

AI integration in EFL curriculum and pedagogical practices: A systematic literature review and bibliometric analysis

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ABSTRACT

The rapid adoption of artificial intelligence (AI) is reshaping English as a foreign language (EFL) education, particularly in teaching, assessment, feedback, and personalized learning. Existing reviews have largely focused on individual AI tools or isolated pedagogical outcomes, offering limited understanding of how AI is integrated across curriculum objectives, instructional activities, learning progression, assessment, and teacher AI literacy. Addressing this gap, this study analyzes 190 Scopus-indexed articles and reviews published between January 2020 and April 2026 using an integrated bibliometric and systematic literature review (SLR). Using Biblioshiny in RStudio for bibliometric mapping and PRISMA 2020 for article selection and reporting (n = 40), the study addresses three research questions concerning publication growth, source distribution, geographical contribution, and thematic structure (RQ1), dominant pedagogical approaches and curriculum frameworks (RQ2), and emerging gaps and future research directions (RQ3). Findings reveal a sharp increase in publications after 2023, with China, Saudi Arabia, and Indonesia as the most productive contributing countries. Thematic analysis identified five major domains: teacher readiness and AI literacy, AI-supported pedagogical practices, curriculum integration and instructional design, learning outcomes and assessment, and ethical and implementation challenges. The integrated findings indicate that publication growth aligns structurally with the thematic emphasis on curriculum reform and AI literacy, while persistent gaps in longitudinal research, methodological diversity, and contextual governance remain. The review is limited to Scopus-indexed, open-access publications within the January 2020–April 2026 search period. Implications for EFL curriculum development, teacher education policy, and institutional governance are discussed.

Keywords: AI; bibliometric analysis; EFL curriculum; pedagogical practices; systematic literature review

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INTRODUCTION

Generative artificial intelligence (AI) and large language models (LLMs) are starting to transform the design, implementation, and evaluation of English as a foreign language (EFL) curricula and pedagogical practices. In the field of EFL education, generative AI has been adopted to aid in writing support, feedback generation, learner interaction, assessment preparation, instructional material development, and personalized learning activities. Recent studies indicate that AI can support teachers in providing more individualized and efficient feedback while also helping learners engage more actively in writing, revision, and language development (Ekizer, 2025; Han & Li, 2024). Other studies further demonstrate its value for both teachers and learners, including supporting teachers in materials and task development and providing learners with interactive, personalized, and feedback-rich language learning experiences (Slamet, 2024; Woo et al., 2024; Xin, 2024). The advancements indicate that AI is not just a tool for the classroom, but a tool that is transforming it. Generative AI has also become part of broader discussions on curriculum alignment, instructional design, teacher roles, learner autonomy, and the future direction of language teaching and learning (Godwin-Jones, 2024; Kohnke et al., 2023; Kohnke & Ulla, 2024).

This change has significant implications for the development of the EFL curriculum and classroom teaching. Particularly in learning objectives, instructional content, assessment, teacher roles, and AI literacy. Generative AI has become a hot topic in language teaching and learning, not just for creating texts, but also as a language learning support tool to help with interaction, content creation, feedback, and instruction (Law, 2024). It might support teachers in creating more flexible and learner-centered activities using adaptive feedback, extra language practice, writing support, and multimodal learning tasks (Kasneci et al., 2023). AI integration changes assessment and teacher roles by requiring teachers to evaluate students' own abilities, guide AI-supported learning, and include AI literacy and prompt skills in curriculum planning. The use of generative AI in EFL education, however, also presents practical and ethical challenges, such as the reliability of AI-generated feedback, academic honesty, dependence on AI, transparency, and the responsible use of AI in the classroom (Chiu et al., 2024). Such concerns are particularly pertinent in EFL settings where language learning is inextricably linked to communicative competence, learner autonomy, assessment validity, and culturally responsive pedagogical practices. These concerns indicate that prompt competence and AI literacy should be embedded in curriculum and pedagogical planning, rather than treated as merely technical skills (Chiu et al., 2024). Therefore, meaningful AI integration in EFL curricula requires alignment among learning objectives, learning activities, assessment, teacher roles, AI literacy, and ethical and culturally responsive competencies.

While research on AI-assisted language learning has increased rapidly, it is not yet fully consolidated. Specific tools, such as ChatGPT, chatbots, automated writing evaluation, and machine translation, have been widely studied and shown to support feedback, learner interaction, writing support, motivation, and learner performance (Kohnke et al., 2023; Law, 2024). The research on these topics, however, tends to be more tool-oriented than focused on the systematic incorporation of AI into EFL curriculum design, instructional design, assessment, teacher training, and institutional implementation. Consequently, there is a need for further synthesis of curriculum alignment, AI literacy, ethical use, and sustainable implementation in EFL education (Chiu et al., 2024; Crompton & Burke, 2023).

Several gaps justify the need for the present review. Although bibliometric and review studies on AI in education and language learning have increased in recent years, many of them still examine AI at a broad educational level or focus on language learning technologies in general, rather than on curriculum-level integration in EFL contexts (Crompton & Burke, 2023; Law, 2024; Zhu & Wang, 2025). Consequently, the specific intersection between generative AI, EFL curriculum development, and pedagogical practices remains insufficiently synthesized. In addition, while AI literacy has been widely discussed as an emerging educational competency, less attention has been given to how this competency can be embedded into EFL curriculum objectives, instructional activities, learning progression, and assessment practices (Chiu et al., 2024; Long & Magerko, 2020).

This gap is closely connected to teacher competency, since effective AI integration requires teachers to combine technological knowledge with pedagogical and content knowledge in classroom practice (Xu et al., 2025). Existing studies have also identified teacher readiness, ethical concerns, academic integrity, learner dependency, and institutional barriers as important challenges, but these issues are often examined separately rather than integrated into a coherent explanation of AI-supported EFL curriculum development (Kasneci et al., 2023; Yan et al., 2024). Therefore, an integrated bibliometric and systematic review is needed to clarify how the field has developed, what pedagogical and curriculum patterns have emerged, and what gaps should guide future research.

To overcome these gaps, this study uses a combination of bibliometric analysis and systematic literature review (SLR). Bibliometric analysis helps to identify the growth in publications, the distribution of publications by sources, geographical contribution, and the thematic structure of the field, while SLR provides a deeper thematic synthesis. The study is designed to combine these two approaches to transcend descriptive publication mapping and offer a more holistic view of the impact of AI on EFL curriculum and pedagogical practices.

This study particularly emphasizes the integration of AI into EFL curriculum and pedagogical practices, such as instructional design, teacher readiness, AI literacy, assessment practices, learner-centered pedagogy, and ethical considerations. This focused scope is designed to prevent overgeneralization across the broader AI-in-education literature and to give a more specific understanding of the conceptualization and application of generative AI in EFL teaching and curriculum development. Therefore, the following research questions are addressed in this study:

1. How has research on AI integration in EFL curriculum and pedagogical practices developed in terms of publication growth, source distribution, geographical contribution, and thematic structure?
2. What dominant pedagogical approaches, curriculum frameworks, and instructional practices are reported in studies on AI integration in EFL education?
3. What gaps, challenges, and future research directions emerge from the existing literature on AI-supported EFL curriculum and pedagogical practices?

This study provides a contribution to the literature in three ways by answering these questions. First, it provides a mapping of the intellectual and publication trajectory of research on generative AI in EFL curriculum and pedagogy. Second, it summarizes the key themes of previous studies from pedagogical and curriculum perspectives. Third, it identifies key gaps and future directions in the areas of AI literacy, teacher readiness, ethical governance, curriculum integration, and sustainable implementation. This comprehensive analysis provides an evidence-based view of the influence of AI on EFL curriculum development and pedagogical changes across different educational contexts.

LITERATURE REVIEW

AI in EFL education: From supplementary tools to curriculum integration

The use of AI in language learning has progressed from isolated tasks to embedding it into the broader learning process and pedagogy. The existing AI-based tools in EFL learning environments were mainly developed to assist with specific language skills, individual learning experiences, and classroom interactions (Huang et al., 2022; Kuhail et al., 2023). The recent emergence of generative AI and large language models (LLMs) like ChatGPT has broadened the pedagogical potential of AI in language learning, allowing for adaptive feedback, real-time interaction, and flexible learning support in various educational contexts (Chiu et al., 2023). Consequently, there has been a growing interest in the potential of AI to impact instructional practices, learner engagement, assessment processes, and pedagogical strategies in EFL education.

The integration of generative AI into the curriculum is quite different from using AI as a supporting instructional tool. In the curricular context, generative AI poses significant questions about authenticity, learner agency, critical thinking, and the need for meaningful language production in the presence of AI-generated text that can be produced quickly and easily. Recent research increasingly

points to the need to use AI not just as an extra tool in the classroom but as a part of the wider pedagogical and curriculum practices that encourage reflective, ethical, and contextually appropriate language learning (Lee et al., 2025; Yeh, 2024). This has led to a call for the integration of critical AI literacy into EFL curricula, which encompasses the capacity to critically evaluate, adapt, and use AI-generated content in an ethical manner, in addition to traditional language skills (Plate et al., 2024).

AI-TPACK and AI literacy in EFL curriculum integration

Conceptually, the integration of AI into EFL curriculum development can be analyzed by recent modifications of the technological, pedagogical, and content knowledge (TPACK) framework, which highlight the pedagogical skills and ethical consciousness associated with AI and its integration into instruction (Ning et al., 2024; Xu et al., 2025). AI-TPACK research in recent years indicates that for successful AI integration, teachers must not only understand the technology, but also integrate it with pedagogical and content knowledge in real classroom contexts (Eyal, 2025). In the realm of AI-integrated EFL teaching, educators are increasingly being asked to critically and pedagogically incorporate AI into the goals of the curriculum, the assessment system, and language learning activities.

Moreover, the concept of AI literacy has become a significant complementary term in AI-aided language education. AI literacy involves the capacity to assess, apply, and teach with AI-generated content in an ethical and critical manner in educational contexts. In recent years, the conversation about AI in education has focused on the role of the teacher, ethical awareness of AI, and pedagogical flexibility as key elements of sustainable AI integration in language learning contexts (Tan et al., 2025; Yeh, 2024). AI-TPACK and AI literacy offer a conceptual framework for understanding teacher readiness, curriculum integration, and pedagogical transformation in AI-supported EFL learning environments.

