

EFL STUDENTS' CHALLENGES AND STRATEGIES IN WRITING UNDERGRADUATE THESES IN THE ERA OF AI: A QUALITATIVE STUDY

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Abstract

Artificial Intelligence (AI) has become an important tool in academic writing, particularly for English as a Foreign Language (EFL) students writing undergraduate theses. While AI supports various aspects of writing, it also presents challenges that affect students' learning experiences. This study explored the challenges EFL students encountered when using AI in undergraduate thesis writing, their perceptions of AI, and the strategies they employed to address these challenges. A descriptive qualitative approach was conducted with four English Education students at Universitas Islam Malang selected through purposive sampling. Data were collected using questionnaires and semi-structured interviews and analyzed through thematic analysis. The findings identified four major challenges: linguistic, cognitive and academic, AI-related, and affective challenges. Although participants viewed AI as beneficial for improving writing efficiency, language accuracy, and idea generation, they also expressed concerns about information reliability, overdependence, citation accuracy, and academic integrity. To overcome these challenges, students critically evaluated AI-generated content, revised drafts independently, consulted supervisors, discussed ideas with peers, and verified information using credible academic sources. The study concludes that AI functions as a complementary tool rather than a substitute for students' academic competence, emphasizing the importance of critical thinking, self-regulated learning, and responsible AI use in thesis writing.

Keywords: *Artificial Intelligence, EFL students, undergraduate thesis writing, academic writing, qualitative study.*

INTRODUCTION

English has become the dominant international language and the primary medium of communication in education, research, and global collaboration. As the world's leading lingua franca, English plays a crucial role in higher education because it enables students to access scientific knowledge, communicate academic ideas, and participate in international scholarly communities (Rao, 2019). In higher education, academic writing is considered one of the most essential competencies because it allows students to demonstrate critical thinking, research competence, and disciplinary knowledge (Tusting et al., 2019). Consequently, English as a Foreign Language (EFL) students are expected to develop strong academic writing skills to fulfill various academic requirements, particularly the completion of an undergraduate thesis.

Writing an undergraduate thesis is widely recognized as one of the most demanding academic tasks for EFL students. A thesis is a logical and systematic academic work that requires students to demonstrate research competence, analytical thinking, and effective academic communication. Throughout the thesis-writing process, students must formulate research problems, review relevant literature, collect and analyze data, and present their findings using appropriate academic writing conventions. This process requires mastery of various writing components, including organization, content, grammar, mechanics, and coherence (Shobah et al., 2023). Moreover, projects requiring advanced academic literacy also demand research skills, critical reading, and the ability to synthesize and evaluate information effectively.

Despite its importance, many EFL students experience considerable difficulties when writing their undergraduate theses. Previous studies have reported that students struggle with academic writing standards, language proficiency, grammar, vocabulary, coherence, academic conventions, and research methodology (Al-Khulaidi & Abdulkhalek, 2022; Yan & Berliner, 2009). In addition to linguistic challenges, students frequently experience psychological barriers such as writing anxiety, fear of making mistakes, low confidence, and concerns about receiving supervisors' feedback (Fitria, 2022; Hayati et al., 2025). Difficulties in time management, organizing ideas, selecting appropriate references, and responding to repeated revisions also contribute to delays in thesis completion (Khusniyah & Ismiatun, 2024; Rahayu et al., 2025). These findings indicate that undergraduate thesis writing is influenced not only by language competence but also by cognitive, emotional, and academic factors.

At the same time, rapid technological development has transformed academic writing practices through the emergence of Artificial Intelligence (AI). AI-powered applications such as ChatGPT, Grammarly, and QuillBot are increasingly used by EFL students to generate ideas, improve grammar, paraphrase texts, organize writing, and revise academic work. From the

perspective of Computer-Assisted Language Learning (CALL), technology has become an integral part of language learning because it provides learners with flexible access to learning resources and supports language development through digital environments (Mirani et al., 2019). Recent studies also suggest that AI can improve writing efficiency, language accuracy, and learner autonomy while supporting academic writing activities (Teng, 2023). Nevertheless, concerns remain regarding students' overreliance on AI, reduced critical thinking, information reliability, academic integrity, and ethical use of AI-generated content (Kaledio et al., 2024).

Although previous studies have investigated EFL students' academic writing difficulties and the implementation of AI in education, several important gaps remain. Theoretically, most studies discuss either traditional challenges in academic writing or AI as a writing support tool without integrating both perspectives to explain how AI influences students' challenges and coping strategies during undergraduate thesis writing. Methodologically, previous research has predominantly employed quantitative approaches that emphasize students' perceptions of AI, providing limited understanding of their lived experiences throughout the thesis-writing process. Contextually, existing studies have focused mainly on general academic writing tasks such as essays or classroom assignments, while qualitative research investigating Indonesian EFL students' experiences in writing undergraduate theses in the era of AI remains limited. Therefore, further qualitative investigation is needed to explore how Indonesian EFL students experience thesis-writing challenges and how they strategically utilize AI throughout the completion of their undergraduate theses.

