & Alahmadi, 2025). Additionally, because AI can analyse a large amount of data and create a programme for each student that meets their specific needs, it allows both teachers and students to develop much more successful and tailor-made teaching and learning experiences than they could have developed otherwise (Al-Bogami & Alahmadi, 2025; Merino-Campos, 2025). The improvements to educational results that have been achieved through better access to personalised learning opportunities and immediate feedback from AI use and the resulting learning have led to the need for further evaluation of AI's ongoing development and its impact on English as a Foreign Language (EFL) educational context (Al-Bogami & Alahmadi, 2025).

AI advances in English language learning (ELL) have increased how an individual's ELL experience can be enhanced in many ways. Through AI, personalisation and adaptation of learning experiences can be developed and customised to a learner's profile and experience in the context of learning materials (Merino-Campos, 2025). Learners also can enhance their motivation and engagement in the learning experience by being able to access learning environments aligned with their interests (Liu et al., 2025). When it comes to assessments, AI enables changes in how traditional assessment practices are conducted, providing an automated mechanism to assess, score and respond to learner progress in real time through provision of formative evaluations, ultimately accelerating the learner's language development process (Al-Bogami & Alahmadi, 2025; Zou et al., 2025). Additionally, AI-enhanced environments support and foster student engagement and motivation through interactive and personalised ELL experiences (Dinh, 2025; Schei et al., 2024). As learners develop their academic vocabulary through incorporation of cognitive support (Al-Obaydi et al., 2025; Dinh, 2025), AI enhances students' ability to study independently. Development of these multiple dimensions of learner experience through AI also establishes a new teacher–student–AI collaboration paradigm that has led to adjustments in the teacher's role and the relationship between the teacher and learner in leveraging AI within their instructional practices (Al-Bogami & Alahmadi, 2025; Li et al., 2024). Nevertheless, as noted in extant studies, ethical dilemmas, privacy and data protection, algorithmic bias and a systematic approach to preparing teachers for integration of AI need to be considered to ensure successful implementation (Eden et al., 2024; Kyambade et al., 2025; Merino-Campos, 2025).

While extant research on AI in education has proliferated, the literature on AI-supported EFL learning is highly fragmented. Researchers have not yet explored how learners view generative AI (particularly in light of recent technological developments) in the context of higher education and EFL learning, as evidenced by Yan et al. (2024). Significant discrepancies exist in terms of geographical location, i.e., to date, most extant research has been completed in East Asia, with very little generated in South America, Middle Eastern regions and other areas, thereby limiting researchers' ability to generalise their findings across multiple educational contexts (Alghasab, 2025; Nelson et al., 2025; Schei et al., 2024). Furthermore, additional systematic analysis of AI research is needed within higher education, specifically in the area of EFL teacher training and curriculum design, to enable

researchers to better identify research trends, locate literature gaps and anticipate areas for future research (Akhmadieva et al., 2024). Furthermore, very little empirical research currently exists to help understand how students' motivation to utilise AI tools is derived from perceived usefulness, intrinsic value and expected success when completing language-related activities (e.g., translation) (Dinh et al., 2025). All of this illustrates how fragmented the literature on AI in education is, currently comprising an array of methodologies and varying levels of international representation. Ethical considerations are an additional challenge due to concerns over the quality of AI-generated material, AI's lack of sensitivity towards pragmatic usage and privacy issues, among many other concerns (Alghasab, 2025). Additionally, issues associated with academic integrity, including concerns over legitimate authorship and plagiarism, are another significant and unaddressed area of scrutiny (Alghasab, 2025; Buele & Llerena-Aguirre, 2025; Nelson et al., 2025).

Technological advances are being made rapidly, and many different findings have been reported. A complete cultural overview of the AI field and its effects on EFL education is very important and timely. Additionally, while methodological rigor can be added to systematic review methodologies, the restrictive criteria may limit how much breadth and rapidly evolving changes to new discoveries and methods in the AI field in EFL can be accessible from systematic reviews. Narrative reviews can aggregate broader groups of evidence and reveal emerging themes from varied areas of research that possibly would not be easily accessible through a narrower scope (Bond et al., 2024). Additionally, a narrative overview of the research on how AI influences EFL education allows researchers to observe trends, develop patterns of thought and identify similar research findings that possibly could help researchers, policymakers and practitioners identify what does and does not work regarding education using AI in EFL (Labadze et al., 2023). Narrative synthesis helps map the AI field in higher education due to the ability to profile a wide range of empirical and conceptual contributions (Bond et al., 2024).

This narrative review aims to bring together peer-reviewed literature that has been published between 2020 and 2025 regarding how AI has impacted EFL learning to elicit a comprehensive understanding of AI's relationship to EFL learning. The main areas of emphasis for this narrative review include how AI facilitates creation of personalised or flexible learning experiences for EFL learners; AI's effectiveness in delivering assessment and constructive feedback; how AI can be leveraged to increase EFL learners' motivation and engagement; use of AI as a means of helping EFL learners acquire effective study skill strategies; identifying key ethical issues associated with AI and academic integrity; bias and data privacy issues associated with the use of AI with EFL learners; and discussing how teachers, EFL learners and AI may work together in new and innovative ways.