Bibliometric landscapes in AI and language education research

The value of bibliometric studies has grown in recent years for mapping the intellectual development of rapidly evolving research fields. In recent years, the number of publications has significantly increased after the surge of generative AI technologies since 2020 (Doğan & Talan, 2025; Wang et al., 2024). Previous reviews also show that research on AI in education is often focused on specific technological applications, such as chatbots, automated writing evaluation, machine translation, and intelligent tutoring systems, rather than broader pedagogical and curriculum aspects (Zhu & Wang, 2025). Research in EFL also indicates that recent studies in AI-assisted language learning still focus on learner performance, interaction, technological affordances, and tool effectiveness rather than curriculum integration and instructional redesign (Chua & Annamalai, 2025; Woo & Choi, 2021). This relative neglect of curriculum-oriented perspectives points to an important gap in the literature and further emphasizes the need for more in-depth analyses examining the implications of generative AI for pedagogical approaches and curriculum development in EFL.

From these viewpoints, generative AI integration in the EFL curriculum can be discussed through several closely related aspects: curriculum integration, teacher readiness, AI literacy, pedagogical redesign, assessment practices, and ethical implementation. These dimensions align with recent debates on AI literacy and competency (Chiu et al., 2024), AI-TPACK for teacher preparation (Xu et al., 2025), and the practical and ethical issues of LLMs in education (Yan et al., 2024). They offer a conceptual framework to explore the application of generative AI in classroom practice, curriculum planning, instructional design, and institutional implementation strategies.

METHOD

Research design

A research design should align with the research questions and the nature of the evidence under investigation. In this study, the analysis focused on understanding both the structural development of research on AI integration in EFL and the synthesis of findings related to curriculum and pedagogical

practices. As the study relied on published literature, its scope was determined by the coverage and eligibility criteria of the selected sources, which should be considered when interpreting the findings. To address these objectives, an integrated design combining bibliometric analysis and a systematic literature review (SLR) was adopted. This combination was considered appropriate because bibliometric analysis provides a broad overview of research development, including publication growth, source distribution, geographical contributions, citation patterns, and thematic structures, while SLR enables a focused synthesis of evidence related to AI implementation, curriculum integration, and pedagogical practices (Snyder, 2019).

The bibliometric analysis aimed to examine the structural and thematic evolution of AI-related research in EFL through the analysis of annual scientific production, most relevant sources, country productivity, citation patterns, and keyword co-occurrence. Bibliometric mapping and analysis were performed using the Bibliometrix package in RStudio (Aria & Cuccurullo, 2017) which is widely applied for science mapping and research trend analysis (Donthu et al., 2021). This approach allowed the identification of research patterns and knowledge structures within the field.

Complementing the bibliometric analysis, the SLR was conducted following the PRISMA 2020 guidelines to ensure transparency, rigor, and reproducibility in the process of identifying, screening, and selecting relevant articles (Page et al., 2021). The SLR focused on synthesizing findings related to AI applications in EFL curriculum and pedagogical practices, including instructional design, assessment, teacher readiness, and learning outcomes. By integrating bibliometric mapping with systematic thematic synthesis, this study provides a comprehensive understanding of AI integration in EFL education by connecting the broader evolution of the research field with evidence-based insights from individual studies.

Data source and search strategy

Data were collected only from the Scopus database due to its wide coverage of peer-reviewed literature in the fields of education, social sciences, language learning, and technology-related studies. Scopus also provides standardized bibliographic metadata suitable for bibliometric analysis, such as author details, affiliations, source titles, keywords, abstracts, and citation data. The publication period was limited from January 2020 to April 2026. This period was selected as a recent baseline to trace the development of AI-assisted English language education research, particularly the transition toward the rapid growth of generative AI research after 2022–2023. The year 2020 represents an important milestone in this development due to significant advances in large language models (LLMs), including GPT-3, which demonstrated improved language generation capabilities and few-shot learning performance (Brown et al., 2020). These developments subsequently encouraged broader research discussions regarding the opportunities and challenges of generative AI applications in educational contexts (Kasneci et al., 2023). The April 2026 cutoff represents the database retrieval period rather than the endpoint of AI development.

The search strategy was designed to identify studies related to AI technologies, EFL/ELT contexts, and curriculum or instructional design. While broader search terms were applied to capture relevant research developments, only studies focusing on EFL curriculum development, pedagogical practices, instructional design, teacher readiness, assessment, or AI literacy were included during the screening process. The final search was performed in the TITLE-ABS-KEY fields of Scopus as follows:

(TITLE-ABS-KEY(("generative AI" OR "ChatGPT" OR "large language model" OR "artificial intelligence" OR "AI") AND ("EFL" OR "English as a foreign language" OR "ELT" OR "English language teaching") AND ("curriculum" OR "curriculum development" OR "syllabus" OR "instructional design" OR "course design"))) AND PUBYEAR > 2019 AND PUBYEAR < 2027

Bibliometric analysis was conducted using 190 publications to provide a broader mapping of research development related to AI integration in English language education, including publication

trends, citation patterns, and thematic structures. Through quantitative analysis and visualization techniques, bibliometric analysis enables the identification of relationships among publications, keywords, and research themes (Avenali et al., 2023; Donthu et al., 2021). The bibliometric corpus was intentionally maintained at a broader level because its purpose was to capture the overall intellectual structure and evolution of the research field rather than to evaluate individual studies in depth.

Subsequently, an SLR was conducted using additional eligibility criteria and detailed screening procedures to identify studies specifically addressing AI integration in EFL curriculum and pedagogical practices. Following the screening process, 40 studies were included for qualitative synthesis. The difference between the bibliometric corpus (190 studies) and the SLR corpus (40 studies) reflects the distinct analytical purposes of these approaches. While bibliometric analysis provides a broader overview of research trends, publication patterns, and knowledge structures, SLR requires predefined eligibility criteria, systematic searching, screening, and synthesis of relevant studies to obtain a focused understanding of a specific research topic (Avenali et al., 2023).

Data collection

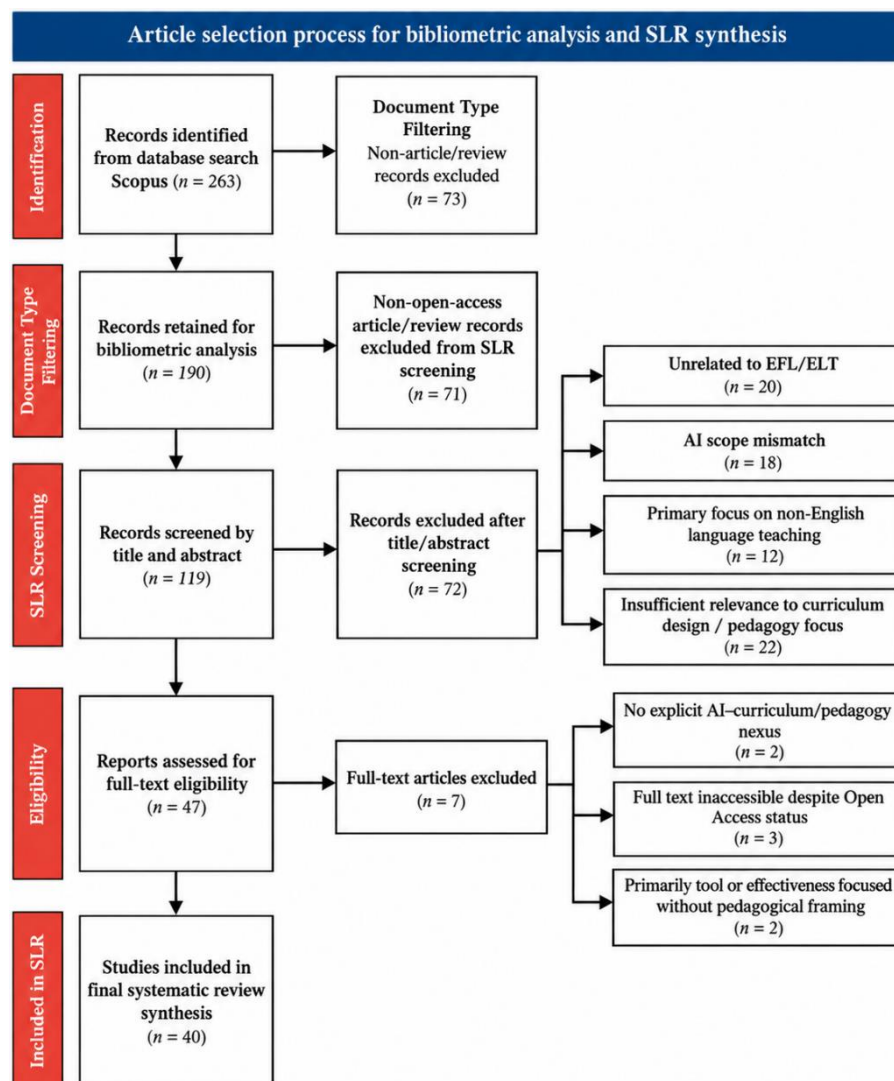
The screening and selection process was guided by the PRISMA 2020 framework, particularly the stages of identification, screening, eligibility assessment, and inclusion (Page et al., 2021). The initial search in the Scopus database identified 263 records related to AI integration in EFL curriculum and pedagogy. During document-type filtering, 73 records were excluded because they were conference papers, book chapters, conference reviews, books, or notes. As a result, 190 Scopus-indexed journal articles and review papers were retained for bibliometric analysis.

For the SLR synthesis, the 190 records were further screened using predefined inclusion and exclusion criteria. Studies were included if they were empirical studies, review articles, or conceptually relevant journal articles indexed in Scopus; addressed AI integration in EFL or ELT contexts; discussed curriculum development, instructional design, syllabus development, assessment, teacher readiness, AI literacy, or pedagogical practices; were published between 2020 and April 2026; and were written in English. Studies were excluded if they focused on AI in non-language educational contexts, examined AI tools without clear pedagogical or curricular framing, focused on non-English language teaching, or did not provide accessible full text.

Open-access status was treated as a practical eligibility requirement for SLR screening rather than as a substantive quality criterion. Of the 190 article and review records, 119 records had open-access status and were screened based on title and abstract. During this stage, 72 records were excluded because they did not sufficiently match the review scope. These included studies that were not directly related to EFL/ELT, had an AI or technology scope mismatch, focused on non-English language teaching, or showed limited relevance to curriculum development, instructional design, assessment, teacher readiness, AI literacy, or pedagogical practices. The remaining 47 reports were assessed for full-text eligibility. Seven full-text articles were excluded because they lacked an explicit AI–curriculum/pedagogy nexus, were inaccessible despite open-access status, or focused mainly on tool effectiveness without sufficient pedagogical framing. Finally, 40 studies were included in the final systematic review synthesis.

