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ARTIFICIAL INTELLIGENCE IN EFL CLASSROOMS: A SYSTEMATIC REVIEW OF RESPONSIBLE USE

Khairun Nissa[1], Henny Mardiah[2], Khairun Niswa[3]

[1,2,3]Universitas Muhammadiyah Sumatera Utara
E-mail: khairun.nissa@umsu.ac.id[1], hennymardiah@umsu.ac.id[2], khairunniswa@umsu.ac.id[3]

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Corresponding Author:

Tria Dewi Lestari

Email Corresponding :

triad3826@students.unnes.ac.id

ABSTRACT

The incorporation of Artificial Intelligence (AI) into educational contexts has expanded significantly, generating new opportunities for personalized instruction, real-time feedback, and enhanced learner autonomy. Nevertheless, the governance of AI use in academic settings has simultaneously provoked critical debates concerning academic integrity, assessment validity, and ethical accountability. Although prior scholarship has explored individual AI applications or addressed ethical considerations at a theoretical level, comprehensive pedagogical guidelines for practical classroom implementation remain insufficiently articulated. This study conducts a systematic literature review of empirical studies and policy documents published between 2019 and 2025, adhering to PRISMA protocols, to consolidate evidence regarding both the pedagogical benefits and institutional challenges of AI integration in EFL education. Employing thematic analysis, the review delineates recurring instructional affordances, structural risks, and contextual mediators influencing AI effectiveness. Building upon this synthesis, the study advances an original rule-based conceptual framework that translates human-centered AI principles into explicit pedagogical directives articulated as concrete do's and don'ts for EFL classroom practice. The findings indicate that AI contributes meaningfully to EFL learning outcomes only when strategically embedded within robust pedagogical design, transparent assessment frameworks, and sustained teacher facilitation. By converting ethical and theoretical discourse into operational classroom guidance, this research provides a practice-oriented contribution for educators, curriculum developers, and policymakers pursuing responsible and sustainable AI integration in EFL environments.

Keywords: Artificial Intelligence, EFL, academic integrity, Rules.

1. INTRODUCTION

Artificial Intelligence (AI) has emerged as a defining force in contemporary educational transformation. Within language education, AI-powered applications including chatbots, automated writing evaluation systems, speech recognition technologies, and generative language models are increasingly embedded in instructional practices and learning environments (Diah Salsabil & Aliya Rakhmawati, 2025; Grab, 2025; Nissa et al., 2025). In English as a Foreign Language (EFL) classrooms, such technologies are frequently positioned as strategic responses to persistent pedagogical constraints, including limited communicative interaction, delayed corrective feedback, and wide disparities in learner proficiency (Kim et al., 2021; Safitri et al., 2025).

A growing body of empirical research suggests that AI tools can facilitate personalized feedback, expand opportunities for language practice beyond classroom boundaries, and cultivate learner autonomy (Ebrahimi et al., 2021). Conversational agents, for example, create

Vol 9, No 1 (2026): ESTEEM

low-anxiety spaces conducive to spoken interaction practice, while automated writing systems provide formative support throughout drafting and revision processes (Ginting et al., 2023; Kim et al., 2021). These affordances are particularly salient in higher education EFL contexts, where large enrollments frequently limit individualized instructional support (Muluk et al., 2025; Wei, 2023; Hapsari & Wu, 2022).

Despite these pedagogical advantages, the accelerated integration of AI has also generated significant concern. Generative AI applications disrupt conventional notions of authorship, originality, and assessment validity. Instructors increasingly report challenges in differentiating student-produced texts from AI-generated outputs, and reliance on AI-detection tools has proven both methodologically unreliable and ethically problematic (Kohnke et al., 2023; Amirjalili et al., 2024; Paludo & Montresor, 2024). Furthermore, limited AI literacy among educators and the absence of clear pedagogical guidelines have led to inconsistent institutional responses, ranging from outright prohibition to uncritical adoption (Liu, 2025; Na et al., 2024; Fadilah et al., 2024).

Current scholarship on AI in EFL education remains comparatively fragmented. Much of the existing literature concentrates on evaluating individual tools or documenting discrete learning outcomes, while relatively few studies attempt to synthesize findings into pedagogically actionable frameworks. As a result, educators and institutions lack coherent governance structures capable of regulating AI use in ways that enhance learning while upholding academic integrity and ethical standards.