This literature review contributes greatly to the literature on AI and EFL by providing (1) a comprehensive overview of the application of current AI technology in EFL for researchers and educators (Bond et al., 2024); (2) a summary of major gaps in current empirical research and what future research should focus on, thereby helping to develop future research agendas (Bond et al., 2024); and (3) a more comprehensive perspective on both the benefits and challenges to educators from AI integration into EFL courses by informing pedagogical practices and policy formulation (Bond et al., 2024). Generally, this review aimed to help facilitate effective and responsible application of AI in EFL instructional practices to create an equitable, ethical and rewarding language learning experience for all students.

Methodology

Review Design and Rationale

Through a narrative review methodology, this article examines various extant studies on AI and its influence on students' EFL learning. Due to the wide range of pedagogy, research-based evidence and education contexts represented in the literature on AI-assisted EFL learning, a systematic review was deemed inappropriate. Instead, the authors opted to conduct a thematic and theoretical synthesis of extant AI-supported EFL learning studies. This synthesis identified both commonalities and discrepancies among various AI-supported EFL studies, thereby including identification of basic factors that may underpin EFL by AI, as well as tensions and emerging themes. By reviewing the data in this manner, the authors have provided an overview of a potentially broad theme related to AI's effects on EFL education that researchers, policymakers and educators alike can utilise (Bond et al., 2024; Labadze et al., 2023).

Literature Search Strategy

The literature search utilised substantial databases commonly employed within the realm of educational technology and applied linguistics research (e.g., Web of Science and Scopus). Searches were conducted to identify peer-reviewed articles published from 2020 to 2025 to identify new developments regarding AI use in supporting EFL learners. The search terms incorporated aspects of AI, together with general EFL or ELL, as well as student support (SS) and learning processes (LPs). Searches of these databases were conducted in succession, with reference lists of relevant studies reviewed to locate additional studies that aligned with the defined inclusion criteria below.

Inclusion and Exclusion Criteria

Studies were included in the review if they:

- were peer-reviewed journal articles
- focussed on AI-supported EFL or ELL
- examined student-related outcomes or LPs
- addressed at least one of the review's focal themes

Studies were excluded if they:

- were conference papers, book chapters, reports or opinion pieces
- focussed exclusively on technical AI development without pedagogical implications
- addressed AI in education without specific relevance to EFL or ELL contexts

Following these criteria, the thematic synthesis utilised approximately 27 peer-reviewed journal articles that focussed on AI-assisted learning in EFL.

Analytical Thematic Synthesis Approach

The use of analytical thematic synthesis facilitates creation of frameworks for analysis/study of research articles

by examining the articles' themes and types (or methods) of learner support developed or used in the articles, as well as grouping all the articles by their themes and types of learner support through code identification and grouping (or grouping by codes). The synthesis also identifies concepts and relationships between studies and articles by combining ideas/concepts from studies with ideas.

Results

AI-Supported Learning Personalisation and Adaptation in EFL

AI has become and continues to be a key component of how EFL is taught. AI allows EFL educators to create and provide learners with access to personalised and adaptive learning experiences based on each learner's needs and preferences, as well as their own unique experiences while acquiring EFL. Introducing adaptive learning paradigms with AI enables EFL education to move away from a traditional 'one size fits all' approach and towards a more responsive model that meets each learner's individual needs, as well as their time-dependent patterns of engagement with learning through use of ongoing analyses of performance data. In addition, the aforementioned reading of student data gives EFL teachers the ability to provide information about how best to formulate specific learning paths for each student to achieve the most effective learning outcomes possible (Gligorea et al., 2023). According to Gligorea et al. (2023), AI-based personalisation in EFL offers considerable advantages because it provides higher-quality learning results compared with other methods. The results from this study demonstrate that using AI systems produces an individualised learning experience for students. Efficient sequencing of materials within the AI system facilitates increased learner participation and performance, as seen through measurements of language proficiency and assessment scores. AI systems also continue to analyse learner data to provide appropriate instructional materials and targeted intervention at the correct time during the LP (Mustafa et al., 2024). AI systems' ability to adapt to learners' individual needs continually is particularly valuable in EFL contexts, in which learners differ significantly in their language backgrounds, proficiency levels and learning preferences. AI language learning tools can motivate learners by supporting their goals, interests and current abilities (Liu et al., 2025). An example of this motivation is the use of tools to create authentic communication scenarios and contextualised materials that enable learners to visualise and build their ideal second language selves (Liu et al., 2025).