Two authors independently screened the titles and abstracts. Disagreements were resolved through discussion until consensus was reached. Inter-rater reliability was assessed using Cohen's kappa. The value ($\kappa = .649$) indicated substantial agreement based on Landis and Koch (1977) interpretation. The complete article selection process is presented in Figure 1.

Figure 1
PRISMA-Based Article Selection Process



Data analysis

Data analysis was conducted in two phases. First, bibliometric analysis was performed on the 190 Scopus-indexed articles and review papers using the Biblioshiny interface of the Bibliometrix package in RStudio. Following bibliometric analysis guidelines, the analysis focused on annual scientific production, most relevant sources, country productivity, and keyword co-occurrence patterns (Donthu et al., 2021). These indicators were used to address the first research question by mapping publication growth, source distribution, geographical contribution, and thematic structure in research on AI integration in EFL curriculum and pedagogical practices.

The second stage was thematic synthesis of the 40 studies that ended up in the final SLR corpus. Thematic analysis was performed by repeated reading, coding, comparison of data extracted and development of themes. The initial codes were developed based on recurring problems identified in the selected studies, such as teacher readiness, AI literacy, instructional design, AI-supported pedagogical practices, learning outcomes, assessment, learner autonomy, academic integrity, and implementation challenges. These codes were then organised into larger themes and then related to the second and third research questions. The authors discussed differences in coding and interpretation of the themes until consensus was achieved. This process allowed the study to link the

identified pedagogical and curriculum-related issues from the thematic synthesis with the bibliometric patterns.

Table 1

Illustrative Codebook for Thematic Analysis

Sample study	Key finding/meaning unit	Initial code	Category	Theme
1	Teachers reported limited confidence and knowledge in using AI for EFL instruction	Teacher readiness; AI competence	Teacher-related factors	Teacher readiness and AI literacy
2	AI-supported feedback helped learners revise writing and receive individualized support	AI feedback; personalized learning	AI-supported instruction	AI-supported pedagogical practices
3	Concerns were reported regarding plagiarism, academic integrity, and responsible AI use	Academic integrity; ethical AI use	Ethical concerns	Ethical and implementation challenges

FINDINGS

This section presents the findings according to the three research questions. The bibliometric findings address RQ1 by explaining publication growth, source distribution, country productivity, and keyword co-occurrence patterns. The thematic findings address RQ2 and RQ3 by synthesizing dominant pedagogical approaches, curriculum integration patterns, learning outcomes, assessment practices, and ethical or implementation challenges identified in the final SLR corpus.

Bibliometric findings

This part discusses the bibliometric results of the study. The analysis covers publication trends, relevant sources, country productivity, and keyword co-occurrence. Through these results, it is possible to see how research on AI-related EFL curriculum has developed, which countries and publication outlets have contributed to the field, and what main topics have received attention in recent years.

Figure 2

Annual scientific production

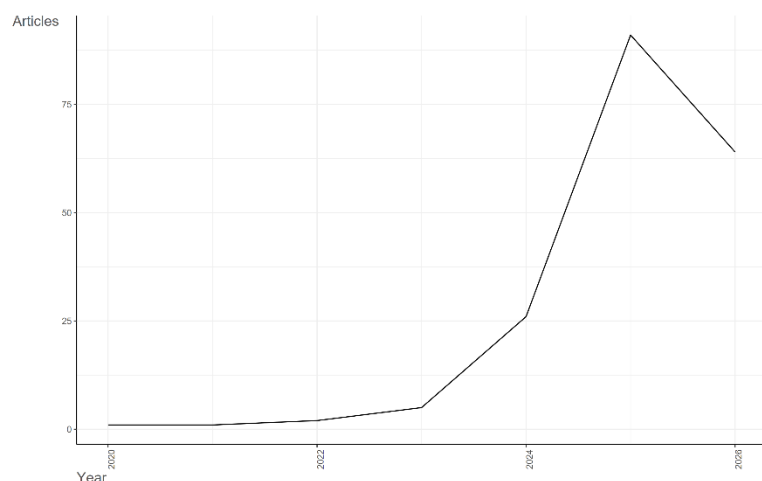


Figure 2 presents the annual scientific production from 2020 to 2026 in the final corpus of 190 articles and review papers indexed in Scopus. The publications were few in the initial years, with 1 article in 2020, 1 article in 2021, and 2 articles in 2022. The number of publications on the topic increased in 2023, reaching 5 articles. The number of publications increased further in 2024, with 26

publications, and even more significantly in 2025, with 91 publications. The 64 publications recorded up to April 2026 represent partial-year data, but research interest seems to have persisted. In general, the trend indicates that studies on the use of AI in EFL curriculum and pedagogical practices have been growing rapidly, especially since the increased use of generative AI tools such as ChatGPT.

Table 2

Most Relevant Sources

Source	Articles
ARAB WORLD ENGLISH JOURNAL	9
SYSTEM	7
WORLD JOURNAL OF ENGLISH LANGUAGE	7
EDUCATION AND INFORMATION TECHNOLOGIES	6
INNOVATION IN LANGUAGE LEARNING AND TEACHING	6
CALL-EJ	4
FORUM FOR LINGUISTIC STUDIES	4
INTERNATIONAL JOURNAL OF LEARNING, TEACHING AND EDUCATIONAL RESEARCH	4
JOURNAL OF ASIA TEFL	4
COGENT EDUCATION	3

The most relevant sources show that research related to generative AI in EFL curriculum and pedagogy has predominantly been published in language education and educational technology journals. The highest number of publications came from Arab World English Journal, followed by System and World Journal of English Language. Other journals that also contributed to this topic were Education and Information Technologies, Innovation in Language Learning and Teaching, CALL-EJ, Forum for Linguistic Studies, Journal of Asia TEFL, and Cogent Education. This distribution indicates that research on AI in EFL does not only focus on technology use but also considers the application of AI in language instruction, curriculum design, and classroom pedagogy.

Table 3

Country Productivity

Rank	Country	Publications
1	CHINA	83
2	SAUDI ARABIA	56
3	INDONESIA	29
4	TURKEY	20
5	THAILAND	19
6	SOUTH KOREA	17
7	INDIA	15
8	IRAN	14
9	MALAYSIA	10
10	UK	8

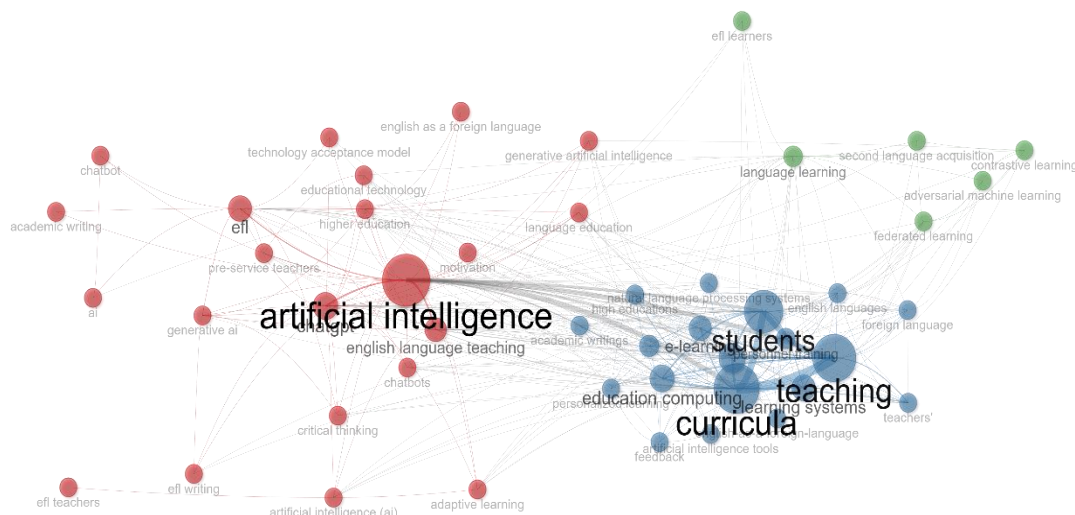
Note. Country productivity refers to country-level publication contributions; therefore, internationally co-authored publications may be counted under more than one country.

From the country productivity data, it can be seen that China was the leading contributor, followed by Saudi Arabia and Indonesia. Other countries, such as Turkey, Thailand, South Korea, India, Iran, Malaysia, and the UK, also appeared among the top contributors. This distribution shows that studies on the use of AI in EFL curriculum and pedagogy are developing strongly in Asian and Middle Eastern contexts. It also implies that the subject is not confined to Western educational

settings but has become relevant in multilingual and non-native English-speaking contexts where digital learning, curriculum reform, and educational technology are becoming increasingly important.

Figure 3

Keyword Co-occurrence Network



The keyword co-occurrence network of studies related to the use of AI in EFL curriculum and pedagogical practices is presented in Figure 3. The network reveals that the field is structured around a number of interrelated thematic clusters. The red cluster highlights the themes of artificial intelligence, EFL, English language teaching, ChatGPT, academic writing, and educational technology, suggesting a significant emphasis on the application of artificial intelligence tools in EFL education and learning. The blue cluster is associated with students, teaching, curricula, learning systems, and e-learning, showing that the use of AI is also discussed in relation to classroom implementation, curriculum design, and learner engagement. The green cluster, on the other hand, contains keywords such as language learning, EFL learners, second language acquisition, and machine learning, indicating connections between AI-related studies and the broader field of language learning and technology-assisted education. In general, the network suggests that the use of AI in EFL is not just a technological development, but also a reflection of wider pedagogical, curricular, and learner-centered issues.

Thematic findings

This part presents the main themes identified from the reviewed studies. The discussion focuses on teacher readiness and AI literacy, AI-supported teaching practices, curriculum integration, learning outcomes and assessment, as well as ethical and implementation issues. These themes illustrate the use of AI in EFL curriculum and classroom practice, as well as the challenges that must be taken into account when using AI.