To address this gap, the present study undertakes a systematic literature review with three primary objectives: (1) to consolidate empirical evidence regarding the pedagogical benefits of AI in EFL classrooms, (2) to identify recurring challenges and institutional risks, and (3) to formulate a rule-based conceptual framework that operationalizes ethical and theoretical principles into explicit classroom practices. In doing so, this research seeks to move the discourse beyond descriptive exploration toward a model of pedagogical governance for responsible AI integration in EFL education (Amin, 2023; Qassrawi et al., 2024; Ouyang et al., 2024).

The review is theoretically anchored in sociocultural theory, constructivist learning theory, and human-centered AI principles. Sociocultural theory foregrounds mediation, interaction, and scaffolding in language development, conceptualizing AI as a mediational artifact rather than an autonomous instructor. Constructivist theory emphasizes active knowledge construction through meaningful engagement, thereby underscoring the importance of task design that mitigates passive dependence on AI-generated content. Human-centered AI principles provide an ethical framework grounded in transparency, fairness, accountability, and the preservation of teacher agency. Collectively, these perspectives inform both the analytical lens of the review and the development of the proposed pedagogical rules.

2. METHODS

Research Design

This study employed a systematic literature review methodology to consolidate empirical investigations and policy-oriented publications addressing the integration of Artificial Intelligence (AI) in English as a Foreign Language (EFL) classrooms. A systematic review design was deliberately chosen to ensure methodological rigor, transparency, and replicability in mapping the existing body of scholarship. The review process was structured in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Page et al., 2021; Wisniewsk et al., 2020; Atasoy, 2021), which directed the

procedures for identification, screening, eligibility assessment, and final inclusion of relevant studies.

Considering the conceptual plurality and methodological heterogeneity characterizing AI-in-EFL research, this study adopted a qualitative thematic synthesis rather than a statistical meta-analysis. Such an approach facilitated the integrative interpretation of empirical evidence, theoretical frameworks, and ethical discourses, thereby enabling the generation of pedagogically substantive insights. This interpretive synthesis further provided the analytical foundation for constructing a rule-based conceptual framework intended to inform responsible and context-sensitive classroom practice.

Data Sources and Inclusion Criteria

Data were collected from five major academic databases: Scopus, Web of Science, ERIC, ScienceDirect, and Google Scholar. These databases were selected due to their extensive coverage of peer-reviewed literature in applied linguistics, educational technology, and language education. To complement empirical studies, authoritative policy documents and institutional reports were also included to capture ethical and governance perspectives relevant to AI use in education.

The literature search focused on publications released between 2019 and 2025. Search terms combined keywords related to AI and EFL, including *artificial intelligence*, *generative AI*, *chatbots*, *automated writing evaluation*, *English as a Foreign Language*, and *English language teaching*.

Studies were included if they met the following criteria: (1) addressed AI use in EFL or English language teaching contexts; (2) reported empirical findings, systematic reviews, conceptual analyses, or policy guidance; (3) were published in peer-reviewed journals or by reputable international or institutional bodies; and (4) were written in English. Studies focusing solely on technical AI development or unrelated educational contexts were excluded.

Study Selection Procedure and Data Analysis

The study selection procedure followed PRISMA guidelines and consisted of three stages (Crompton et al., 2024; Ramirez, 2021). First, all records retrieved from database searches were compiled, and duplicate entries were removed. Second, titles and abstracts were screened to exclude studies that were clearly irrelevant to AI use in EFL education. Third, full-text articles were reviewed against the inclusion criteria to determine final eligibility.

Following selection, data were systematically extracted from each included study, including publication details, research context, type of AI application, methodological approach, reported benefits, identified challenges, and pedagogical implications. The extracted data were then analyzed using thematic synthesis. Initial codes were generated inductively to capture recurring ideas across studies. These codes were subsequently grouped into broader themes related to pedagogical benefits, challenges and risks, ethical considerations, teacher readiness, and institutional governance. The resulting themes informed both the Results section and the development of the proposed conceptual framework.

3. RESULTS AND DISCUSSION

Pedagogical Benefits of AI in EFL Classrooms

Across the body of reviewed scholarship, AI is recurrently identified as a catalyst for personalized learning within EFL settings. Adaptive technologies facilitate differentiated feedback calibrated to learners' proficiency profiles, enabling students to target specific linguistic deficiencies with greater precision. Zawacki-Richter et al. (2019) and Qiao (2025) underscore that such personalization is particularly advantageous in large-enrollment classrooms, where opportunities for individualized teacher feedback are inherently constrained.