AI systems adaptively calibrate task difficulty and linguistic complexity based on learners' ongoing performance so that task challenges continue to align with learners' zones of proximal development, thereby enabling sustained engagement, as well as incremental progress and long-term mastery of language skills (Liu et al., 2025). AI systems not only provide learners with the basic content they need to develop language skills, but also analyse vast amounts of educational resources to recommend supplemental materials and create personalised learning content. Consequently, EFL learners benefit by having timely, relevant and meaningful instructional content made available to them, thereby improving the efficacy of their learning experience overall (Gligorea et al., 2023). Notable examples of such AI-driven systems include Duolingo – which retains learners' motivation using intelligent tutoring systems, adaptive algorithms and game-like elements (Stošić et al., 2025) – and Coursera, which personalises learners' learning pathways with adaptive course recommendations tailored to learners' interests, prior knowledge and learning goals (Stošić et al., 2025). As such, 'intelligent learning environments',

which integrate expert systems with computational and/or mathematical models, provide very efficient and highly personalised learning experiences (Gligorea et al., 2023).

AI-enabled personalisation can help educators in many ways, particularly those teaching large or heterogeneous classes in which it is difficult to provide individualised support for every student (Nabhani et al., 2025). By leveraging AI tools, educators can create more time for higher-order instructional and facilitative roles that they need to play by streamlining tasks such as monitoring and providing feedback on student performance (Nabhani et al., 2025). Significant challenges are associated with implementation and use of AI-enhanced personalisation, including algorithmic bias, issues related to student and teacher data security, and technical difficulties involved in designing and building sophisticated AI-based systems (Gligorea et al., 2023; Merino-Campos, 2025). Consequently, there has been a growing need to develop effective training programmes for teachers so that they can utilise AI tools in a responsible, ethical and pedagogically sound manner in their EFL classrooms (Merino-Campos, 2025). AI-enhanced personalisation and flexibility likely will remain an exciting and evolving field of study and practice in EFL.

AI-Based Assessment and Feedback in EFL Learning

AI is poised to transform existing instructional methodologies in the EFL discipline by providing new forms of dynamic, efficient and personalised assessment. Rather than applying static assessment methods, such as oral or written tests, AI technology allows for providing immediate feedback to learners based on their performance, as well as guiding them towards developing an individualised learning pathway. Most AI-based systems also provide cognitive scaffolding to learners, aiding their comprehension and language development, including grammar and reading comprehension (Al-Bogami & Alahmadi, 2025; Dinh, 2025). Additionally, by automating many assessment aspects, including grading, AI systems can decrease the administrative workload placed on instructors substantially, while providing data-based evidence of student performance and achievement trends (Al-Bogami & Alahmadi, 2025).

In EFL contexts, AI-supported assessment involves using several different technology tools and applications, particularly to assess speaking proficiency. Several companies offer automated score and feedback based on speech recognition technology – including platforms such as Duolingo, Liulishuo IELTS and EAP Talk – all of which allow learners to receive continuous feedback on their spoken output and make adjustments as needed to improve their oral proficiency (Zou et al., 2025). Automatic Speech Recognition (ASR) technology provides users with visual feedback on their spoken output and highlights any areas where improvement is needed, making error detection and correction quicker and easier. Using these tools will be supported by data, as well as demonstrated by using empirical evidence in relation to fluency, lexical complexity, grammatical accuracy and discourse coherence (Zou et al., 2025).

The benefits of using AI tools to write assessments include providing full and ongoing support for both formative and summative assessments. For example, Automated Essay Scoring (AES) typically are used during large-scale summative assessments. Various online tools that provide Automated Writing Evaluation (AWE) and/or

Automated Corrective Feedback (ACF) are at the writer's disposal (e.g., Grammarly, Criterion, Google Translate, QuillBot and Wordtune) (Alghasab, 2025; Gardner et al., 2021). Using AI systems to grade short-answer responses has shown promise as well, as AI systems grade responses with consistency and impartiality, thereby positively impacting student performance on assessments (Grassini, 2023). To provide learners with ongoing targeted formative feedback to encourage skill development and facilitate revisions, the data obtained from learners' writing is collected and analysed systematically (Gardner et al., 2021).

AI's future in assessing EFL holds promise, but also many limitations. While AI potentially can interpret the meaning of 'standard' vocabulary used in foreign language tests, it often struggles with more subtle meanings found in idiomatic expressions, cultural references and other more abstract meanings in text. As would be expected, this is particularly true of translation tasks, in which human assessors always are needed to verify or confirm translated texts' quality (Dinh, 2025). Therefore, AI-generated translations' inconsistency can present a challenge to EFL test results' reliability (Dinh, 2025). Additionally, the rise of AI-supported writing tools offers increasing opportunities to violate academic integrity and represents the risk of plagiarising others' work and misrepresenting learners' actual language skills (Liang et al., 2025; Nelson et al., 2025). If learners continue to rely heavily on AI-generated feedback, over-reliance on AI and cognitive offloading may develop, which can hinder development of critical thinking and independent writing skills (Alghasab, 2025). Finally, feedback generated by AI may not always be concise and could be overly repetitive or inaccurate, and automated scoring systems may have difficulty scoring creative and higher-level writing (Alghasab, 2025; Gardner et al., 2021).