Table 4

Teacher Readiness and AI Literacy

No	Author(s)	AI Focus	EFL Context	Curriculum/ Pedagogical Focus	Method	Main Findings	Key Challenges
1	(Tran, 2026)	ChatGPT for test design	Vietnamese pre-service EFL teachers	AI literacy and assessment design	Qualitative	ChatGPT supported curriculum-aligned	Ethics issues and overreliance on AI

No	Author(s)	AI Focus	EFL Context	Curriculum/ Pedagogical Focus	Method	Main Findings	Key Challenges
2	(Lee & Jeong, 2026)	AI language tools	Korean university EFL learners	AI literacy education and curriculum integration	Quantitative survey	language test construction and validation. Students showed strong interest in AI-supported learning but limited conceptual understanding of AI.	Low technical literacy
3	(Isaee & Barjesteh, 2026)	Chatbots and AI tools	EFL teachers and learners	AI integration and learner autonomy	Mixed-methods	Participants generally perceived AI integration positively in ELT practices.	Privacy concerns and limited institutional support
4	(Alshammari, 2026)	AI writing tools	Saudi EFL writing classes	AI-assisted L2 writing pedagogy	Mixed-methods	Experienced teachers demonstrated stronger acceptance of AI-supported instruction and assessment.	Limited training and unethical AI use
5	(Altamimi, 2025)	ChatGPT in EFL classrooms	Saudi university EFL lecturers	Teacher readiness and AI-supported instruction	Qualitative	AI tools increased learner engagement and motivation in EFL learning.	Infrastructure and training limitations
6	(Jiang & Li, 2026)	AI-TPACK and lesson planning	Pre-service EFL teachers	AI-integrated pedagogy and lesson planning	Mixed-methods	AI intervention improved AI-TPACK competence and curriculum-oriented lesson planning skills.	Prompt design difficulties
7	(Karakaya et al., 2025)	Generative AI and AI-TPACK	EFL teacher education	AI literacy and teacher professional development	Bibliometric review	Generative AI reshaped teacher education and reflective pedagogical practices.	AI bias and inconsistent readiness
8	(Harakchiyska, 2025)	AI tools in teacher training	Pre-service EFL teachers	AI readiness and self-efficacy	Quantitative survey	Self-efficacy significantly influenced	Weak pedagogical preparation

No	Author(s)	AI Focus	EFL Context	Curriculum/ Pedagogical Focus	Method	Main Findings	Key Challenges
9	(Tatipang et al., 2026)	AI-driven ELT tools	Higher education ELT lecturers	Institutional AI readiness and curriculum integration	Mixed-methods	intention to integrate AI into teaching. Lecturers viewed AI positively for instructional efficiency and learner engagement.	Limited infrastructure and training
10	(Kohnke & Ulla, 2024)	ChatGPT and GenAI tools	Thai higher education ELT	Teacher roles and AI integration	Qualitative	Teachers valued GenAI for feedback, instructional support, and professional tasks.	Overdependence and digital divide
11	(Liu et al., 2025)	GenAI literacy framework	Chinese EFL learners	GAI literacy in digital multimodal composing	Quantitative (EFA/CFA)	The proposed GAI literacy framework demonstrated strong validity and reliability.	Prompt literacy and ethical concerns

Table 4 reveals that teacher readiness and AI literacy have emerged as key concerns in the development of AI-integrated EFL curriculum. The studies were coded across multiple, non-exclusive categories; therefore, individual articles could contribute to more than one theme depending on their findings. In addition to teacher readiness, the reviewed studies addressed learner perceptions, engagement, motivation, AI literacy, assessment, and related dimensions of AI integration. In the studies examined, AI tools were found to have a growing impact on assessment design, lesson planning, learner autonomy, and instructional support (Jiang & Li, 2026; Karakaya et al., 2025; Tran, 2026). In general, teachers and learners showed positive perceptions toward AI integration, particularly for improving engagement, instructional efficiency, and curriculum-oriented learning practices (Isaac & Barjesteh, 2026; Kohnke & Ulla, 2024; Tatipang et al., 2026).

Beyond teacher readiness and AI literacy, the reviewed studies identified broader challenges related to AI integration in EFL education. Despite these positive perceptions, several studies also reported continuing challenges in AI integration within EFL education. Effective implementation was often hampered by limited technical literacy, inadequate pedagogical preparation, prompt-writing problems, and unequal institutional support (Altamimi, 2025; Harakchiyska, 2025; Lee & Jeong, 2026). Concerns related to overreliance on AI, privacy, academic integrity, and AI bias also remained significant issues across multiple contexts (Karakaya et al., 2025; Liu et al., 2025). Difficulties in formulating effective prompts for AI-assisted learning were also reported across the reviewed studies (Alhamam, 2025; Liu et al., 2025).

Table 5

AI-Supported Pedagogical Practices

No	Author(s)	AI Focus	EFL Context	Curriculum/ Pedagogical Focus	Method	Main Findings	Key Challenges
1	(Chung, 2025)	ELSA Speak, ChatGPT, Duolingo	Vietnamese secondary EFL classes	AI-supported pronunciation instruction	Qualitative	AI increased engagement, confidence, and	Limited training; unstable internet

No	Author(s)	AI Focus	EFL Context	Curriculum/ Pedagogical Focus	Method	Main Findings	Key Challenges
2	(AbdAlgan e et al., 2026)	AI-generated texts and human-written texts	Saudi EFL academic writing	AI-supported academic writing pedagogy	Mixed-methods case study	pronunciation practice AI-generated texts differed from human-written texts in EFL academic writing	Authenticity, authorship, and overreliance on AI-generated texts
3	(Kılıçkaya & Kic-Drgas, 2025)	Educational chatbot	Pre-service EFL teacher training	Collaborative AI-supported learning	Qualitative	Chatbot enhanced communication and collaboration	AI dependence; privacy concerns
4	(Pitychouts, 2024)	ChatGPT, Grammarly	EFL essay writing	AI-supported writing pedagogy	Literature review	AI supported feedback and writing improvement	Plagiarism; inaccurate feedback
5	(Tseng & Lin, 2024)	GPT-3.5 writing support	Taiwanese EFL college students	Scaffolded AI writing instruction	Mixed-methods	AI scaffolding improved revision and autonomous writing	Overdependence on AI
6	(Lai, 2025)	ChatGPT + BOPPPS	EFL speaking classes	Scaffolded speaking pedagogy	Mixed-methods	ChatGPT improved speaking proficiency and confidence	Superficial AI dependence
7	(Zhou et al., 2026)	ASR, chatbots, CAPT, LLMs	EFL speaking education	AI-mediated speaking practice	Bibliometric review	Research shifted toward learner-centered speaking pedagogy	Teacher readiness; curriculum mismatch
8	(Busso & Sanchez, 2024)	ChatGPT, MT, Grammarly	Japanese university EFL	Communicative AI-supported interaction	Conceptual review	AI enhanced motivation and speaking confidence	Limited digital literacy
9	(Yıldız, 2025)	ChatGPT, Canva, QuillBot	Middle school EFL learners	AI-supported multimodal writing	Qualitative	AI tasks improved engagement and reflective learning	Unequal digital proficiency
10	(Al-khresheh, 2024)	ChatGPT in ELT	EFL/ELT classrooms	Personalized and interactive pedagogy	Qualitative	AI enhanced feedback and classroom interaction	Reduced creativity; overreliance
11	(Lu & Watanapokakul, 2025)	GenAI, LMS, Kahoot	Online and face-to-face EFL	Active learning integration	Conceptual review	GenAI supported interaction and higher-order thinking	Unsystematic technology integration

No	Author(s)	AI Focus	EFL Context	Curriculum/ Pedagogical Focus	Method	Main Findings	Key Challenges
12	(Bhar, 2026)	AI chatbots & LLMs	Asian EFL contexts	Speaking scaffolding strategies	Systematic review	AI improved fluency and willingness to communicate	Weak higher-order communication gains
13	(Wang et al., 2025)	AI speaking platforms	Asian higher education EFL	Task-based AI speaking instruction	Systematic review	AI improved speaking fluency and engagement	Curriculum mismatch; low AI literacy
14	(Uysal, 2026)	Educational chatbot	Undergraduate ELT course	Syllabus-aligned independent learning	Mixed-methods	Chatbot increased engagement and learning satisfaction	Repetitive responses; limited coverage

As shown in Table 5, AI-supported pedagogical practices in the reviewed EFL studies were primarily associated with speaking, pronunciation, and writing instruction. AI tools such as ChatGPT, chatbots, Duolingo, and AI-based speaking systems were reported to enhance learner engagement, confidence, interaction, and self-directed learning (Chung, 2025; Wang et al., 2025). Other studies showed that AI was incorporated into writing revision, scaffolded speaking tasks, and multimodal learning activities (Yıldız, 2025; Lu & Watanapokakul, 2025; Tseng & Lin, 2024). These practices demonstrate a closer connection between AI and instructional design when AI is deliberately embedded into learning tasks, scaffolding, feedback, and classroom activities rather than used only as an additional classroom tool.

The studies also pointed to some recurring pedagogical and curricular issues. Issues such as overreliance on AI-generated content, inaccurate feedback, curriculum mismatch, and low digital literacy emerged in various settings (Busso & Sanchez, 2024; Pitychoutis, 2024; Zhou et al., 2026). In addition, several studies emphasized that AI integration often became less effective when teachers lacked pedagogical preparation or when technology was implemented without clear instructional frameworks (Kılıçkaya & Kic-Drgas, 2025; Wang et al., 2025). Overall, the findings indicate that the successful application of AI in EFL education requires not only technological availability, but also curriculum alignment, teacher guidance, and structured pedagogical design.

