

## Understanding EFL learners' academic writing problems and the benefits of artificial intelligence tools: A descriptive review

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**Abstract** - Artificial Intelligence (AI) today represents not only technological advancement but also a powerful tool that is rapidly transforming the process of learning English. EFL learners increasingly use AI-based applications to enhance their language skills and academic writing performance. This study aims to identify the major challenges EFL learners face in academic writing and to highlight the significance of AI tools in addressing these issues. A qualitative descriptive review was conducted to achieve the study objectives. Relevant literature published over the last ten years was selected from open-access sources and academic databases. The findings indicate that learners encounter persistent problems in grammar, punctuation, coherence, and the organization of ideas. The review also shows that AI tools play a supportive role in helping learners improve their grammatical accuracy, expand their vocabulary, and develop better writing structure and coherence.

**Keywords:** Artificial Intelligence (AI), Academic writing, EFL learners, Writing challenges, AI writing tools

### 1. Introduction

It is widely recognized that the world is undergoing a technological revolution across various sectors, including education. More recently, this has evolved into what can be described as an Artificial Intelligence (AI) revolution. Discussions worldwide now focus on the advantages of AI and how its features are designed to enhance different aspects of life. According to Djaghroui (2024), AI refers to machine-based systems capable of generating predictions, recommendations, or decisions that influence real or virtual environments, all while operating under human-defined goals.

These systems engage with people and frequently have a direct or indirect impact on their actions by identifying the situation. For this, AI has been integrated into many aspects of life, including education. Although not necessary, it is essential to familiarize learners with AI tools and applications in their education, thereby facilitating their learning and enabling them to acquire new skills and potential.

The concept of academic writing appears in the scientific world. It refers to the type of writing that involves teachers or students. The teachers generally write research



papers, articles, books, etc., while the students write assignments, reports, and other documents. Therefore, it can be described as a backbone pillar of both science and knowledge. Mastering the use of grammar, vocabulary, and punctuation is an essential step toward professional academic writing because they help in arranging ideas and thoughts perfectly.

Artificial intelligence has brought about a qualitative leap in several academic and educational aspects, including academic writing. Artificial intelligence has contributed to saving time for researchers in various disciplines and effort and time due to its advanced features and tools. Writing tasks such as summarising, writing guidance, text analysis, classification, and many more can be made possible by advancements in deep learning, machine learning, and natural language processing, which enable the AI to analyse and comprehend texts in ways that closely mimic human capabilities.

Given the importance of artificial intelligence across various areas of life, especially in education, learning English and other foreign languages, including academic writing, many studies have addressed several topics in these area (Chen & Gong, 2025; Alvarado & Andrade, 2025; Aljuaid, 2024; Li et al, 2024; Schmohl et al, 2020; Suryanto et al., 2025). In this study, light will be shed on the significance of AI tools in improving academic writing skills.

Raheem and Ghafar (2024) indicated that academic writing is one of the forms of writing known as a formal style. It can be divided into student academic writing and professional academic writing. This form is limited to acidic sociality for distributing knowledge and discussing ideas with the academic world.

Academic writing is considered an essential factor in education that serves as a way used by learners to express their construct logical discussion, express critical understanding, and engage with scholarly discourse. Nevertheless, mastering academic writing for EFL learners is a complex challenge because academic writing in the mother tongue differs from that in a foreign language. For this, most of the EFL learners face different challenges and struggles when it comes to using grammar, punctuation, and vocabulary. Another issue learners may face is unity, coherence, and cohesion (Rahman et al., 2024; Ahmed, 2019; Al Fadda, 2012). Various factors and hindrances affect academic writing proficiency, including a lack of explicit instruction and first-language interference. Accordingly, it is important to understand the sources of these challenges, and suggestions for an appropriate pedagogical strategy that incorporates AI tools and applications will be considered a genuine step towards enhancing EFL learners' proficiency, with special reference to academic writing.

In recent years, English language learning (ELL) has undergone a transformative shift through the use of AI tools. Various AI tools and computer systems have been designed to facilitate different issues and tasks that require human intelligence, such as adapting to new information, understanding language, recognizing speech, and so on. AI provides specific features to enhance English language teaching and learning as an interactive, personalized, and data-driven experience (Kristiawan & Pradana, 2024; Suryanto et al., 2025).

