

Exploring the Use of AI in Academic Writing: A Descriptive Qualitative Study of EFL Undergraduate Students

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ABSTRAK

The rapid development of artificial intelligence (AI) has introduced new possibilities for supporting academic writing, particularly among English as a Foreign Language (EFL) learners. This study aims to explore undergraduate EFL students' experiences of using AI tools in academic writing and to identify the perceived benefits and challenges associated with AI-assisted writing practices. A qualitative research design was employed, using semi-structured interviews with undergraduate EFL students to collect data regarding their experiences, perceptions, and practices in using AI for writing tasks. The findings revealed three major benefits of AI use in academic writing: (1) grammar and vocabulary support, (2) time-saving and increased writing efficiency, and (3) improvement of writing quality. Participants reported that AI tools, particularly ChatGPT, helped them improve grammatical accuracy, expand academic vocabulary, organize ideas, and produce more coherent and structured texts. Additionally, AI was perceived as an effective tool for accelerating the writing process by providing immediate feedback and suggestions during drafting and revision stages. However, the findings also revealed concerns regarding overreliance on AI, particularly its potential to reduce students' independent thinking, creativity, and critical engagement with the writing process. The study concludes that AI can function as a valuable learning partner in EFL academic writing when used appropriately and critically. Therefore, effective AI integration requires guidance from educators to promote responsible use, academic integrity, and students' autonomy as writers. This study contributes to the growing discussion of AI-assisted language learning by highlighting both the opportunities and challenges of incorporating generative AI into EFL writing education.

Keyword: artificial intelligence, ChatGPT, EFL students, academic writing, AI-assisted writing, language learning

INTRODUCTION

Artificial intelligence (AI) has rapidly become an important technology in higher education. The development of generative AI tools, such as ChatGPT, Grammarly, and QuillBot, has transformed how university students learn, conduct research, and complete academic writing tasks. These tools can generate ideas, improve grammar, paraphrase sentences, summarize information, and provide immediate feedback, making them valuable resources throughout the writing process (Kasneci et al., 2023; UNESCO, 2023). As AI technologies continue to evolve, they are increasingly influencing not only students' writing practices but also the broader landscape of teaching and learning in higher education.

This rapid adoption of AI has created both opportunities and challenges for educational institutions. On the one hand, AI can enhance learning efficiency by providing personalized support, immediate feedback, and continuous writing assistance. On the other hand, its widespread use has raised concerns about academic integrity, plagiarism, authorship, transparency, and students' overreliance on AI-generated content. These issues have encouraged

universities to develop institutional policies and ethical guidelines to ensure that AI is used responsibly in academic settings (Dwivedi et al., 2023; UNESCO, 2023). Therefore, rather than viewing AI as a replacement for human learning, educators increasingly recognize its potential as a complementary learning tool.

From this perspective, AI should be understood as a technology that supports students' cognitive development instead of replacing their intellectual efforts. When integrated appropriately, AI can encourage independent learning, facilitate problem-solving, and provide opportunities for continuous revision and self-reflection. Consequently, understanding how students interact with AI and incorporate it into their learning processes has become an important area of educational research. This issue is particularly relevant in language education, where writing is considered one of the most challenging academic skills.

Academic writing is one of the most demanding skills for English as a Foreign Language (EFL) students because it requires more than linguistic accuracy. Students are expected to organize ideas logically, construct persuasive arguments, synthesize information from multiple sources, employ appropriate academic vocabulary, and follow academic conventions such as citation and referencing (Hyland, 2019). These requirements often present significant challenges for undergraduate students whose English proficiency is still developing, making academic writing a complex cognitive and linguistic task.

These challenges are reflected in many aspects of students' writing performance. Previous studies have shown that EFL students frequently struggle with grammar, vocabulary, coherence, cohesion, and argument development. In addition, they often experience difficulties in paraphrasing, integrating information from scholarly sources, and avoiding plagiarism. As a result, students typically spend considerable time revising their work while remaining uncertain about the quality of their academic writing (Fareed et al., 2016; Hyland, 2019). Such challenges indicate that academic writing requires continuous guidance and meaningful feedback throughout the writing process.