Table 6
Curriculum Integration and Instructional Design

No	Author(s)	AI Focus	EFL Context	Curriculum / Pedagogical Focus	Method	Main Findings	Key Challenges
1	(Nualprasert et al., 2025)	SAMR, AI-TPACK, DIGCOMP	Thai higher education ELT	AI-enhanced curriculum integration	Mixed-methods	DIGCOMP and TPACK supported curriculum integration effectively.	Limited transformative integration
2	(Park & Derakhshan, 2026)	GPT-3.5, Llama 2	Korean EFL reading classes	AI-generated reading materials & assessment	Mixed-methods	AI-generated materials improved reading comprehension	Cultural mismatch; need for human oversight
3	(Elmotri et al., 2025)	ChatGPT in ESP writing	Saudi EFL/ESP higher education	ESP curriculum redesign & assessment	Mixed-methods	ChatGPT improved writing, engagement,	Ethical concerns; educator training

4	(Chae & Yoo, 2026)	AI/TTS pronunciation tools	Adult EFL learners	IPA-based pronunciation curriculum	Conceptual paper	and learner autonomy. AI/TTS practice improved speaking and listening development.	Digital literacy variation
5	(Woo et al., 2026)	Generative AI tools	Hong Kong secondary EFL students	AI-integrated academic writing curriculum	Mixed-methods	AI-supported curriculum improved writing competence and AI literacy.	Ethical AI use; scaffolding needs
6	(Qutub et al., 2023)	AI technologies & digital tools	MENA higher education EFL	Curriculum reform & learner autonomy	Mixed-methods	Teachers showed strong readiness for technology integration.	Unequal technological access
7	(Alhajji et al., 2025)	GenAI, VR, AR, Copilot	UAE educational context	Personalized and future-oriented curriculum	Qualitative	AI supported adaptive and creative learning models.	Bias; plagiarism; implementation barriers

The results indicate that AI use in EFL curriculum development is not limited to tool use but has extended into curriculum redesign and instructional processes. Several studies emphasized the integration of AI into syllabus planning, assessment, adaptive learning, and AI literacy development (Nualprasert et al., 2025; Woo et al., 2026). AI-supported curricula were commonly associated with personalized learning, improved writing and reading performance, learner autonomy, and more flexible instructional models, particularly in higher education and ESP (Elmotri et al., 2025; Park & Derakhshan, 2026). AI was not only used as a teaching tool, but also as part of curriculum structure and learning pathways in many instances.

Although these advantages were noted, the studies also highlighted the pedagogical and institutional difficulties of curriculum integration. Ethical issues, cultural differences, access to technology, and teacher training were found in several studies (Alhajji et al., 2025; Qutub et al., 2023). Some findings also suggested that AI integration often remained surface-level, with limited transformative impact on curriculum design itself (Nualprasert et al., 2025). Overall, the literature suggests that successful AI-supported EFL curriculum development is not merely a matter of AI tool availability, but also depends on the alignment of technology, pedagogy, assessment, and institutional readiness.

Table 7
Learning Outcomes and Assessment

No	Author(s)	AI Focus	EFL Context	Assessment/ Learning Focus	Method	Main Findings	Key Challenges
1	(Bataineh et al., 2026)	AI listening tools, chatbots, VR	EFL listening instruction	AI-enhanced listening curriculum and adaptive practice	Quasi-experimental (ANCOVA)	AI-supported instruction improved listening comprehension scores.	Novelty effect; limited sample size
2	(Teng, 2024)	ChatGPT, AWE systems	EFL writing across	Writing assessment, feedback, and motivation	Systematic literature review	AI improved writing performance,	Academic integrity; overreliance

No	Author(s)	AI Focus	EFL Context	Assessment/ Learning Focus	Method	Main Findings	Key Challenges
3	(Alkhateeb et al., 2025)	ChatGPT, Quizlet, Gemini, ExamSoft	multiple contexts Saudi higher education EFL	AI-assisted assessment and exam preparation	Mixed-methods survey	feedback quality, and motivation. AI tools improved efficiency and assessment preparation.	Output inaccuracies; insufficient training

Research on learning outcomes and assessment generally indicates that AI was employed to support language learning, feedback, and assessment. For listening instruction, AI tools, adaptive feedback, and virtual learning environments were reported to support students' listening comprehension (Bataineh et al., 2026). Similar patterns also appeared in writing instruction, where AI-assisted feedback and Automated Writing Evaluation systems supported better writing performance, revision quality, and learning motivation across various EFL contexts (Teng, 2024). In assessment practices, AI tools such as Quizlet, Gemini, and ExamSoft were reported to help teachers prepare assessments more efficiently and manage evaluation tasks more effectively (Alkhateeb et al., 2025).

Meanwhile, some common constraints were found across the studies. Overreliance on AI-generated feedback, academic integrity concerns, inaccurate outputs, and insufficient teacher training continued to be major challenges in AI-supported assessment practices (Alkhateeb et al., 2025; Teng, 2024). In addition, it was reported that novelty effects or short-term exposure to technology might affect learning outcomes rather than reflect long-term pedagogical impact (Bataineh et al., 2026). These patterns indicate that while AI holds significant promise for enhancing assessment and learning in EFL curricula, its implementation must remain balanced, teachers need guidance, and AI-generated outputs must be critically evaluated.

Table 8

Ethical and Implementation Challenges

No	Author(s)	AI Focus	EFL Context	Curriculum/ Instructional Focus	Method	Main Findings	Key Challenges
1	(Qoyyimah & Bargallie, 2025)	Machine Translation (Google Translate, DeepL)	Beginner EFL writing classes	Grammar-focused writing pedagogy	Qualitative reflective study	Excessive MT use weakened grammar and sentence construction skills.	Dependency on translation tools
2	(Zheng & Stewart, 2024)	ChatGPT-generated moral stories	Bilingual/EFL learners	Critical literacy and cultural awareness	Qualitative	AI-generated stories reflected cultural bias and Western assumptions.	Gender bias; cultural mismatch
3	(Rafida et al., 2024)	AI writing tools and chatbots	Indonesian and Taiwanese EFL learners	AI-supported academic writing	Qualitative	Students viewed AI as useful for writing support and grammar help.	Dependency; authenticity concerns
4	(Almahboob, 2025)	ChatGPT in EFL writing	Saudi university EFL classes	AI integration in writing curriculum	Quantitative survey	Teachers perceived ChatGPT positively for	Hallucination; plagiarism; overreliance

No	Author(s)	AI Focus	EFL Context	Curriculum/ Instructional Focus	Method	Main Findings	Key Challenges
5	(Alhamam, 2025)	ChatGPT for L2 writing support	Saudi college-level EFL learners	AI-assisted writing and brainstorming	Qualitative thematic analysis	creativity and feedback. Students showed mixed attitudes and limited AI literacy.	Weak prompt skills; institutional resistance

Recent research indicates that ethical and implementation concerns are significant issues in the use of AI in EFL curriculum development. While AI tools were generally considered beneficial for writing support, feedback, grammar assistance, and brainstorming, the reviewed studies also identified concerns such as dependency, plagiarism, authenticity issues, and inaccurate AI-generated responses (Almahboob, 2025; Rafida et al., 2024). Although AI tools were generally considered beneficial for writing support, feedback, grammar assistance, and brainstorming, excessive reliance on these tools may create concerns regarding academic integrity and learners' independent language development. In beginner writing contexts, students' grammar and sentence construction abilities were found to be negatively affected by the overuse of machine translation tools such as Google Translate and DeepL (Qoyyimah & Bargallie, 2025).

Ethical concerns also pointed out issues related to cultural bias, AI literacy, and institutional readiness. It is found that AI-generated content frequently carried Western-centric assumptions that did not necessarily align with local learning contexts, while Alhamam (2025) reported that many learners still lacked effective prompt-writing skills and critical AI literacy. Across the reviewed studies, problems such as hallucination, dependency, authenticity concerns, and limited institutional support persisted as obstacles to sustainable AI integration in EFL instruction (Alhamam, 2025; Almahboob, 2025; Rafida et al., 2024).

DISCUSSION

The collective findings of this review show an expanding and unsettled field, a field in which real pedagogical innovation is happening alongside ongoing structural tensions. The bibliometric results reveal a significant surge in scholarly interest after 2023, particularly as generative AI tools became more mainstream. Thematic findings, however, indicate that growth in publication volume has not always been followed by equally mature curriculum-level integration. The reviewed studies not only shed light on the potential of AI in EFL curriculum settings but also highlight the disconnect between technological feasibility, pedagogical preparedness, and institutional support.

From technology adoption to curriculum transformation

The bibliometric and thematic results indicate a shift in AI usage in EFL from tool-based application toward broader curriculum and pedagogical transformation. Publication growth increased from 26 articles and reviews in 2024 to 91 in 2025, while the 64 records in 2026 should be interpreted as partial-year data because the search was limited to publications up to April. This pattern is also evident in the keyword network, where the terms curricula, teaching, generative AI, and artificial intelligence are closely connected. This indicates that AI is not just a technological solution, but also part of EFL curriculum design and teaching practice.

This shift, however, is uneven. Some studies in this review still treat AI as a motivational tool instead of a part of curriculum architecture, particularly those that focus on pedagogical practices for speaking, writing, and pronunciation. In contrast, fewer studies explicitly address how AI could be incorporated into curriculum design, learning objectives, assessment, and institutional implementation, such as those by Nualprasert et al. (2025) and Woo et al. (2026), who have begun to investigate it. This echoes Crompton and Burke (2023), who noted that while the use of AI in

education has increased significantly, ethical and structural implementation issues continue to outpace pedagogical theorization.

This unevenness is accentuated by the geographical distribution. The top contributing countries were China, Saudi Arabia, and Indonesia, which contrasts with the Western-dominated pattern identified in previous bibliometric reviews (Zawacki-Richter et al., 2019). However, many of these studies also reveal gaps in infrastructure, digital literacy, and institutional readiness. This paradox suggests that high research productivity does not necessarily correspond to a high level of integration, and context-sensitive analysis is still needed to understand regional research contributions.

The distribution of sources in technology-oriented and language education journals indicates that research on AI in the EFL curriculum is interdisciplinary. This pattern is similar to the keyword co-occurrence network, where terms related to AI were linked with EFL, educational technology, curricula, teaching, and students.

Teacher readiness and AI literacy as structural determinants

One of the most common themes was teacher readiness as a crucial element for the successful integration of AI in EFL curricula. The relationship between positive attitudes toward AI and successful implementation was not consistently found in the reviewed studies, and the gap between enthusiasm for AI and competence in the classroom was often filled by pedagogical judgment, ethical sensitivity, and AI literacy. This is supported by Karaduman (2025), who observed that pre-service EFL teachers with positive attitudes toward AI still tended to lack confidence in practical application and ethical decision-making.

The reviewed literature also suggests that the construct of AI literacy needs to be further specified in curriculum studies. Prompt literacy, which refers to the ability to create contextually suitable and pedagogically meaningful prompts, was identified as a unique and recurring barrier in studies conducted by Alhamam (2025) and Liu et al. (2025). This barrier cannot be solved simply by increasing general digital literacy. This distinction is important for curriculum design because if AI use is to support meaningful learning, it must be explicitly scaffolded in instructional sequences and teacher education programs, not simply assumed as a transferable digital skill. Kasneci et al. (2023) also stated that the use of LLMs in education requires specific competency development that extends beyond general technological familiarity.

