

The Role Of Artificial Intelligence In Developing Students' Writing Skills In Efl Classrooms

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Abstract: The rapid integration of artificial intelligence (AI) into educational environments has transformed the teaching and learning of English as a Foreign Language (EFL). Writing, a cognitively demanding skill requiring mastery of grammar, vocabulary, organization, and discourse conventions, particularly benefits from AI-driven tools. This article explores how AI contributes to the development of EFL learners' writing skills, focusing on intelligent tutoring systems, automated writing evaluation (AWE), machine translation, natural language processing (NLP), and generative AI systems such as large language models. Drawing from recent empirical studies, the paper analyzes the advantages of AI—personalized feedback, error correction, scaffolding, increased engagement—while also addressing concerns related to overreliance, academic integrity, teacher preparedness, and ethical considerations. The findings suggest that when purposefully integrated into pedagogy, AI enhances writing proficiency by supporting metacognitive awareness, fostering autonomous learning, and enabling data-driven assessment practices. Effective implementation, however, requires pedagogical planning, digital literacy training, and a balance between AI support and independent student production.

Keywords: Artificial intelligence, EFL writing, automated writing evaluation, natural language processing, intelligent tutoring systems, generative AI, language learning technologies.

Introduction: In recent years, artificial intelligence (AI) has become increasingly embedded in language education, reshaping how learners acquire, practice, and refine writing skills in English as a Foreign Language (EFL). Writing, unlike listening or speaking, demands both linguistic accuracy and higher-order cognitive abilities such as planning, organizing ideas, revising, and self-monitoring. For many EFL learners, especially in environments where exposure to authentic English writing is limited, developing proficiency can be challenging (Hyland, 2016). AI-driven tools—from grammar-checking systems to intelligent writing assistants—offer new opportunities to provide real-time feedback, personalized learning pathways, and data-driven insights that support writing development. The rise of large language models (LLMs) and AI-based writing platforms has opened a new chapter in EFL pedagogy. While traditional instruction heavily depends on teacher feedback, AI can deliver instant, individualized comments at scale, making writing practice more accessible and efficient (Li et al., 2022).

However, the integration of AI raises questions regarding academic integrity, overdependence, and the teacher's evolving role. This article examines the pedagogical potential and challenges of AI in EFL writing instruction, synthesizing perspectives from applied linguistics, educational technology, and cognitive science.

The literature on AI in language education spans several interconnected domains: automated writing evaluation (AWE), intelligent tutoring systems, machine translation, natural language processing, and generative AI.

Automated Writing Evaluation (AWE). AWE systems such as Criterion, Grammarly, and Write & Improve provide automated feedback on grammar, vocabulary, coherence, and organization. Research indicates that AWE can improve writing accuracy and revision quality (Wang et al., 2020). Students benefit from immediate feedback, which reduces error fossilization and promotes learning through repeated practice.

Intelligent Tutoring Systems (ITS) ITS platforms adapt

instruction based on learner performance. In writing, these systems can identify weaknesses—such as misuse of articles or poor cohesion—and assign targeted exercises. Studies show ITS enhances autonomy and promotes self-regulated learning (D’Mello & Graesser, 2015).

Machine Translation and NLP Tools. Machine translation platforms such as Google Translate and DeepL use neural networks to produce contextually aware output. While not perfect, these tools assist learners in generating drafts and understanding linguistic patterns. NLP tools support paraphrasing, summarizing, and vocabulary enhancement.

Generative AI and Large Language Models (LLMs). LLMs like ChatGPT, Claude, and others can generate essays, outlines, explanations, and feedback. Empirical evidence suggests that generative AI improves idea development and coherence while enabling scaffolded learning (Kasneci et al., 2023). However, concerns include plagiarism, reduced cognitive engagement, and ethical risks.

Traditional SLA (second language acquisition) theory emphasizes student production and meaningful output (Swain, 2005). Overreliance on AI may hinder language internalization. Researchers highlight the need for balanced integration, where AI supports but does not replace authentic writing practice (Zou & Xie, 2018).