The complexity of academic writing is further explained by its recursive nature. Writing is not a linear activity but a continuous process involving planning, drafting, revising, editing, and evaluating ideas. Throughout these stages, students must critically examine both the content and language of their work before producing a final draft. However, in many higher education contexts, students have limited opportunities to receive immediate and detailed feedback because lecturers often teach large classes and have limited time for individualized guidance. Consequently, there is an increasing need for learning support that enables students to improve their writing independently while receiving timely feedback.

In response to this need, recent advances in generative AI have introduced new possibilities for supporting academic writing. Unlike traditional grammar-checking software, AI-powered writing assistants can generate writing outlines, suggest ideas, explain grammatical rules, improve sentence structure, paraphrase academic texts, summarize information, and recommend appropriate academic vocabulary. These capabilities allow students to receive instant assistance throughout different stages of the writing process, making AI a more interactive learning partner than previous writing technologies (Kasneci et al., 2023).

The growing use of AI-assisted writing has attracted considerable attention from researchers. Several studies have reported that AI can improve grammatical accuracy, vocabulary selection, organization, and the overall quality of students' writing. Furthermore, AI-assisted writing tools have been found to increase students' confidence and reduce writing anxiety because learners are able to revise and refine their work repeatedly before submission (Yan, 2024; Tlili et al., 2023). These findings suggest that AI has the potential to enhance both students' writing performance and their learning experiences.

Despite these promising benefits, researchers also emphasize that AI should not replace students' own thinking and writing processes. Excessive dependence on AI-generated content may weaken critical thinking, creativity, and independent learning, particularly when students accept AI responses without evaluating their accuracy or relevance. Therefore, the educational value of AI depends largely on how students use it. AI should function as a learning partner that supports students in developing their own ideas rather than serving as a substitute for their intellectual engagement (Dwivedi et al., 2023).

Given the increasing use of AI in education, numerous studies have investigated its role in academic writing. Most previous research has focused on students' perceptions, technology acceptance, or the effectiveness of AI in improving writing performance through quantitative approaches, such as surveys and experimental studies (Kasneci et al., 2023; Yan, 2024). These studies have provided valuable evidence regarding the benefits of AI; however, they primarily emphasize measurable outcomes rather than students' lived experiences during the writing process.

Consequently, there remains a need for more qualitative research that explores how students actually experience AI-assisted writing. In particular, limited attention has been given to understanding how undergraduate EFL students interact with AI, how they integrate AI into different stages of academic writing, and how they perceive AI's contribution to improving writing quality. Exploring these experiences is essential because students' perceptions and learning strategies influence the effectiveness of AI as a pedagogical tool.

This gap is especially evident in the Indonesian EFL context, where the adoption of generative AI has increased rapidly in recent years. Although several studies have examined students' attitudes toward AI, qualitative evidence explaining how Indonesian undergraduate EFL students experience AI-assisted academic writing remains limited. Considering the growing integration of AI into higher education, understanding these experiences is important for developing pedagogical practices that promote both effective learning and responsible AI use.

To address this gap, the present study explores the use of AI in academic writing among undergraduate EFL students. Using a descriptive qualitative approach, this study investigates students' experiences of using AI-assisted writing tools and examines how these technologies contribute to improving the quality of their academic writing. Specifically, the study seeks to answer the following research question: How do undergraduate EFL students experience the use of AI-assisted writing tools in improving their academic writing quality?

The findings of this study are expected to contribute to the growing body of literature on AI-assisted language learning by providing a deeper understanding of students' experiences with AI in academic writing. Furthermore, the study offers practical implications for English

lecturers, curriculum developers, and higher education institutions in designing pedagogical strategies and institutional policies that support the ethical, responsible, and effective integration of AI into academic writing instruction.