Xu et al. (2025) offer a theoretically informed solution to this issue by defining the intersection of AI-related technological knowledge and pedagogical content knowledge as the goal of professional development in the AI-TPACK framework. The reviewed studies, however, indicate that policy clarity, infrastructure provision, and collaborative professional learning environments are also important factors. Studies by Altamimi (2025), Kohnke and Ulla (2024) and Tatipang et al. (2026) all report teachers who express strong readiness but are unable to implement AI effectively because of structural barriers. The results suggest that the issue of teacher readiness for AI-assisted EFL instruction is not just a professional development issue, but also an institutional governance problem.

Personalized and learner-centered EFL pedagogy

The reviewed studies indicate that AI tools can support personalized, learner-centered, and adaptive learning experiences in speaking, writing, and reading instruction. AI-mediated speaking practice reduces communication anxiety by enabling low-stakes rehearsal (Lai, 2025; Wang et al., 2025). Adaptive learning systems support differentiated instruction across proficiency levels (Naseer & Khawaja, 2025) while AI-assisted writing feedback improves revision quality and learner autonomy (Elmotri et al., 2025; Tseng & Lin, 2024). This is supported by the bibliometric evidence: the keywords in the keyword network are tightly clustered, with terms such as students, language learning, and educational technology occurring together with curricula, which suggests that learner-centered language learning has become structurally embedded within the conceptual vocabulary of the field.

However, the same research also reveals a common challenge that complicates this positive story: overreliance on AI-generated content, lack of prompt literacy, and curriculum mismatch. As

many studies have pointed out, the personalization that AI tools provide can become detrimental to the learning process when it is used without pedagogical frameworks and clear learning goals, as it may decrease cognitive effort instead of scaffolding it. This concern is explicitly stated in [Pitychoutis' \(2024\)](#) review of AI in EFL writing, and teacher preparation and curriculum alignment are also identified as key roadblocks in [Zhou et al. \(2026\)](#) bibliometric analysis of AI-mediated speaking instruction.

Further studies are required to better understand how AI-driven personalization contributes to lasting learning outcomes. Learning outcomes and assessment are already discussed in some of the reviewed literature, but the evidence is still limited. The findings to date mainly point to improvements in listening, writing, feedback, assessment preparation, and motivation, while long-term effects remain unclear. Therefore, further longitudinal and comparative studies are required to validate the curriculum-level effects of AI in EFL education.

Ethical, cultural, and institutional challenges

Ethical and institutional issues were frequently encountered in studies related to the development of EFL curriculum with the aid of AI. The concerns were not only related to the use of AI as a classroom tool, but also to the impact of AI on assessment, student independence, access to technology, and the appropriateness of learning materials for local EFL contexts.

One of the most common concerns across the reviewed studies was academic integrity. Several studies reported issues related to plagiarism, overreliance on AI-generated content, and inaccurate AI responses in writing and assessment practices ([Almahboob, 2025; Teng, 2024](#)). Although AI was often viewed as useful for learning support and instructional efficiency, too much dependence on AI-generated output may reduce students' opportunities to develop independent learning, critical thinking, and language production skills.

The reviewed studies also identified issues with AI hallucination, digital literacy, and cultural bias. Some studies reported that students often had difficulties assessing inaccurate information generated by AI, especially when they lacked AI literacy or language proficiency ([Alhamam, 2025; Almahboob, 2025](#)). Moreover, [Zheng and Stewart \(2024\)](#) noted that AI-generated content sometimes exhibited Western cultural assumptions that were not always congruent with local EFL contexts. This issue is important considering that much of the reviewed research came from Asian and Middle Eastern countries such as China, Saudi Arabia, and Indonesia.

The problem was also institutional. In several cases, teachers and learners expressed interest in using AI, but the supporting conditions were still limited. Challenges to sustainable AI use in education persisted, including infrastructure issues, unreliable internet connection, inadequate teacher training, and ambiguous institutional support ([Altamimi, 2025; Kohnke & Ulla, 2024; Tatipang et al., 2026](#)). Thus, the use of AI in EFL curriculum development should be viewed not just as a technological implementation, but also as an ethical issue, a pedagogical challenge, an institutional matter, and a culturally relevant approach.

Toward an integrated framework for AI-supported EFL curriculum development

The results of this review indicate that AI integration in EFL education is not only related to technological adoption but also involves pedagogical, curricular, institutional, and ethical considerations. The use of AI for language learning has been explored in previous research, with studies highlighting its potential in providing automated feedback, assisting with writing tasks, and supporting learner interaction ([Kohnke et al., 2023; Law, 2024](#)). However, existing research has mainly focused on specific AI tools and learning outcomes, while less attention has been given to broader pedagogical and curriculum-level integration of AI ([Chua & Annamalai, 2025; Wang et al., 2024](#)). Thus, this review suggests an integrated framework where AI is not only used as an instructional support tool but also positioned as a component of AI-supported EFL curriculum development.

The proposed framework is organized around five conditions: (1) curriculum alignment, where AI tools are aligned with explicit learning goals rather than being used only for technological novelty;

(2) teacher competency, where AI-TPACK, AI literacy, and prompt literacy are developed as professional competencies for meaningful AI integration (Chiu et al., 2024; Xu et al., 2025); (3) learner readiness and AI literacy, where students are prepared to use AI critically and responsibly; (4) institutional readiness, where policies, infrastructure, and professional learning communities support sustainable implementation; and (5) ethical governance, where issues related to AI reliability, bias, academic integrity, privacy, and equitable access are considered in curriculum design (Yan et al., 2024). This framework integrates these elements into a broader curriculum perspective rather than examining them individually, as in previous studies.

Future research should explore the sustainability of AI-supported EFL curriculum implementation through longitudinal and cross-contextual studies to investigate how different educational contexts influence AI integration (Zhu & Wang, 2025). Furthermore, assessment frameworks should be developed to evaluate not only language competence but also AI literacy, critical evaluation skills, and responsible AI practices as emerging curriculum outcomes. These future directions indicate that AI integration in EFL education should move beyond evaluating isolated tools toward developing sustainable, context-sensitive, and curriculum-oriented approaches.

CONCLUSION

This study combined bibliometric analysis of 190 Scopus-indexed publications with an SLR of 40 studies to examine AI integration in EFL curriculum and pedagogical practices. The findings show rapid research growth since 2023 and increasing use of AI to support speaking, writing, pronunciation, assessment, learner-centered instruction, and adaptive learning. However, AI remains more frequently positioned as a pedagogical support tool than as an integrated component of curriculum design. Key challenges include teacher and learner AI literacy, prompt literacy, academic integrity, cultural bias, overreliance on AI-generated outputs, curriculum mismatch, and limited institutional support. Effective AI integration therefore requires curriculum alignment, teacher competency, learner readiness, ethical guidance, and institutional support. The study is limited to English-language, Scopus-indexed journal articles and review papers, while the SLR included only studies accessible in full text, which may have excluded relevant evidence and limited the generalizability of the findings. Future research should therefore prioritize longitudinal, comparative, and context-sensitive studies to examine the sustainability and broader applicability of AI-supported EFL curriculum integration.

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REFERENCES

- AbdAlgane, M., Ali, R., Othman, K., Ibrahim, I. Z. A., Alhaj, M. K. M., Ali, E. M. T., & Allehyani, F. S. (2026). Exploring AI generated texts vs. human written texts in EFL academic writing: A Case study of Qassim University in Saudi Arabia. *World Journal of English Language*, 16(2), 114–131. <https://doi.org/10.5430/wjel.v16n2p114>
- Al-khresheh, M. H. (2024). Bridging technology and pedagogy from a global lens: Teachers' perspectives on integrating ChatGPT in English language teaching. *Computers and Education: Artificial Intelligence*, 6. <https://doi.org/10.1016/j.caeai.2024.100218>
- Alhajji, R. A. Y., Almansoori, A. G., & Alyammahi, A. (2025). Harnessing AI for EFL educational advancement: A reflection on policy, practice, and pedagogy within the ministry of education in the UAE. *Forum for Linguistic Studies*, 7(3), 231–251. <https://doi.org/10.30564/fls.v7i3.8492>
- Alhamam, A. A. (2025). Investigating the role of AI tool interactions in enhancing English language