Moreover, in terms of ethical issues relating to AI in the EFL assessment area, protecting student data can be viewed as an ethical issue due to concerns regarding algorithmic discrimination and lack of information on how the automatic evaluation model was generated (Eden et al., 2024; Kyambade et al., 2025). AI systems have been demonstrated to produce better results on standardised test assessments than on more complex (i.e., university-level) assessments because they are trained using available datasets (Grassini, 2023). When it comes to gauging more complex forms of assessment, humans still must be involved to ensure that valid and fair assessments occur (Grassini, 2023). Furthermore, increasing evidence has been demonstrating that AI detection systems can identify AI-generated written work with greater accuracy than humans can. This situation poses a challenge to current assessment practices and leads to questions about current methods being used to teach writing to students (Liang et al., 2025). Based on this evidence, it appears that building digital literacy and re-evaluating existing procedures for assessment to promote responsible use of AI and protect the EFL learning environment's integrity are crucially important (Liang et al., 2025).

AI-Supported Student Engagement and Motivation in EFL Contexts

Currently, many EFL students use AI as an integral component of their English language acquisition process, and such use of AI provides opportunities to enhance student engagement in this challenging field through technology-enhanced environments, as well as create more motivational ways to learn the English language. AI can create opportunities to create a dynamic, personalised, stimulating and enjoyable learning environment through technology-enhancements that can improve student motivation and interest in language learning dramatically (Liu

et al., 2025). By providing learners with the tools they need to create an individualised experience, thereby promoting competence and providing immediate feedback (in a supportive manner), AI can forge a pathway for maintaining motivation throughout the entire language acquisition journey (Liu et al., 2025).

AI uses the personalisation of learning experience and motivation to engage learners by developing motivational, personalising and engaging learning experiences. AI-based language learning products enable learners to create personalisation and development plans tailored to each learner's goals, interests and abilities to envision themselves as successful users of a foreign language (Liu et al., 2025). AI's adaptive capabilities support learning and ensure that learners are being challenged constantly within their Zone of Proximal Development (ZPD), thereby giving them the opportunity to attain success and continuously pushing them to achieve (Liu et al., 2025). Extant studies have found that learners participating in AI-enhanced informal digital learning of English have reported increased self-efficacy in their ability to acquire and learn a foreign language, enjoy learning and using a foreign language, and increase their confidence and motivation in practising language skills (Liu et al., 2025). Additionally, feedback from success provided through AI use increases learners' self-efficacy, thereby encouraging them to continue their second-language learning (Liu et al., 2025).

AI applications (particularly chatbots/conversational agents) exert significant influence on learners' motivation. A common issue with traditional learning environments is that learners do not always have access to expert speakers or required learning materials. Online AI chatbots offer learners effective, interactive models of expert speakers to better meet these needs (Yan et al., 2024). The learner's perception of the ease of using an AI tool and its ability to provide structured responses with appropriate explanations contributes significantly to learner motivation and engagement (Schei et al., 2024). For example, ChatGPT has demonstrated improved writing performance and increased learner motivation (relative to traditional instruction) (Liu et al., 2025). ChatGPT, as a learning tool for vocabulary development, also has produced higher motivation for learners than traditional methods of learning vocabulary because ChatGPT provides them with a fun and attentive environment for their learning needs (Liu et al., 2025). In addition, through development of 'ideal L2 selves' and promotion of foreign language enjoyment, AI-supported informal digital learning of English can support learner motivation (Liu et al., 2025).

AI use in motivating and engaging learners depends largely on individual and contextual factors surrounding these learners. One way in which students will be motivated to use AI tools is through their perceptions of the tools' usefulness, intrinsic value and probability of success with specific activities, such as a translation assignment (Dinh, 2025). While AI chatbots are being adopted for increasing use in language learning, teachers remain important. According to self-determination theory, using AI tools can help learners by offering support for their needs for autonomy and competence through personalised learning and real-time feedback, but teachers are critical in meeting learners' larger psychological needs, providing instructional support and situating AI use within a meaningful instructional context (Li et al., 2024; Liu et al., 2025). Therefore, successful integration of AI into EFL classrooms must include a thoughtful combination of affordances offered by technological advances and pedagogical expertise to support maximum engagement and motivation for students.

AI for Study Support and Skills Development in EFL

AI provides transformative study support and skill development for EFL students. For example, AI tools (e.g., software programs, chatbots) act as cognitive scaffolds during the language acquisition and academic/linguistic skills development stages (Alghasab, 2025). These tools enable the learner to progress from the foundational first stage through all stages to development of the higher-order cognitive processes necessary for successful communication of ideas when studying independently.

AI supports numerous aspects of the writing process, including production and editing of written works, in addition to a variety of other areas of written production (Perkins, 2023). Many digital writing assistant products use AI to provide users with more than just basic error correction, i.e., they can help identify structural and linguistic problems, as well as provide users with suggestions on how to improve clarity and coherence in writing, generate ideas, expand vocabulary and verify accuracy in their writing (Alghasab, 2025). As a result, AI tools provide a continually supportive environment throughout various stages of the writing process, allowing for development and articulation of ideas in a clearer and more precise manner in English (Alghasab, 2025). In addition, as long as AI tools are integrated properly and ethically into academic writing policies, such tools' availability for continuous/formative support remains unquestionable (Perkins, 2023).