METHOD

This study employed a descriptive qualitative research design to explore undergraduate English as a Foreign Language (EFL) students' experiences of using artificial intelligence (AI) in academic writing. A descriptive qualitative approach was considered appropriate because it enables researchers to gain a comprehensive understanding of participants' perceptions, experiences, and interpretations of a phenomenon in its natural context (Creswell & Poth, 2018; Merriam & Tisdell, 2016). Rather than measuring the effectiveness of AI through numerical data, this study sought to describe how undergraduate EFL students used AI-assisted writing tools and how they perceived these technologies in improving the quality of their academic writing.

The study was conducted at the English Education Study Program of STKIP Kristen Wamena, Papua Pegunungan, Indonesia. The participants consisted of eight undergraduate EFL students enrolled in the Writing 3 course who had experience using AI-powered writing tools, particularly ChatGPT, to assist them in completing academic writing tasks. The participants were selected using purposive sampling because this technique enables researchers to recruit individuals who possess direct experience relevant to the research topic (Patton, 2015). To be included in the study, participants had to be actively enrolled in the Writing 3 course, have used AI writing tools for academic writing, and voluntarily agree to participate in the study. These selection criteria ensured that the participants were able to provide rich and meaningful information regarding their experiences of using AI in academic writing.

Data were collected through semi-structured interviews, which allowed participants to describe their experiences freely while enabling the researcher to explore emerging issues in greater depth (Creswell & Poth, 2018). An interview guide consisting of open-ended questions was developed to investigate students' experiences of using AI in academic writing, the perceived benefits and challenges of AI-assisted writing, and their perspectives on the ethical use of AI in higher education. Each interview lasted approximately 30–45 minutes and was conducted face-to-face at the university. With the participants' informed consent, all interviews were audio-recorded to ensure the accuracy and completeness of the data. Field notes were also taken during each interview to capture contextual information, participants' expressions, and other observations that supported the interpretation of the findings.

The interview data were analyzed using thematic analysis following the six-phase framework proposed by Braun and Clarke (2006). The analysis began with data familiarization through repeated reading of the interview transcripts and careful listening to the audio recordings. Subsequently, initial codes were generated by identifying meaningful statements related to students' experiences of using AI-assisted writing tools. Similar codes were then grouped into broader categories and organized into themes that represented recurring patterns across participants' responses. The themes were reviewed and refined to ensure that they accurately reflected the participants' experiences and addressed the objectives of the study.

Finally, the themes were interpreted and presented narratively using representative quotations from participants to illustrate and support the findings.

RESULT AND DISCUSSION

The analysis of the interview data revealed three major themes regarding undergraduate EFL students' experiences of using artificial intelligence (AI) in academic writing: (1) grammar and vocabulary support, (2) time-saving and writing efficiency, and (3) improvement of writing quality. Overall, the participants perceived AI as a valuable learning tool that assisted them throughout the writing process. However, they also acknowledged that excessive reliance on AI could negatively affect their critical thinking and independent writing ability. These findings are consistent with previous research suggesting that generative AI tools can provide personalized support for language learning, writing development, and self-directed learning among EFL students (Kasneci et al., 2023; Kohnke et al., 2023; Lo, 2023).

The first theme identified in this study was grammar and vocabulary support. All participants reported that AI-assisted writing tools, particularly ChatGPT, helped them improve grammatical accuracy and select more appropriate academic vocabulary. Many participants explained that AI enabled them to recognize grammatical errors that they had previously overlooked while also suggesting more natural and formal expressions suitable for academic writing. As one participant stated:

"ChatGPT helps me correct my grammar and suggests better vocabulary, so my writing sounds more academic." (Student 3)

Similarly, another participant explained:

"Sometimes I know what I want to write, but I don't know the right English words. AI gives me better vocabulary and sentence choices." (Student 7)

These findings suggest that AI functions as an immediate language support tool, allowing students to revise their writing independently without waiting for lecturer feedback. This finding supports previous research showing that AI-powered writing assistants can provide corrective feedback, lexical suggestions, and language scaffolding that help EFL learners improve linguistic accuracy (Fitria, 2023; Kohnke et al., 2023). Similarly, Barrot (2023) reported that ChatGPT can assist language learners by providing explanations of grammatical structures, improving vocabulary choices, and supporting the development of more accurate written communication. Furthermore, Yan (2024) found that EFL students perceived ChatGPT as an effective writing assistant because it enhanced their awareness of language errors and increased their confidence during writing activities.