- acquisition among Saudi college students. *Arab World English Journal*, 16(3), 426–440. <https://doi.org/10.24093/awej/vol16no3.26>
- Alkhateeb, A., Hezam, A. M. M., & Almuraikhi, A. A. (2025). Assessing the use of AI tools for EFL exam preparation at Saudi universities: Efficiency, benefits, and challenges. *Cogent Education*, 12(1). <https://doi.org/10.1080/2331186X.2025.2507553>
- Almahboob, T. (2025). Exploring the impact of AI technologies on EFL writing proficiency. *Forum for Linguistic Studies*, 7(7), 270–282. <https://doi.org/10.30564/fls.v7i7.9952>
- Alshammari, H. (2026). Leveraging AI tools to improve Saudi EFL students' academic writing skills: Instructor perceptions. *Journal of Curriculum and Teaching*, 15(1). <https://doi.org/10.5430/jct.v15n1p267>
- Altamimi, D. H. F. (2025). AI integrating in EFL classrooms: A study on lecturers' adaptation and student outcomes. *Arab World English Journal*, 2025-July, 364–379. <https://doi.org/10.24093/awej/call11.22>
- Aria, M., & Cuccurullo, C. (2017). Bibliometrix: An R-tool for comprehensive science mapping analysis. *Journal of Informetrics*, 11(4), 959–975. <https://doi.org/10.1016/j.joi.2017.08.007>
- Avenali, A., Daraio, C., Di Leo, S., Matteucci, G., & Nepomuceno, T. (2023). Systematic reviews as a metaknowledge tool: Caveats and a review of available options. *International Transactions in Operational Research*, 30, 2761–2806. <https://doi.org/10.1111/itor.13309>
- Bataineh, R. F., Obeiah, S. F., & Bataineh, R. F. (2026). Tuning in with technology: AI-enhanced listening instruction in the Jordanian EFL classroom. *Journal of Information Technology Education: Innovations in Practice*, 25(Article 7). <https://doi.org/10.28945/5699>
- Bhar, S. K. (2026). Artificial intelligence in EFL speaking instruction: A systematic review of pedagogical design, affective conditions and instructional input. *Encyclopedia*, 6(4). <https://doi.org/10.3390/encyclopedia6040074>
- Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., Neelakantan, A., Shyam, P., Sastry, G., Askell, A., Agarwal, S., Herbert-Voss, A., Krueger, G., Henighan, T., Child, R., Ramesh, A., Ziegler, D. M., Wu, J., Winter, C., ... Amodei, D. (2020). Language models are few-shot learners. *ArXiv Preprint ArXiv:2005.14165*. <https://arxiv.org/abs/2005.14165>
- Busso, A., & Sanchez, B. (2024). Advancing communicative competence in the digital age: A case for AI tools in Japanese EFL education. *Technology in Language Teaching and Learning*, 6(3). <https://doi.org/10.29140/tltl.v6n3.1211>
- Chae, S.-I., & Yoo, I. W. (2026). Explicit pronunciation instruction, IPA literacy, and AI practice: A conceptual framework for adult L2 listening and speaking development. *Journal of Asia TEFL*, 23(1), 99–108. <https://doi.org/10.18823/asiatefl.2026.23.1.7.99>
- Chiu, T. K. F., Ahmad, Z., Ismailov, M., & Sanusi, I. T. (2024). What are artificial intelligence literacy and competency? A comprehensive framework to support them. *Computers and Education Open*, 6, 100171. <https://doi.org/10.1016/j.caeo.2024.100171>
- Chiu, T. K. F., Xia, Q., Zhou, X., Chai, C. S., & Cheng, M. (2023). Systematic literature review on opportunities, challenges, and future research recommendations of artificial intelligence in education. *Computers and Education: Artificial Intelligence*, 4, 100118. <https://doi.org/10.1016/j.caeai.2022.100118>
- Chua, H. W., & Annamalai, N. (2025). A bibliometric analysis and systematic review in AI chatbots in language teaching and learning. *International Journal of Technology in Education (IJTE)*, 8(2), 274–331. <https://doi.org/10.46328/ijte.1035>
- Chung, A. Q. (2025). AI integration in pronunciation instruction: Insights from secondary school EFL teachers. *Technology in Language Teaching and Learning*, 7(4). <https://doi.org/10.29140/tltl.v7n4.103014>
- Crompton, H., & Burke, D. (2023). Artificial intelligence in higher education: the state of the field. *International Journal of Educational Technology in Higher Education*, 20(1), 22. <https://doi.org/10.1186/s41239-023-00392-8>
- Doğan, Y., & Talan, T. (2025). Artificial intelligence in foreign language learning: A bibliometric

- analysis. *Journal of Pedagogical Research*, 9, 206–230. <https://doi.org/10.33902/JPR.202427734>
- Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., & Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *Journal of Business Research*, 133, 285–296. <https://doi.org/10.1016/j.jbusres.2021.04.070>
- Ekizer, F. N. (2025). Exploring the impact of artificial intelligence on English language teaching: A meta-analysis. *Acta Psychologica*, 260, 105649. <https://doi.org/10.1016/j.actpsy.2025.105649>
- Elmotri, B., Osman, W. A. E. A. E., Al-Humari, M. A., Amri, F., Elyasa, Y. M., Malik, F. H., Garrouri, S., & Hassanein, O. H. S. (2025). Possibilities for improving ESP curriculum design and assessment strategies for Saudi universities with ChatGPT. *Arab World English Journal*, 2025(Special Issue), 234–250. <https://doi.org/10.24093/awej/AI.13>
- Eyal, L. (2025). Developing and validating an AI-TPACK assessment framework: Enhancing teacher educators' professional practice through authentic artifacts. *Education Sciences*, 15(11). <https://doi.org/10.3390/educsci15111452>
- Godwin-Jones, R. (2024). Distributed agency in language learning and teaching through generative AI. *Language Learning & Technology*, 28(2), 5–30. <https://doi.org/10.64152/10125/73570>
- Han, J., & Li, M. (2024). Exploring ChatGPT-supported teacher feedback in the EFL context. *System*, 126, 103502. <https://doi.org/10.1016/j.system.2024.103502>
- Harakchiyska, T. (2025). Predictors of pre-service EFL teachers' predisposition towards AI adoption in language teaching. *Education Sciences*, 15(9). <https://doi.org/10.3390/educsci15091112>
- Huang, W., Hew, K. F., & Fryer, L. K. (2022). Chatbots for language learning---Are they really useful? A systematic review of chatbot-supported language learning. *Journal of Computer Assisted Learning*, 38(1), 237–257. <https://doi.org/10.1111/jcal.12610>
- Isaee, H., & Barjesteh, H. (2026). Exploring teachers' and learners' perceptions of AI-supported pedagogical tools in English language teaching. *Discover Artificial Intelligence*, 6(1), 224. <https://doi.org/10.1007/s44163-026-00933-w>
- Jiang, S., & Li, J. (2026). Triadic instructional design: The impact of structured AI training on pre-service teachers' intelligent-TPACK, attitudes, and lesson planning skills. *Education Sciences*, 16(2). <https://doi.org/10.3390/educsci16020315>
- Karaduman, C. (2025). Pre-service EFL teachers' perceived AI literacy and competency: the integration of ChatGPT into English language teacher education. *Sage Open*, 15(3), 21582440251379710. <https://doi.org/10.1177/21582440251379712>
- Karakaya, K., Alpat, M. F., Uçar, H., Karakaya, O., & Bozkurt, A. (2025). Preparing teachers for the algorithmic educational landscape: A critical mapping of generative AI integration in language teacher education. *Technology in Language Teaching and Learning*, 7(2). <https://doi.org/10.29140/tltl.v7n2.102841>
- Kasneci, E., Seßler, K., Küchemann, S., Bannert, M., Dementieva, D., Fischer, F., & Kasneci, G. (2023). ChatGPT for good? On opportunities and challenges of large language models for education. *Learning and Individual Differences*, 103, 102274. <https://doi.org/10.1016/j.lindif.2023.102274>
- Kılıçkaya, F., & Kic-Drgas, J. (2025). Enhancing collaborative learning practices via chatbots: Insights from an EFL context. *SAGE Open*, 15(3). <https://doi.org/10.1177/21582440251369189>
- Kohnke, L., Moorhouse, B., & Zou, D. (2023). ChatGPT for language teaching and learning. *RELC Journal*, 54(2), 537–550. <https://doi.org/10.1177/00336882231162868>
- Kohnke, L., & Ulla, M. B. (2024). Embracing generative artificial intelligence: The perspectives of English instructors in Thai higher education institutions. *Knowledge Management and E-Learning*, 16(4), 653–670. <https://doi.org/10.34105/j.kmel.2024.16.030>
- Kuhail, M. A., Alturki, N., Alramlawi, S., & Alhejori, K. (2023). Interacting with educational chatbots: A systematic review. *Education and Information Technologies*, 28(1), 973–1018. <https://doi.org/10.1007/s10639-022-11177-3>
- Lai, Z. C.-C. (2025). Enhancing EFL oral proficiency through a ChatGPT-integrated BOPPPS learning framework. *International Journal of Online Pedagogy and Course Design*, 15(1).

- <https://doi.org/10.4018/IJOPCD.383301>
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159–174. <https://doi.org/10.2307/2529310>
- Law, L. (2024). Application of generative artificial intelligence (GenAI) in language teaching and learning: A scoping literature review. *Computers and Education Open*, 6, 100174. <https://doi.org/10.1016/j.caeo.2024.100174>
- Lee, Y.-J., Davis, R. O., & Choi, J.-I. (2025). Integrating generative AI into EFL writing: University students' strategies and perceptions. *Online Journal of Communication and Media Technologies*, 15(4). <https://doi.org/10.30935/ojcm/17545>
- Lee, Y.-J., & Jeong, S.-H. (2026). Exploring university ELLs' AI literacy: An exploratory descriptive study. *Journal of Educational and Social Research*, 16(1), 94–105. <https://doi.org/10.36941/jesr-2026-0241>
- Liu, M., Zhang, L. J., & Zhang, D. (2025). Enhancing student GAI literacy in digital multimodal composing through development and validation of a scale. *Computers in Human Behavior*, 166, 108569. <https://doi.org/10.1016/j.chb.2025.108569>
- Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems, CHI '20*, 1–16. <https://doi.org/10.1145/3313831.3376727>
- Lu, B. D., & Watanapokakul, S. (2025). How active is 'active'? Overcoming misconceptions and optimizing pedagogical practices of active learning in EFL classrooms. *REFlections*, 32(1), 595–612. <https://doi.org/10.61508/refl.v32i1.280462>
- Naseer, F., & Khawaja, S. (2025). Mitigating conceptual learning gaps in mixed-ability classrooms: A learning analytics-based evaluation of AI-driven adaptive feedback for struggling learners. *Applied Sciences (Switzerland)*, 15(8). <https://doi.org/10.3390/app15084473>
- Ning, Y., Zhang, C., Xu, B., Zhou, Y., & Wijaya, T. T. (2024). Teachers' AI-TPACK: Exploring the relationship between knowledge elements. *Sustainability (Switzerland)*, 16(3). <https://doi.org/10.3390/su16030978>
- Nualprasert, B., Punkhoom, W., & Jehma, H. (2025). Reframing digital literacy in ELT: Integrating SAMR, AI-TPACK, and connectivism in the Global South. *International Journal of Interactive Mobile Technologies*, 19(20), 55–68. <https://doi.org/10.3991/ijim.v19i20.56333>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., ... Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *PLOS Medicine*, 18(3), e1003583. <https://doi.org/10.1371/journal.pmed.1003583>
- Park, Y., & Derakhshan, A. (2026). From Gutenberg to the classroom: Large-scale generation and validation of vocabulary-controlled EFL reading materials. *Language Testing in Asia*, 16(1). <https://doi.org/10.1186/s40468-026-00429-5>
- Pitychoutis, K. M. (2024). Harnessing AI chatbots for EFL essay writing: A paradigm shift in language pedagogy. *Arab World English Journal*, 2024-April(Special Issue), 197–209. <https://doi.org/10.24093/awej/ChatGPT.13>
- Plate, D., Melick, E., Hutson, J., & Edele, S. (2024). Generative AI in the English composition classroom: Practical and adaptable strategies. In *Generative AI in the English Composition Classroom: Practical and Adaptable Strategies*. Taylor and Francis. <https://doi.org/10.4324/9781003507949>
- Qoyyimah, U., & Bargallie, D. (2025). Scientific knowledge structures: problematising AI-powered translation tools in EFL academic writing. *LLT Journal: Journal on Language and Language Teaching*, 28(2), 634–651. <https://doi.org/10.24071/llt.v28i2.9833>
- Qutub, M. M. T., Bukhari, S. S. F., Fadel, S. A., & Aljuhani, H. S. A. (2023). The future of English as a foreign language teaching and learning in view of the fourth industrial revolution in the MENA Region. *Arab World English Journal*, 2023-July, 67–86. <https://doi.org/10.24093/awej/call9.5>
- Rafida, T., Suwandi, S., & Ananda, R. (2024). EFL students' perception in Indonesia and Taiwan on