AI dramatically has changed how language learners seek help to improve their speaking skills, mainly through tests of automated systems that use technology that recognises speech and analyses scores in real time, with scoring and measuring in subcategories such as pronunciation, fluency level, vocabulary complexity, grammar accuracy and coherence level (Zou et al., 2025). Use of these systems can provide immediate feedback to learners so they can continue to develop as they receive specific suggestions on how to improve their spoken performance (Zou et al., 2025). ASR technology offers additional methods of visual feedback on produced speech by providing the learner with ways to recognise and make corrections to produced speech as readily as possible. Learners can speed up their own language development and increase their confidence when communicating with these tools. AI systems' flexibility and multimodal capabilities enable a highly effective and immersive contextual learning level (Zou et al., 2025).

Conversational AI enables improved vocabulary and grammar development through Intelligent Tutoring Systems' ability to provide individualised feedback and personalised instruction. This immediately resulted in identifiable gains in reading and grammar for EFL students (Al-Bogami & Alahmadi, 2025). Many generative AI resources, such as ChatGPT, are more effective at vocabulary development than traditional methods, as these resources learn and adjust to each student's input on the fly and provide an extensive context for vocabulary-learning opportunities (Abdelhalim & Alsehibany, 2025). These tools also encourage retention of vocabulary, increased student autonomy and motivation because of their personal and immersive way of engaging students in language practice through an interactive platform, resulting in more in-depth cognitive engagement during language practice (Abdelhalim & Alsehibany, 2025). With this in mind, ChatGPT has become prominent as a tool for immediate, individualised feedback and incredible language learning experiences.

Beyond discrete language skills, AI also helps learners develop independent learning capacities and support broader academic endeavours. In particular, AI-mediated second language learning tools allow for learner-centred personalised pathways and instant feedback that enhance learners' perceptions of autonomy and competence, thereby motivating learners intrinsically and producing positive emotional states related to learning (Liu et al., 2025). Furthermore, immediate error detection and corrective feedback promote effective learning and positively affect how learners perceive themselves (Liu et al., 2025). AI can empower educators to provide students with AI-based instructional activities designed to encourage students to achieve their target second-language identities (e.g., simulating professional interactions or utilising task-based activities) and instil a sense of self-efficacy in their English-language LPs long after they have left the classroom (Liu et al., 2025). AI use also helps learners develop self-regulatory skills, such as critical thinking, listening comprehension and grammar knowledge (Alghasab, 2025). By providing such support to EFL learners, educators can provide them with increased control over their LPs, thereby creating autonomous learners who persistently engage in the process of learning a second language (Abdelhalim & Alsehibany, 2025).

Teacher–Student–AI Pedagogical Collaboration

The rise of AI in the EFL market means that educators need to rethink their approaches to working together, as well as ways in which to build more meaningful relationships with their learners through the use of technology. As this ecosystem develops at such an extraordinary pace, educators must redefine their role and use AI as a co-collaborator to provide new opportunities for success for their students (Al-Bogami & Alahmadi, 2025; Li et al., 2024). In addition, as AI technologies become an integral part of learning environments, collaborations between educators and students likely will evolve into new models. Moreover, students often are viewed as cocreators with AI, but it is through the AI-learner relationship that it has been demonstrated to provide students with more potential to take control of and empower themselves to be better-informed about how and when to learn (Al-Bogami & Alahmadi, 2025).

Teachers play an increasingly complex and involved role in AI-based EFL learning, rather than a diminishing one. Instead of removing teachers from the equation, introducing AI into EFL classrooms creates additional roles for EFL teachers to play as instructional design experts, facilitators, assessors and resource developers (Li et al., 2024). For example, teachers as instructional design experts develop objectives for student learning and create assignments that cohere with these objectives while also taking advantage of AI-based tools (e.g., designing prompts to integrate into learning tasks using AI-based chatbots) (Li et al., 2024). Teachers as facilitators support learners' use of AI-based tools during learning, set or clarify learning objectives, create opportunities for learners to engage actively in their learning environments and supervise each student's progress during the student's engagement with AI-based activities (Li et al., 2024). Teachers also take on the role of resource developers by adapting, curating and refining instructional materials created, adapted or used by learners (e.g., editing AI-produced writing to address linguistic/strategic resources) to correspond with individual learners' proficiency levels and instructional needs (Li et al., 2024). Additionally, teachers will continue to play a central role in assessing learners' linguistic performance after they have completed an AI-supported task, as well as providing feedback that supports learners' subsequent learning (Li et al., 2024).