This study draws on three major frameworks to interpret AI’s role in EFL writing:

Vygotsky’s theory emphasizes mediated learning through tools and social interaction. AI functions as a “digital mediator,” providing scaffolding in the learner’s Zone of Proximal Development (ZPD). AWE and LLMs help learners extend their writing abilities by offering structured support.

Writing in a foreign language imposes high intrinsic cognitive load. AI tools reduce extraneous load—such as searching for vocabulary or checking grammar—allowing learners to focus on idea development and discourse organization (Paas et al., 2003).

Swain (2005) argues that producing language encourages learners to notice linguistic gaps. AI feedback draws attention to those gaps, enhancing accuracy and promoting deeper processing.

One of the greatest benefits of AI is instant feedback. Traditional teacher feedback is often delayed, limited, or inconsistent due to workload. AI, in contrast, provides:

- grammatical corrections
- suggestions for lexical improvement
- comments on cohesion

- structural recommendations

This aligns with findings that timely feedback significantly enhances language acquisition (Shute, 2008).

NLP systems analyze learner writing and suggest:

- synonyms
- collocations
- academic vocabulary
- alternatives to repetitive phrasing

Such feedback is essential for learners from non-Indo-European language backgrounds, including Russian- or Uzbek-speaking learners, who often struggle with English collocational patterns (Nesselhauf, 2005).

AI provides models of:

- thesis statements;
- paragraph structures;
- essay outlines

Model-based learning is strongly supported by genre-based pedagogy (Hyland, 2007). Viewing a model enables learners to internalize genre conventions before producing their own texts.

ITS systems analyze learner errors and progress, generating individualized tasks. For example:

- A student struggling with past tense receives targeted practice.
- A student with good grammar but weak structure receives organizational support.

This personalization is rarely achievable in large EFL classes.

Gamified AI platforms and interactive feedback increase engagement. Learners feel more confident when they receive confirmation that they are improving, which promotes sustained writing practice (Li et al., 2022).

AI-based dictation tools, organization aids, and text-to-speech systems help students with dyslexia, ADHD, or processing difficulties overcome writing barriers.

Students may let AI generate entire texts, bypassing critical cognitive processes such as planning and revising. This undermines acquisition and contradicts principles of productive language learning.

Generative AI can produce high-quality essays indistinguishable from student work. This complicates assessment authenticity. Institutions must adapt assessment practices to ensure originality.

Many teachers lack digital literacy skills to evaluate AI feedback or integrate tools effectively. Without proper training, AI may reinforce errors or create confusion.

AI tools often collect user data. Schools must ensure compliance with privacy regulations and adopt ethical usage policies.

LLMs sometimes produce grammatically correct but stylistically unnatural responses. Machine translation may introduce errors or cultural mismatches. Teachers must guide students in evaluating AI output critically.

Teachers must clearly define how AI should be used:

- brainstorming
- checking grammar
- analyzing cohesion

but not as a substitute for original student production.

A structured pedagogy may include:

1. Students write an initial draft independently.
2. AI provides feedback.
3. Students revise based on feedback.
4. Teachers evaluate higher-level features: argumentation, ideas, coherence. This promotes learning through revision.

AI tools can facilitate peer review by helping students detect errors and provide suggestions, enhancing collaborative learning.

Students must learn:

- how AI works
- its limitations
- how to verify AI suggestions
- ethical use of AI tools

AI literacy is now a vital component of EFL education. Effective instruction combines:

- teacher feedback
- AI analytics
- writing workshops
- reflective journals
- genre instruction

AI enhances instruction but cannot replace human judgment.

Artificial intelligence has become a transformative force in EFL writing pedagogy, offering innovative ways to support accuracy, fluency, coherence, and motivation. Through automated feedback, adaptive learning, genre modeling, and vocabulary enhancement, AI tools significantly assist learners in developing writing proficiency. When aligned with sociocultural and cognitive theories of learning, AI functions as a powerful mediator that supports both linguistic development and metacognitive growth.

Nevertheless, AI integration must be approached strategically. Overreliance can weaken skill acquisition, and ethical concerns require careful attention. Teacher training and AI literacy are essential to ensuring

responsible and effective use. Ultimately, AI should complement—not replace—human instruction, enabling teachers to focus on higher-order writing competencies while providing learners with the scaffolding and practice necessary for success.

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