A further significant contribution of AI pertains to the enhancement of speaking and writing competencies. Empirical investigations into AI-driven chatbots report heightened learner engagement, diminished speaking anxiety, and increased frequency of target-language production (Du et al., 2024; Kohnke et al., 2023). Similarly, automated writing

Vol 9, No 1 (2026): ESTEEM

evaluation systems are shown to support learners throughout drafting and revision stages by delivering immediate, form-focused feedback, thereby strengthening metalinguistic awareness and revision strategies (Li et al., 2023).

Moreover, AI applications are frequently associated with the promotion of learner autonomy and self-regulated learning practices. Students employ AI tools to independently rehearse vocabulary, grammar, and discourse organization, effectively extending language development beyond formal classroom hours (Prayogo, 2025; Jaya et al., 2025). Nonetheless, the literature consistently cautions that these pedagogical gains are contingent upon deliberate instructional scaffolding and careful alignment between AI use and clearly articulated learning objectives.

Challenges to Academic Integrity and Assessment Validity

Academic integrity emerges as one of the most significant challenges. Generative AI tools complicate notions of authorship and originality, particularly in writing tasks. Perkins et al. (2023) report that traditional assessment formats are increasingly vulnerable to AI misuse.

Moreover, reliance on AI-detection tools is widely criticized. Studies and institutional reports indicate that detection systems are unreliable and may unfairly disadvantage non-native English speakers (Turnitin, 2023). As a result, scholars advocate for assessment redesign rather than technological surveillance.

Ethical, Equity, and Data Privacy Concerns

Ethical considerations are central in policy-oriented literature. UNESCO (2023) stresses that AI in education must adhere to principles of transparency, accountability, and human oversight. In EFL contexts, data privacy is a key concern, as many tools require uploading written texts or voice recordings.

Equity issues are also prominent. Zhai (2022) notes that unequal access to devices and internet connectivity may exacerbate existing educational inequalities, particularly in under-resourced contexts.

Teacher Readiness and Institutional Context

Teacher readiness is identified as a critical factor in successful AI integration. Many EFL teachers report limited AI literacy and uncertainty regarding ethical and pedagogical boundaries (Kessler, 2023; Fadilah et al., 2023). Professional development that integrates pedagogical, ethical, and technical dimensions is therefore essential.

Institutional Policy Responses

The literature indicates that institutional policies often lag behind technological developments. Where policies exist, they tend to focus on misconduct rather than pedagogical guidance (Perkins et al., 2023). International frameworks advocate for comprehensive strategies that align classroom practice with ethical principles (UNESCO, 2023).

4. CONCLUSION

The findings of this review substantiate that Artificial Intelligence can make a substantive contribution to EFL education, provided that its implementation is anchored in coherent pedagogical design and robust ethical oversight. The analysis indicates that advantages such as personalization and enhanced learner autonomy do not emerge intrinsically from the mere adoption of AI technologies; rather, they materialize through deliberate teacher mediation and the establishment of explicit, context-sensitive classroom regulations.

The reviewed literature further reveals that concerns surrounding academic integrity, equity, and assessment validity are predominantly associated with unregulated or poorly structured AI use, rather than with the technology per se. By operationalizing abstract ethical principles into concrete pedagogical rules, the proposed framework offers a pragmatic strategy for guiding AI integration without resorting to indiscriminate prohibition. This orientation is congruent with sociocultural and constructivist paradigms, reaffirming the teacher's role as an active mediator who structures, scaffolds, and

contextualizes learning processes. Significantly, the framework reconceptualizes AI governance as an instructional and pedagogical matter, rather than as a purely technological or disciplinary issue.

Although this review synthesizes a wide spectrum of empirical and conceptual studies, much of the extant research remains exploratory and limited in scale. Future investigations should therefore examine the applicability and effectiveness of the proposed framework across varied EFL contexts, employing longitudinal or quasi-experimental methodologies to generate more robust evidence.

Ultimately, this study underscores that AI integration in EFL classrooms is neither inherently advantageous nor inherently detrimental. Its educational impact is contingent upon the manner in which it is pedagogically regulated. By advancing a rule-based conceptual framework grounded in theoretical insight, empirical evidence, and ethical principles, this review offers an original contribution to AI-mediated language education. The framework provides educators and institutions with actionable guidance to foster responsible, context-sensitive, and sustainable AI use in EFL settings.

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Vol 9, No 1 (2026): ESTEEM

77

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