Students' AI use also exerts a strong influence on how they will work together. By using metaphors to explain how they view AI, particularly in terms of generative abilities, learners tend to compare AI to an 'English teacher' or 'helper', signifying the learning potential that these resources can provide to students (Yan et al., 2024). Therefore, teachers may spend more time preparing actual teaching components and less time grading and interacting with students (Yan et al., 2024). AI also is used to tutor students in their language skills or create opportunities for students to become independent learners through real-time feedback on their writing, particularly in large classes, where teachers cannot provide each student with the same level of individualised attention as in smaller classes (Woo et al., 2025). In addition, AI is used to enhance learners' oral language capabilities by helping increase their willingness to speak and engage in oral communication (Zou et al., 2025).

While the advantages of collaboration between teachers and students and AI have been identified, obstacles to effective collaboration remain. For example, AI chatbots have advanced conversational skills, but they cannot provide the emotional support, interpersonal sensitivity and nonverbal communication that human teachers can (Li et al., 2024; Zou et al., 2025). Additionally, AI systems likely will encounter difficulties comprehending nuanced language, cultural references and deeper semantic interpretations, which can be validated only through human judgement for their accuracy and pedagogical appropriateness (Dinh, 2025). In terms of self-determination theory, AI tools can help meet learners' autonomy and competence needs through personalised learning and immediate feedback; however, teachers help satisfy learners' need for relatedness and conceptualise the guidance that AI can offer (Li et al., 2024). Moreover, teachers will establish an ethical framework for using AI tools, emphasising academic integrity, critical evaluation of AI-generated outputs and responsible engagement to mitigate the risk of plagiarism and uncritically accept generated content (Abdelhalim & Alsehibany, 2025; Al-Obaydi et al., 2025).

Finally, only teachers who implement either pedagogically sound knowledge or have a critical understanding of how AI technology can help satisfy students' language acquisition needs will establish successful pedagogical partnerships in the AI-enhanced EFL experience (Abdelhalim & Alsehibany, 2025). Teachers should demonstrate how to develop effective prompts and create opportunities for educators and students to conduct thoughtful discussions on AI outputs, as well as demonstrate how a teacher's role is one of facilitation between students and technology. This collaboration's ultimate goal is to create a collaborative education system in which AI does repetitive or fully automated tasks for the teacher (e.g., providing timely information about a student's performance on tasks or reinforcing content) while allowing the teacher to concentrate on meeting each student's unique academic, relational, emotional and developmental needs (Liang et al., 2025). AI integration supports traditional and individualised learning methods that facilitate human-to-human educational partnerships and encourage teachers to adopt a classroom model that enhances, rather than diminishes, the human-centric nature of language learning (Al-Obaydi et al., 2025).

Critical Challenges and Considerations in AI-Supported EFL Learning

While AI holds great promise as a means of revolutionising EFL, many challenges accompany this new opportunity. Many different types of challenges arise from the following areas: ethical, pedagogical, technical,

structural (e.g., academic integrity challenges) and equity-related (e.g., data privacy, fairness in algorithms, reliability and accessibility).

Academic integrity and authentic authorship have become some of the biggest challenges that educators and academics face. As generative AI tools such as ChatGPT have proliferated, there has been an increase in concerns regarding the potential for academic dishonesty related to AI – a phenomenon known as 'AI-giarism' (Nelson et al., 2025), in which students pass off AI-generated work as their own (Nelson et al., 2025). New AI advances are creating further confusion between the idea of a 'human' author and the idea of an 'AI' author, making it even more difficult for those within educational institutions to know how to identify what has been authored legitimately (Nelson et al., 2025). Current extant research has indicated increasing concerns that AI has led to greater levels of academic dishonesty, so educators and educational institutions must foster an environment that promotes a sense of student responsibility and ethics surrounding learning, as well as provide meaningful ways to address academic dishonesty (Nelson et al., 2025). Furthermore, because AI has made it easier than ever for students to generate academic texts, students are becoming increasingly reliant on AI to complete their writing assignments – a trend that has negatively impacted their ideas on analytical reasoning and their ability to think critically (Alghasab, 2025).

Another major concern regarding data privacy and security stems from the practice of collecting, processing and storing user data as part of the AI system. Due to this, concern has been rising over how learners' personal information will be shared, stored and protected (Kelley & Wenzel, 2025). In addition to seeking users' consent to use their data, many platforms do not clearly state how their AI model uses data collected from learners. Therefore, there is a risk to users, whose sensitive information could be revealed accidentally because of ambiguity concerning how AI models utilise data (Grassini, 2023). Compounding these worries further are fears that social interaction between learners, parents and teachers will diminish, along with privacy risks from personal data being shared with AI systems across educational environments (Alghasab, 2025a, 2025b).

AI-supported EFL learning also is impacted by algorithmic bias and fairness, creating ethically complex scenarios. AI systems are built using historical databases with built-in bias (Eden et al., 2024; Stošić et al., 2025); therefore, they may replicate or amplify current inequalities within society and create inequitable outcomes for learners from marginalised groups. For example, training data used to build AIs may contain mostly one particular linguistic norm or cultural context, leading AIs to generate content based on their training and incorrectly categorising non-native writers' work as being AI-generated, which can elicit accusations of academic misconduct (Farrelly & Baker, 2023; Li et al., 2025). Resolving these issues will require improvements in transparency levels within the AI design stage, ongoing evaluations of algorithms' decision-making processes and use of fairness principles within the design to monitor AI systems (Eden et al., 2024).

