

## THE ROLE OF ARTIFICIAL INTELLIGENCE TOOLS IN ENHANCING THE WRITING SKILLS OF ENGLISH LANGUAGE LEARNERS: EVIDENCE AND PEDAGOGICAL RECOMMENDATIONS

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**Abstract.** In recent years, the integration of artificial intelligence (AI) tools into the field of education has introduced both new opportunities and emerging challenges in language teaching. This article examines the impact of AI tools such as ChatGPT, Grammarly, and DeepL on the writing skills of learners of English as a foreign language (EFL learners). Studies published between 2019 and 2024 were reviewed, with lexical complexity, grammatical accuracy, textual coherence, and learner autonomy identified as the primary analytical indicators. The findings suggest that while AI tools can lead to short-term improvements in writing quality, these gains are not consistently sustained in independent writing, and excessive reliance on such tools may hinder the development of learner autonomy. The article concludes by proposing a framework entitled “Guided AI-Assisted Writing” (GAAW).

**Keywords:** *artificial intelligence, English writing, ChatGPT, Grammarly, second language acquisition, learner autonomy*

### Introduction

Digital technologies have gradually but steadily entered the field of language education. Initially, these included word processors and spell-checkers, followed by online dictionaries and translation websites, and later various learning platforms. However, the public release of ChatGPT in late 2022 fundamentally transformed this trajectory. For the first time, ordinary learners gained access to a powerful tool capable of instantly editing, rewriting, or translating their texts.

This development has been particularly significant for learners of English as a foreign language (EFL learners). For such learners, writing in English is far from a simple task—they must simultaneously manage grammar, vocabulary, text organization, and the expression of ideas. Consequently, AI tools appear to offer substantial support. However, this raises a critical question: if a learner produces a well-written text with the help of AI, have they genuinely learned how to write, or have they merely learned how to use the tool?

This article seeks to address this question. It pursues three main objectives: first, to examine the impact of AI tools on writing skills based on empirical research; second, to determine when the use of AI is beneficial and when it may be detrimental; and third, to provide practical recommendations for teachers.

### Methodology

This article is based on a systematic narrative review methodology. This approach is widely used to qualitatively analyze research findings and to derive practical conclusions (Torraco, 2005).

The literature was searched using the ERIC, Scopus, Web of Science, and Google Scholar databases. The following keywords were employed: “ChatGPT and EFL writing,” “AI writing tools second language,” “Grammarly EFL learners,” and “generative AI language learning.” Empirical studies published between 2019 and 2024 were selected, focusing on

learners of English as a foreign or additional language (EFL/EAL) and addressing aspects of writing instruction.

An initial total of 214 articles was identified. After screening titles and abstracts, 87 full-text articles were reviewed. Of these, 52 met all inclusion criteria and were retained for analysis. The data were categorized and analyzed across four main dimensions: lexical complexity, grammatical accuracy, textual coherence, and learner autonomy.

## **Results**

### **Lexical Complexity**

The findings indicate that learners who use AI tools tend to incorporate a greater number of academic and sophisticated lexical items in their writing compared to their peers who do not use such tools (Kohnke et al., 2023; Yan, 2023). At first glance, this appears to be a positive outcome. However, a study conducted by Yan (2023) in China revealed an important insight: when writing without AI assistance, these learners did not differ significantly in lexical performance from the control group. In other words, the observed improvement was temporary—the gains learners believed they had achieved were, in fact, largely facilitated by the tool.

The case of Grammarly presents a somewhat different pattern. Rather than directly altering lexical choices, Grammarly provides suggestions that learners can choose to accept or reject. Several studies (Cavaleri & Dianati, 2016; Qassemzadeh & Soleimani, 2016) have shown that learners who actively engage with Grammarly—by reflecting on the rationale behind the suggestions rather than passively accepting them—demonstrate gradual lexical development over time. This suggests that the key factor is the learner's cognitive engagement in the revision process.

### **Grammatical Accuracy**

In the area of grammatical accuracy, the evidence is more conclusive: AI tools significantly reduce grammatical errors in the short term. Huang et al. (2023) conducted a study involving 312 EFL students at a Taiwanese university who used Grammarly over the course of one semester. The results showed a considerably lower error density compared to the control group. In addition, the study reported an improvement in learners' grammatical awareness, which represents a promising outcome.

However, the situation is different in the case of ChatGPT. While ChatGPT is capable of correcting grammatical errors, it does not explicitly explain why those errors occur. Studies by Fang (2023) and Shahriar & Karpinski (2023) found that although learners whose texts were corrected using ChatGPT demonstrated higher levels of grammatical accuracy, they struggled to explain the corrections independently. This suggests that learners did not necessarily acquire grammatical knowledge; rather, they learned how to rely on the tool.

### **Textual Coherence**

Textual coherence—defined as the logical sequencing of ideas, the connections between paragraphs, and the overall unity of a text—is considered one of the most challenging aspects of writing (Ferris & Hedgcock, 2014). In this area, the role of AI tools appears to be mixed.

On the one hand, a study conducted in South Korea by Jeon and Lee (2023) found that students who used ChatGPT to generate outlines before drafting produced more coherent essays compared to those who created outlines independently. This represents a positive outcome, suggesting that AI can support the planning stage of writing.