Personalization is one of the main benefits of AI in language learning and teaching. The learners' performance (weaknesses and strengths) can be identified by AI-powered platforms. Duolingo and Grammarly are real examples of AI applications that use algorithms to adjust difficulty levels and the feedback given, and to provide individualized exercises. This guide helps learners progress and focus on areas that require improvement (Vo, 2025).

The other advantage of AI in language learning is *intelligent feedback and assessment*, which is completely different from the traditional classroom, which often lacks immediate correction. Nowadays, AI tools can easily assess and evaluate punctuation, grammar,

vocabulary, writing style, and more. These tools and features help foster learners' autonomy by providing continuous practice and encouraging self-correction (Tiana et al., 2025).

Moreover, *teacher effectiveness* is an AI advantage, as it automates routine tasks such as attendance and grading. Teachers can also use AI to analyse and design effective lessons, which is a step toward students' progress. However, the advantages cannot be limited to what was discussed above; AI represents an innovative development across different disciplines, including English language learning and teaching. It plays a great role in shaping the future of language education, making English learning more inclusive, effective, and accessible for all (Fitria, 2021).

## 2. Method

The present study uses a qualitative descriptive review to shed light on the major challenges EFL learners face in academic writing and how AI can address them. The selected literature is from the last 10 years and was obtained from open-access sources and databases, such as Google Scholar, MDPI, and others. The obtained studies were credible and peer-reviewed to ensure reliability and validity. The data were thematically analysed to identify key challenges, including rhetorical and linguistic ones. The findings also shed light on how AI systems and tools help learners overcome these issues in their academic writing.

## 3. Result And Discussion

### 3.1. Results

#### 3.1.1 The major challenges of EFL learners in Academic writing

Generally, writing is a process of conveying thoughts, ideas, and imagination into a piece of understandable text. In this regard, Nunan (2003) describes writing as a process of generating text with the assistance of ideas and thoughts. This process can be considered a demanding task for most learners, whether they are EFL or ESL learners (Chen & Gong, 2025). In terms of academic writing, it is a stressful and complex task for learners, and it is completely different from the mother tongue in terms of grammar, punctuation, etc. It requires a precise, logical argument for the targeted audience.

Several studies have examined the common challenges EFL/ESL learners face in academic writing. For instance, a study by Ahmed (2019) examines the major challenges faced by EFL learners and identifies common errors in their academic writing. The study has shown that learners face different difficulties in their academic writing, which are: grammar, punctuation, organization of ideas, and vocabulary. On the other hand, a different study has explored the challenges faced by postgraduate (PG) learners in TESOL in academic writing and how to overcome them (AlMarwani, 2020).

On the other hand, Aldabbus and Almansouri (2022) explored the main difficulties that undergraduate (UG) EFL learners face at Benghazi University. The study has found that learners' main struggles are with grammar usage, vocabulary selection, and idea organization. A study was conducted in Bangladesh by Rahman et al. (2024), which intended to examine UG learners' difficulties in English academic writing. The findings have revealed a set of difficulties, such as grammar, vocabulary, idea organization, and critical thinking skills. In this study, other struggles were found related to pilgrimage and a lack of paraphrasing ability. Frequent issues were also reported, such as insufficient exposure to academic writing practices.

Badah et al. (2023) examined the challenges PG learners face in academic writing in a Palestinian university context. This study has also focused on how linguistic



proficiency impacts scholarly writing. The findings indicate problems with vocabulary, sentence structure, and discourse coherence.

Akrei (2021) examines the challenges faced by PG students at Duhok Polytechnic University in Iraq. The study has determined that grammar, punctuation, and vocabulary are the major issues learners face in their academic writing. Another difficulties were reported with cohesion and academic style. Hairul (2023) aims to identify the most common problems faced by EFL students in Indonesia. The study has shown that learners face several difficulties in organizing and generating ideas, as well as in applying grammatical rules. Another finding is the difficulty in locating suitable references and the lack of systematic academic writing.

Another study by Kotamjani et al. (2018) examined the difficulties PG learners face in academic writing in Malaysia. This study has shed light on the rhetorical and linguistic challenges. The findings have revealed difficulties with using the academic vocabulary, coherence, and organizing the discussion.