Along with the aforementioned points, technical limitations and related concerns about reliability create further difficulties on a practical level. Like any system, AI systems can produce erroneous, misleading or inaccurate outputs. For example, a system can produce such faulty outputs when it moves outside of the parameters set by its training information (Alghasab, 2025). The AI system's probabilistic model inhibits its ability to use certain

forms of language effectively, such as idioms, and communicate in a culturally appropriate manner. When the technology's limitations impact these abilities, learners and educators are presented with various misunderstandings or lower-quality instruction, contributing to reduced understanding among learners. Other technological applications also maintain certain limitations regarding (a) accuracy related to speech recognition, (b) tasks' authenticity and (c) interaction quality. When these limitations impact interactions, learners may have limited opportunities for meaningful or effective learning (Li et al., 2024; Lo & Hew, 2023). Variability in the quality of AI-generated translations decreases AI-based systems' reliability for a wide variety of foreign language learning tasks (Dinh, 2025).

To implement AI responsibly in EFL education, issues of equitable access to AI tools and teacher preparedness for using these tools need to be addressed (Kelley & Wenzel, 2025). Without equal access to AI-powered resources in the classroom, existing inequities in education will worsen (Kelley & Wenzel, 2025). Furthermore, many teachers do not possess adequate AI and digital literacy skills to create and deliver AI-generated learning experiences successfully, greatly restricting their ability to support students with AI-delivered learning experiences (i.e., Çelisk & et al., 2022; Mustafa et al., 2024). For teachers to integrate AI into their classrooms effectively, they need to receive ongoing professional development, which teaches them the knowledge and skills needed to understand AI's positives and negatives, assess AI-created learning resources and help students utilise AI responsibly and ethically (i.e., Abdelhalim & Alsehibany, 2025; Alghasab, 2025; Al-Obaydi et al., 2025). Additionally, without the right type of instructional direction, students may rely overly on AI, thereby hindering development of their critical-thinking skills, creativity and independent learning skills (Li et al., 2024). Successful resolution of the issues presented will result in equitable, ethical and advantageous AI contributions to EFL instructional practice.

Implications and Future Research Directions

Integration of more AI tools into EFL will influence how lessons are taught and lead to many more research streams. Although this narrative review provides an overview of how AI can change the language learning landscape, it draws attention to some areas that still need further empirical studies to enable responsible, ethical and practical application of AI in the EFL classroom.

The importance of developing pedagogical approaches that keep pace with the rapidly evolving nature of technology and continuous teacher professional development highlights the need for teachers to redefine their role from just being a teacher to also being a designer of learning activities, facilitator of learning, assessor of student achievement and provider of resources (Li et al., 2024). Future studies should explore how to create effective teacher-training models that increase their knowledge and abilities in AI and digital literacy, as well as allow them to incorporate use of AI tools in their classrooms confidently to create pedagogically sound activities for students and critically examine AI results. Additionally, this line of inquiry should include developing ethical frameworks for AI use in education, specifically in the area of academic integrity, and developing students who engage responsibly and reflectively with AI technology (Abdelhalim & Alsehibany, 2025; Al-Obaydi et al., 2025).

The topic of academic integrity and ethics is an additional area of future research that should be considered. Due to the number of writing tools available, it is now very easy for anyone to create learning resources using AI software, which raises many questions regarding 'AI-giarism' – namely, how students will risk losing critical thinking skills and writing abilities if they are overly dependent on these tools (Alghasab, 2025; Nelson et al., 2025), as well as ways to establish AI detection tools, create institutional guidelines for ethical behaviour regarding AI and develop pedagogical techniques that support authentic authorship and meaningful learning. Longitudinal studies also should focus on long-term impacts from using AI on developmental processes in cognitive functioning, language proficiency and teachers and students' academic independence.

Future studies also will focus on topics tied to algorithmic bias and equitable access to AI resources, as these two areas are also critical to research moving forward. Algorithmic bias and equitable access can be viewed as the impact that existing biases within a dataset on a wide range of consumers will make on a learner from a diverse or marginalised environmental perspective (Eden et al., 2024; Li et al., 2025). For future researchers to address these concerns adequately, a concerted effort is needed to develop inclusive, bias-free systems that provide equitable access to AI resources for all students within schools and across all geographic regions by addressing issues related to the digital divide and preventing acceleration of existing inequities within education (Kelley & Wenzel, 2025).