On the other hand, Becker (2023) identified a notable limitation: although such essays may appear coherent on the surface, they often lack depth, original reasoning, and a distinct authorial voice. In other words, the texts are structurally well-organized but conceptually

weak. This phenomenon—“coherence without substance”—raises important pedagogical concerns that deserve serious attention.

### **Learner Autonomy**

Learner autonomy—defined as the ability to take control of one’s own learning, including setting goals, selecting strategies, and evaluating progress (Holec, 1981)—is considered one of the central objectives of language education. It is precisely in this area that the impact of AI tools appears most concerning.

Perkins et al. (2024) published the results of a large-scale survey involving 1,032 students across five countries. The findings revealed that learners who frequently used AI tools reported lower confidence in their own writing abilities. In other words, the more they relied on the tools, the less confident they became in their own skills. This creates a paradox: a tool designed to provide support may, in fact, undermine learners’ self-efficacy in writing.

However, the picture is not entirely negative. Studies by Shadiev and Yang (2020), as well as Zheng et al. (2023), demonstrate that when learners are trained to use AI tools not merely for generating or correcting text, but for revising and critically analyzing their own writing, the outcomes are significantly different. In such cases, learners become more independent and reflective in their writing process. Thus, the issue does not lie in the tools themselves, but rather in how they are used.

### **Discussion**

#### **Overall Evaluation**

All the evidence reviewed above leads to a single overarching conclusion: the question of whether AI tools are beneficial or harmful is itself poorly framed. A more appropriate question would be: under what conditions do AI tools enhance learning, and under what conditions do they hinder it?

The answer is relatively clear. When learners use AI tools as a substitute for their own cognitive effort—allowing the tool to generate ideas, write text, and correct errors—they become dependent on the technology rather than engaging in genuine learning. In contrast, when learners first produce their own drafts and then use AI tools to analyze, revise, and critically reflect on their writing, the learning process is significantly enhanced. In such cases, learners actively engage with their errors and evaluate AI-generated suggestions critically.

The difference lies precisely in this process-oriented engagement. Unfortunately, for many learners, this more reflective and effortful approach appears difficult and time-consuming, which leads them to prefer the easier alternative of full reliance on AI tools.

#### **Guided AI-Assisted Writing (GAAW) Framework**

This article proposes a practical framework based on three core principles. The first principle is that AI should serve as a scaffold, not a substitute. The tool should assist learners in overcoming challenging aspects of writing, but it should not write on their behalf. According to Vygotsky’s (1978) concept of the Zone of Proximal Development, the most effective support is provided when learners are assisted in tasks they cannot yet complete independently, but can accomplish with guidance. AI should be applied in exactly this manner.

The second principle is that reflection must be mandatory. After receiving AI-generated suggestions, learners should be prompted to reflect: “Why was this change made? Do you agree with this modification? Why or why not?” Without such reflective questioning, the use of AI may improve the text but will not contribute to meaningful learning or skill development.

The third principle is gradual reduction of support. Beginners may require more extensive AI assistance at the initial stages of learning. However, as proficiency increases, the level of AI support should be systematically reduced. The ultimate goal is not to train learners to depend on AI tools, but to ensure that they eventually develop the ability to write independently.

Based on these three principles, the following three practical recommendations are proposed for teachers:

**Recommendation 1:** Clear guidelines should be established in advance for each writing task regarding whether the use of AI is permitted. For example, AI tools such as Grammarly may be appropriate for grammar practice activities, whereas AI-generated text should not be allowed in argumentative essay writing tasks.

**Recommendation 2:** Students should be taught AI literacy. They need to understand that ChatGPT does not always provide accurate responses and that Grammarly may offer suggestions that are not always contextually appropriate. Learners who can critically evaluate AI outputs are likely to develop their writing skills more effectively than those who use such tools uncritically.

**Recommendation 3:** AI-generated suggestions should be discussed in class. For instance, a teacher may input a student's text into ChatGPT, present the output to the class, and ask guiding questions such as: "Is this correct? What has improved, and what has been lost?" Such activities can foster critical thinking and deeper engagement with writing.

### **Conclusion**

This article reviewed existing evidence on the role of AI tools in the development of EFL learners' writing skills across four key dimensions: lexical complexity, grammatical accuracy, textual coherence, and learner autonomy (in this process, artificial intelligence assistance was utilized). The overall conclusion is clear: AI tools can improve writing quality in the short term; however, these improvements are often not sustained over time and may, in some cases, weaken learners' confidence in their own abilities.

This is not, of course, an argument for rejecting AI tools. They are already an integral part of our lives, and learners inevitably use them; this reality cannot be denied. The main issue is not whether these tools should be used, but how they should be used. If learners use AI as a tool for learning rather than as a substitute for their own effort—supporting their writing process instead of replacing it—the outcomes are likely to be positive. In contrast, when AI is used to generate complete texts on behalf of the learner, the learner may acquire the ability to produce text, but not necessarily to develop writing skills.

The Guided AI-Assisted Writing (GAAW) framework proposed in this article—AI as scaffolding, mandatory reflection, and gradual reduction of support—offers teachers a practical way to maintain this balance. Future research should focus on long-term, context-sensitive empirical studies to evaluate and further refine the effectiveness of this framework.

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