- using artificial intelligence to enhance writing skills. *Jurnal Ilmiah Peuradeun*, 12(3), 987–1016. <https://doi.org/10.26811/peuradeun.v12i3.1520>
- Slamet, J. (2024). Potential of ChatGPT as a digital language learning assistant: EFL teachers' and students' perceptions. *Discover Artificial Intelligence*, 4(1), 46. <https://doi.org/10.1007/s44163-024-00143-2>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339. <https://doi.org/10.1016/j.jbusres.2019.07.039>
- Tan, X., Cheng, G., & Ling, M. H. (2025). Investigating the mediating role of TPACK on teachers' AI competency and their teaching performance in higher education. *Computers and Education: Artificial Intelligence*, 9, 100461. <https://doi.org/10.1016/j.caeai.2025.100461>
- Tatipang, D. P., Irwan, A., Wasamba, L. R., Bora, B., Akil, M. A., Yusuf, N. A. A., & Yuningsi, N. (2026). University lecturers vs. the AI-implemented ELT curriculum in an Indonesian context: A needs analysis. *Theory and Practice in Language Studies*, 16(2), 697–706. <https://doi.org/10.17507/tpls.1602.35>
- Teng, M. F. (2024). A systematic review of ChatGPT for English as a foreign language writing: Opportunities, challenges, and recommendations. *International Journal of TESOL Studies*, 6(3), 36–57. <https://doi.org/10.58304/ijts.20240304>
- Tran, T. G. (2026). Using AI in designing language tests: Perspectives and practices of pre-service EFL teachers. *Journal of Asia TEFL*, 23(1), 109–116. <https://doi.org/10.18823/asiatefl.2026.23.1.8.109>
- Tseng, Y.-C., & Lin, Y.-H. (2024). Enhancing English as a foreign language (EFL) learners' writing with ChatGPT: A university-level course design. *Electronic Journal of E-Learning*, 22(2), 78–97. <https://doi.org/10.34190/ejel.21.5.3329>
- Uysal, D. (2026). Integrating an educational chatbot in an undergraduate-level linguistics course: Cognitive load and student engagement. *Thinking Skills and Creativity*, 60. <https://doi.org/10.1016/j.tsc.2025.102099>
- Wang, H., Abdul Aziz, A., & Kutty, F. M. (2025). Integrating AI into Asian tertiary EFL learners' speaking instruction: A systematic literature review. *Forum for Linguistic Studies*, 7(3), 104–119. <https://doi.org/10.30564/fls.v7i3.8263>
- Wang, S., Wang, F., Zhu, Z., Wang, J., Tran, T., & Du, Z. (2024). Artificial intelligence in education: A systematic literature review. *Expert Systems with Applications*, 252, 124167. <https://doi.org/10.1016/j.eswa.2024.124167>
- Woo, D. J., Wang, D., Guo, K., & Susanto, H. (2024). Teaching EFL students to write with ChatGPT: Students' motivation to learn, cognitive load, and satisfaction with the learning process. *Education and Information Technologies*, 29(18), 24963–24990. <https://doi.org/10.1007/s10639-024-12819-4>
- Woo, D., Kizilates, S., Guo, K., & Wang, D. (2026). Developing English academic writing and AI literacy in an EFL co-curricular secondary school context. *Innovation in Language Learning and Teaching*. <https://doi.org/10.1080/17501229.2026.2636962>
- Woo, J. H., & Choi, H. (2021). Systematic review for AI-based language learning tools. *Journal of Digital Contents Society*, 22, 1783–1792. <https://doi.org/10.9728/dcs.2021.22.11.1783>
- Xin, J. J. (2024). Investigating EFL teachers' use of generative AI to develop reading materials: A practice and perception study. *Language Teaching Research*, 0(0), 13621688241303320. <https://doi.org/10.1177/13621688241303321>
- Xu, G., Yu, A., Gao, A., & Trainin, G. (2025). Developing an AI-TPACK framework: Exploring the mediating role of AI attitudes in pre-service TCSL teachers' self-efficacy and AI-TPACK. *Education and Information Technologies*, 30(15), 22471–22495. <https://doi.org/10.1007/s10639-025-13630-5>
- Yan, L., Sha, L., Zhao, L., Li, Y., Martinez-Maldonado, R., Chen, G., Li, X., Jin, Y., & Gasevic, D. (2024). Practical and ethical challenges of large language models in education: A systematic scoping review. *British Journal of Educational Technology*, 55(1), 90–112.

- <https://doi.org/10.1111/bjet.13370>
- Yeh, H.-C. (2024). Revolutionizing language learning: Integrating generative AI for enhanced language proficiency. *Educational Technology and Society*, 27(3), 335 – 353. [https://doi.org/10.30191/ETS.202407_27\(3\).TP01](https://doi.org/10.30191/ETS.202407_27(3).TP01)
- Yıldız, T. A. (2025). Sustainability education in L2 writing: AI-based multimodal awareness and engagement. *Sustainability (Switzerland)*, 17(21). <https://doi.org/10.3390/su17219376>
- Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education – where are the educators? *International Journal of Educational Technology in Higher Education*, 16(1). <https://doi.org/10.1186/s41239-019-0171-0>
- Zheng, Y. (Danson), & Stewart, N. (2024). Improving EFL students' cultural awareness: Reframing moral dilemmatic stories with ChatGPT. *Computers and Education: Artificial Intelligence*, 6. <https://doi.org/10.1016/j.caeai.2024.100223>
- Zhou, B., Pek, L. S., Kabir, N., Yang, J., Bouteraa, M., & He, X. (2026). Artificial intelligence in English-speaking education: A WoS-based bibliometric analysis of technology, pedagogy, and ethics (2021-2025). *International Journal of Learning, Teaching and Educational Research*, 25(3), 853–873. <https://doi.org/10.26803/ijlter.25.3.37>
- Zhu, M., & Wang, C. (2025). A systematic review of AI in language education: Current status and future implications. *Language Learning & Technology*, 29(1), 1–29. <https://doi.org/10.64152/10125/73606>

CONFLICT OF INTEREST STATEMENT:

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Appendix*Table Quality Appraisal Matrix*

Study	Design	C1: AI-EFL/ELT relevance	C2: Curriculum/Pedagogy link	C3: Method/Concept clarity	C4: Contribution to challenges/implications	appraisal
(AbdAlgane et al., 2026)	Mixed-methods case study	High	Moderate	Moderate	High	Moderate
(Alhajji et al., 2025)	Qualitative	High	High	High	High	High
(Alhamam, 2025)	Qualitative thematic analysis	High	Moderate	High	Moderate	Moderate
(Alkhateeb et al., 2025)	Mixed-methods survey	High	High	High	High	High
(Al-khresheh, 2024)	Qualitative	High	High	High	High	High
(Almahboob, 2025)	Quantitative survey	High	High	Moderate	High	High
(Alshammari, 2026)	Mixed-methods	High	High	High	High	High
(Altamimi, 2025)	Qualitative	High	High	High	High	High
(Yıldız, 2025)	Qualitative	High	High	High	Moderate	High
(Bataineh et al., 2026)	Quasi-experimental (ANCOVA)	High	High	High	Moderate	High
(Bhar, 2026)	Systematic review	High	High	High	High	High
(Busso & Sanchez, 2024).	Conceptual review	High	High	Moderate	Moderate	Moderate
(Chae & Yoo, 2026)	Conceptual paper	Moderate	High	Moderate	Moderate	Moderate
(Chung, 2025)	Qualitative	High	High	High	High	High
(Elmotri et al., 2025)	Mixed-methods	High	High	High	High	High
(Harakchiyska, 2025)	Quantitative survey	High	High	High	High	High
(Isaee & Barjesteh, 2026)	Mixed-methods	High	High	High	High	High
(Jiang & Li, 2026)	Mixed-methods	High	High	High	High	High
(Karakaya et al., 2025)	Bibliometric review	High	High	High	High	High

Study	Design	C1: AI-EFL/ELT relevance	C2: Curriculum /Pedagogy link	C3: Method/Concept clarity	C4: Contribution to challenges/implications	appraisal
(Kılıçkaya & Kic-Drgas, 2025)	Qualitative	High	High	High	Moderate	High
(Kohnke & Ulla, 2024)	Qualitative	High	High	High	High	High
(Lai, 2025)	Mixed-methods	High	High	High	Moderate	High
(Lee & Jeong, 2026)	Quantitative survey	High	Moderate	High	Moderate	Moderate
(Liu et al., 2025)	Quantitative (EFA/CFA)	High	High	High	High	High
(Lu & Watanapokakul, 2025)	Conceptual review	High	High	Moderate	Moderate	Moderate
(Nualprasert et al., 2025)	Mixed-methods	High	High	High	High	High
(Park & Derakhshan, 2026)	Mixed-methods	High	High	High	High	High
(Pitychoutis, 2024)	Literature review	High	High	Moderate	High	High
(Qoyyimah & Bargallie, 2025)	Qualitative reflective study	High	High	High	High	High
(Rafida et al., 2024)	Qualitative	High	Moderate	High	Moderate	Moderate
(Qutub et al., 2023)	Mixed-methods	High	High	High	High	High
(Tatipang et al., 2026)	Mixed-methods	High	High	High	High	High
(Teng, 2024)	Systematic literature review	High	High	High	High	High
(Tran, 2026)	Qualitative	High	High	High	High	High
(Tseng & Lin, 2024).	Mixed-methods	High	High	High	High	High
(Uysal, 2026)	Mixed-methods	High	High	High	Moderate	High
(Wang et al., 2025)	Systematic review	High	High	High	High	High
(Woo et al., 2026)	Mixed-methods	High	High	High	High	High
(Zheng & Stewart, 2024)	Qualitative	High	High	High	High	High
(Zhou et al., 2026).	Bibliometric review	High	High	High	High	High