Research into AI tools' capabilities for EFL students must continue by researching the technology limitations (or deficiencies) related to these AI resources. Current examples demonstrate how existing AI methods produce responses that are ambiguous at best and inadequate representations of the intended meaning at worst. Due to how AI works, when it does not correctly interpret the context of idioms, cultural references and certain nuances in the English language, it can result in improper or nonsensical responses to EFL students, causing ineffective communication and misunderstandings (Alghasab, 2025; Dinh, 2025). Future studies also must determine ways to improve AI's Natural Language Processing (NLP) ability to produce more authentic and contextually accurate responses based on cultural context and usage, while enhancing the overall effectiveness of AI's NLP features as pedagogically reliable and responsive to users' changing needs, as well as reducing repetitive responses and providing more diverse options for learners (Li et al., 2024; Lo & Hew, 2023).

In addition, more empirical evidence should be collected to understand AI's impact on student engagement and motivation further. While extant literature has indicated that AI provides individualised and potentially motivational educational experiences for learners, the manner in which learners perceive the usefulness, intrinsic value and expectations of success associated with using AI for language learning tasks must be clarified through further empirical investigation (Dinh, 2025). In addition, to help understand how AI can support students' need for autonomy, competence and relatedness within the context of a pedagogical framework in which instructors continue to be central in their role mediating and supporting student development, future research should examine the psychological and emotional impact of students' interactions with AI (Li et al., 2024).

AI's role in EFL instruction becomes increasingly complex through continued integration over time; therefore, while there may be benefits associated with using AI to learn personalised building skills and work with teachers

together better as a group, any continued success for AI in this area will rely on our ability to address issues of ethics, equity and reliability, technological reliability and instructors' preparedness. Ongoing research and informed technological innovation are required to ensure positive AI contributions to EFL learning's future.

Conclusions

AI in the EFL classroom is changing how we learn EFL today. With new AI technology available, in addition to providing new forms of EFL acquisition and enhancing EFL instruction's effectiveness, there is new potential for enhancing how EFL learners acquire the language and the EFL teacher population's effectiveness (Liang et al., 2025). As highlighted in this narrative review, AI technology is changing how EFL learners acquire the language through development of AI-supported, learner-specific personalisation and adaptive learning systems that help identify each learner's needs, create tailored learning pathways for each learner, adjust the pace of learning and develop engagement and sustenance for each learner's language development over time (Gligorea et al., 2023; Liu et al., 2025). Another aspect of how the introduction of AI technology is changing how EFL learners acquire the language and how EFL teachers evaluate that acquisition and provide feedback to EFL learners is through rapid development of potentially new AI-supported assessment and feedback systems that provide timely, consistent feedback and enhance language proficiency through reduced bureaucratic and procedural burdens for the EFL teacher population (Al-Bogami & Alahmadi, 2025; Zou et al., 2025). Additionally, using AI technology has enhanced EFL students' engagement levels by creating an interactive and personalised environment that utilises conversational agents (AI-based tools that have been designed to simulate human-like conversation) and chatbots (AI tools that allow for continuous practice by the EFL learner during development of their language skills) (Liu et al., 2025; Yan et al., 2024). Continued development of AI technology for use in EFL learner support and skills development will give EFL teachers the opportunity to use AI as a cognitive scaffold to support EFL learners in all aspects of developing their language skills, including the areas of writing and speaking, developing vocabulary, acquiring grammatical proficiency, etc. (Alghasab, 2025; Perkins, 2023; Zou et al., 2025).

Integrating AI tools into language education (EFL specifically) presents various obstacles and difficulties that need to be identified and corrected over time, even though these tools have become much more advanced. Perhaps the most challenging issue relates to concerns regarding academic integrity and originality concerning a learner's unique ideas, which potentially could lead to AI plagiarism and the possibility of cognitive offloading. Both would inhibit a learner's capacity to analyse and develop language critically without assistance (Alghasab, 2025; Nelson et al., 2025). In addition, many other challenges exist regarding data privacy and security, bias in the equalised assessment of learners through algorithms and limitations in AI technology that impact implementation of AI systems in schools. Each of these issues raises serious concerns regarding equity, reliability and ethical design of AI educational systems (Alghasab, 2025; Eden et al., 2024; Kelley & Wenzel, 2025). Because of this, as AI continues to advance within the educational arena, educators must rethink collaboration roles (as designers, facilitators and assessors) between themselves and AI technologies, as well as between themselves and their students (Li et al., 2024).

Researching and practising AI (use) to teach EFL requires paying attention to several interconnected issues

through the use of evidence-based research and practice. The future of research and practice in AI and EFL also must include (1) developing ethical frameworks, (2) reducing algorithmic biases, (3) adding linguistic and cultural sensitivity to the AI and (4) providing equal access to AI-based learning tools for all students (Eden et al., 2024; Li et al., 2025). Teachers also must receive ongoing professional development in AI literacy so they can integrate AI into their own classroom practices effectively and critically assess AI's output to guide their students in using AI in an ethical, responsible and real-world manner (Abdelhalim & Alsehibany, 2025). By leveraging technology's advantages, along with the expertise of pedagogy, language teachers will be able to utilise AI to supplement the human element of teaching/learning a language and ultimately create inclusive, ethical and impactful EFL learning environments.

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