The findings also align with Hyland's (2019) argument that feedback plays an essential role in developing academic writing proficiency, particularly among second-language learners. While traditional teacher feedback is valuable, students often experience limited opportunities to receive immediate responses during the writing process. AI-based feedback provides continuous and instant assistance, enabling learners to engage in repeated revision and reflection (Ranalli, 2018; Guo & Wang, 2024). Therefore, in this study, AI complemented traditional feedback

practices by providing accessible linguistic support and encouraging students' independent learning.

The second theme concerned time-saving and writing efficiency. Most participants believed that AI significantly reduced the time required to complete writing assignments. Instead of spending considerable time searching for vocabulary, organizing ideas, or revising grammatical mistakes, students used AI to obtain immediate suggestions that accelerated the writing process. One participant commented:

"Using ChatGPT saves a lot of time because I don't have to search many websites to find ideas or correct my writing." (Student 1)

Another participant explained:

"Before using AI, I spent hours revising my essay. Now I can finish the first draft much faster because AI helps me organize my ideas." (Student 5)

These findings indicate that AI enhances writing efficiency by providing rapid access to information, idea generation, and immediate feedback during the drafting and revision stages. Previous studies have similarly reported that generative AI reduces learners' cognitive burden by assisting with brainstorming, outlining, and language revision (Tlili et al., 2023; Lo, 2023). According to Kasneci et al. (2023), large language models can function as cognitive support tools by helping learners complete complex academic tasks more efficiently while maintaining interaction with learning materials.

Furthermore, the findings support the argument of Dwivedi et al. (2023), who suggested that generative AI has the potential to transform learning processes through personalized assistance and rapid information processing. In writing contexts, AI can shorten the time required for mechanical aspects of writing, allowing students to focus more attention on higher-order skills such as argument development, organization, and critical evaluation (Mizumoto & Eguchi, 2023). From the perspective of self-regulated learning, immediate AI feedback may encourage students to monitor, evaluate, and revise their own writing more actively (Zimmerman, 2002; Teng, 2024).

The third and most prominent theme was the improvement of writing quality. All participants agreed that AI contributed positively to the overall quality of their academic writing. They reported improvements in sentence organization, coherence, clarity, grammar, and vocabulary, making their writing more structured and academically appropriate. One participant stated:

"After using ChatGPT, my essays became more organized, and my ideas were easier to understand." (Student 2)

Another participant added:

"AI helps me improve my writing before submitting it. I become more confident because my sentences are clearer and more coherent." (Student 6)

These findings indicate that AI plays an important role in supporting the revision process, enabling students to produce more coherent and linguistically accurate academic texts. Similar findings were reported by Mizumoto and Eguchi (2023), who found that ChatGPT-assisted

writing activities improved students' writing performance by supporting idea development, linguistic refinement, and revision practices. Likewise, Barrot (2023) suggested that generative AI can enhance writing outcomes by providing learners with opportunities to experiment with language and receive immediate suggestions for improvement.

The findings also corroborate Kasneci et al. (2023), who argued that generative AI can improve learning outcomes by supporting iterative feedback and personalized learning experiences. In addition, Zawacki-Richter et al. (2019) emphasized that AI-based educational technologies can enhance learning by adapting support to individual learners' needs. In the context of EFL writing, this personalized assistance is particularly beneficial because students often face challenges in organizing ideas, maintaining coherence, and expressing complex arguments in English (Hyland, 2019).