A study by Al Fadda (2020) examined the challenges Saudi EFL learners face in their academic writing. The study has revealed serious problems and issues in academic writing, specifically in essay writing. The findings have identified weaknesses in grammar, vocabulary, idea development, and coherence and cohesion. It has also been shown that there is a lack of awareness in academic writing, for instance, in argument structure and citation. Moreover, a different study by Fareed et al. (2021) has revealed the same challenges with Pakistani EFL learners in writing essays. It has revealed frequent grammatical and lexical errors, a lack of paragraph unity, and poor organization. The finding has also shown a lack of ideas and issues with expressing them.

To sum up, all the previously selected studies have identified serious issues in academic writing among EFL learners. The learners face undeniable issues, and they can be summarized as grammatical, punctuation, coherence, and organization of ideas.

### **3.1.2 The use of AI in EFL academic writing**

As mentioned earlier, EFL learners face serious issues and challenges in their academic writing. The use of AI applications and tools affected various factors across several educational fields, including academic writing. In this regard, Song & Song (2023) investigated the impact of using ChatGPT on academic writing among EFL learners. Research has shown that utilizing ChatGPT has a significant impact on learners' writing organization, coherence, and vocabulary use. Another benefit of using ChatGPT is that it helps learners build confidence in their writing. Another study by Selim (2024) has also shown the transformative role of AI tools such as Grammarly and ChatGPT in improving EFL academic writing among university-level students. The AI tools significantly assist learners' vocabulary use, grammar accuracy, and writing skills.

Artiana and Fakhurriana (2024) find that ChatGPT assists EFL learners in several ways in academic writing. It helps generate ideas, enhance grammar use, and also helps in text organization effectively. The learners valued the language enhancement features and the immediacy feedback. Moreover, Fathi & Rahimi (2024) studied the effect of AI tools on developing EFL academic writing skills. The findings show that AI supports learners in lexical variety, accuracy, and organization in their academic writing. It has also been shown that AI tools help improve understanding of weaknesses and enhance revision.

Alkamel and Alwagieh (2024) studied the effect of using ChatGPT as an AI writing tool and how it enhances academic writing among EFL learners. The study has shown that integrating the AI tool ChatGPT has a significant impact on the learners' writing skills and performance. It has also revealed that learners get confidence and self-sufficiency in drafting and revising their work. Al-Sofi (2024) indicated that learners believe that using ChatGPT helps them improve their grammar, vocabulary, and writing organization.

Pratolo (2025) examines the effectiveness of using AI tools, specifically Grammarly, in the academic writing of EFL learners. The learners showed significant improvement in grammar, vocabulary, and writing organization. They have also reported fluency and confidence due to the real-time feedback and suggestions from Grammarly. In this regard, Ozfidan et al. (2024) indicated that most EFL learners nowadays frequently use AI tools such as ChatGPT, Grammarly, and Google Translate to support their academic writing. It has been found that AI tools help learners save time by outlining, generating ideas, offering suggestions, and checking grammar and spelling during the writing process.

Furthermore, another study by Tran (2025) investigated the effectiveness of various AI tools, such as Grammarly, Write and Improve, and others, on EFL learners' writing. The study has indicated significant developments in task completion, grammar use, and error correction. These findings are in line with Widiati et al. (2023), which revealed how AI tools such as Quillbot, ChatGPT, Copy.ai, Tune, and PaperPal affect EFL writing. It has been shown that the learners' writing improved in terms of structure, logic, paragraphing, and idea suggestions. It also helps learners with idea organization and content generation.

On the other hand, AbAlgane et al. (2026) sought to demonstrate differences between AI-generated and human-written text among EFL learners. It has been found that AI-generated text shows higher grammatical correctness and organization, whereas human-written text reveals more originality. At the end of the study, it was indicated that AI tools have the potential to improve EFL writing skills. To conclude that all the selected studies have shown that AI plays a master key role in terms of improving EFL academic writing. AI tools assist learners in improving their grammar, vocabulary, and writing organization, among other advantages.

#### 4. Conclusion

Using and integrating AI in English Education is a serious step towards achieving English proficiency in English language learning and teaching. Tools such as ChatGPT and Grammarly have played a significant role in improving academic writing skills. They can provide grammar accuracy, vocabulary, and spelling correction. The learners get confidence and self-sufficiency in drafting and revising their work. Moreover, AI tools support learners by providing immediate feedback, scalable formative assessment, and personalisation; thus, integrating AI into academic writing could be developed in steps to build academic writing skills, but it requires pedagogical guidance to ensure critical thinking and organisational ability in learners. In this regard, the authors recommend that the educational institution offer training and pedagogy on AI-guided use of AI tools.

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