Although participants generally perceived AI positively, they also expressed concerns regarding overreliance on AI. Several students admitted that frequent use of AI sometimes reduced their motivation to think independently because AI could instantly generate ideas, reorganize paragraphs, and suggest complete responses. One participant remarked:

"Sometimes I depend too much on ChatGPT because it gives answers very quickly. If I use it all the time, I may not improve my own writing." (Student 4)

Another participant similarly noted:

"AI is very helpful, but students still need to think critically because not every answer from AI is correct." (Student 8)

These concerns reflect previous research highlighting the risks associated with excessive dependence on generative AI. Although AI can support learning, researchers have warned that uncritical acceptance of AI-generated responses may weaken learners' creativity, critical thinking, and ownership of the writing process (Kasneci et al., 2023; UNESCO, 2023). Similarly, Cotton et al. (2023) argued that educators must consider issues of academic integrity and learner dependency when integrating AI tools into educational contexts.

The participants' awareness of AI limitations also supports the importance of AI literacy. Students need sufficient knowledge to evaluate AI-generated content, identify inaccuracies, and use AI as a supportive resource rather than a replacement for their own thinking (Ng et al., 2021; UNESCO, 2023). Therefore, effective AI integration requires not only access to technology but also guidance on ethical, critical, and responsible use.

Overall, the findings demonstrate that undergraduate EFL students perceive AI as a highly beneficial tool for academic writing. AI supports grammar and vocabulary development, improves writing efficiency, and enhances the overall quality of students' academic texts. These findings correspond with previous studies indicating that generative AI can provide valuable linguistic assistance, personalized feedback, and writing support for second-language learners (Barrot, 2023; Kohnke et al., 2023; Mizumoto & Eguchi, 2023).

At the same time, the study highlights the importance of balancing AI use with independent learning and critical thinking. AI should be positioned as a learning partner that assists students during the writing process rather than as a substitute for their intellectual effort.

Therefore, English lecturers should guide students in using AI responsibly by emphasizing critical evaluation, academic integrity, and reflective writing practices. Through appropriate guidance, AI can function as an effective educational tool while preserving students' autonomy and development as academic writers.

CONCLUSION

This study explored undergraduate EFL students' experiences of using artificial intelligence (AI) in academic writing and revealed that AI provides significant support throughout the writing process. The findings indicate that students primarily benefit from AI in three main areas: grammar and vocabulary development, writing efficiency, and improvement of overall writing quality. Participants reported that AI-assisted writing tools, particularly ChatGPT, helped them identify language errors, select more appropriate academic expressions, organize ideas, and produce clearer and more coherent texts. These findings demonstrate that AI can serve as an effective learning support tool that facilitates students' language development and enhances their confidence in academic writing.

Furthermore, the findings highlight that AI contributes to a more efficient writing process by reducing the time required for brainstorming, drafting, and revising. Through immediate feedback and personalized suggestions, AI enables students to engage in continuous improvement and become more active participants in the writing process. However, despite these benefits, the study also identified concerns regarding excessive dependence on AI. Participants recognized that relying too heavily on AI-generated suggestions may reduce opportunities for independent thinking, creativity, and the development of their own writing skills. Therefore, the effectiveness of AI in academic writing depends largely on how students interact with and evaluate the technology.

Overall, this study suggests that AI should be viewed as a supportive learning partner rather than a replacement for students' intellectual efforts. The integration of AI into EFL writing instruction should emphasize responsible and ethical use, where students are encouraged to critically evaluate AI-generated content, maintain academic integrity, and actively participate in the writing process. English lecturers also have an important role in developing students' AI literacy by providing guidance on how to use AI effectively while strengthening independent learning and critical thinking skills.

The findings contribute to the growing body of research on AI-assisted language learning by providing insights into how undergraduate EFL students perceive and utilize AI tools in academic writing contexts. Future studies may investigate AI use among larger and more diverse groups of learners, examine changes in students' writing performance through longitudinal approaches, and explore effective pedagogical strategies for integrating AI into writing instruction. By balancing technological assistance with human creativity and critical reflection, AI has the potential to become a valuable resource for developing more autonomous and competent academic writers.

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