Based on these gaps, the present study aims to explore the challenges encountered by Indonesian EFL students during undergraduate thesis writing in the era of AI, examine their perceptions of AI in supporting time management, language use, and academic writing conventions, and identify the strategies they employ to overcome thesis-writing challenges. The findings are expected to contribute to the growing body of knowledge on AI-assisted academic writing and provide practical insights for students, supervisors, and higher education institutions regarding the responsible integration of AI into undergraduate thesis writing.

METHOD

This study employed a descriptive qualitative research design to explore the challenges encountered by EFL students in writing their undergraduate thesis in the era of artificial intelligence (AI), as well as the strategies they used to overcome those challenges. A qualitative approach was considered appropriate because it provides an in-depth understanding of participants' experiences and perceptions within their natural context (Hennink et al., 2020).

The participants were selected using purposive sampling. They consisted of four seventh-semester students from the English Education Study Program at Universitas Islam Malang who had experience using ChatGPT during the undergraduate thesis-writing process. Before the interviews, a questionnaire was distributed to approximately 20–30 students to identify participants who met the predetermined criteria. The questionnaire functioned only as a screening instrument and was not included in the primary data analysis.

Data were collected through semi-structured interviews conducted online via Zoom or WhatsApp video call. Each interview lasted approximately 20–30 minutes and focused on participants' experiences regarding the challenges of thesis writing, the influence of AI on the writing process, and the strategies they adopted. All interviews were transcribed verbatim, translated into English when necessary, and confirmed through member checking to ensure the accuracy of the participants' responses.

The interview data were analyzed using thematic analysis following (Braun & Clarke, 2006). The analysis involved familiarizing with the data, generating initial codes, grouping similar codes into categories, identifying overarching themes, reviewing and refining the themes, and interpreting the findings according to the research questions. Direct quotations from participants were included to support the interpretation of the results.

To ensure the trustworthiness of the findings, this study applied the criteria proposed by (Lincoln & Guba, 1986), including credibility, transferability, dependability, and confirmability. Ethical considerations were also addressed by obtaining participants' informed consent, ensuring anonymity through pseudonyms, maintaining data confidentiality, and allowing participants to withdraw from the study at any stage.

FINDINGS

Challenges Experienced by EFL Students in AI-Assisted Undergraduate Thesis Writing

The findings revealed that EFL students experienced four major challenges in writing their undergraduate theses in the AI era, namely linguistic, cognitive and academic, AI-related, and affective challenges. Linguistic difficulties remained the most common obstacle, particularly in grammar, vocabulary, sentence structure, and expressing ideas in academic English. Participants also encountered cognitive and academic challenges, such as developing research problems, organizing literature reviews, constructing logical arguments, and interpreting supervisors' feedback. These findings support (Prihatmi, 2017), who emphasizes that academic writing requires both language proficiency and higher-order thinking skills, and (Brinda &

Ardiyanto, 2025), who argue that academic writing involves complex cognitive processes throughout planning, drafting, and revision.

Furthermore, participants reported AI-related challenges, including inaccurate information, overly general responses, and concerns about overreliance on AI-generated content. They addressed these issues by verifying AI outputs with credible academic sources before incorporating them into their writing, reflecting the importance of critical AI literacy as highlighted (Nugroho et al., 2025). Besides academic challenges, students also experienced affective challenges such as anxiety, frustration, and reduced confidence during the thesis-writing process. These findings indicate that although AI facilitates technical aspects of writing, successful thesis completion still depends on students' critical thinking, language competence, and emotional resilience.

Students' Perceptions of AI in Undergraduate Thesis Writing

The findings showed that EFL students generally perceived AI as a useful tool for supporting undergraduate thesis writing. Participants believed that AI improved writing efficiency by assisting with grammar correction, vocabulary development, sentence organization, and idea generation. These findings are consistent with (Zahra, 2025), who reported that AI contributes to language improvement and writing efficiency, and (Nurazizah, 2025), who found that AI helps students improve grammar and sentence structure. However, participants also acknowledged that AI could not replace their understanding of academic writing conventions, critical thinking, or ethical research practices. Instead, they emphasized the need to evaluate AI-generated content critically and use it responsibly throughout the writing process.

Overall, students viewed AI as a complementary learning tool rather than a substitute for their academic abilities. While AI enhanced productivity and language quality, its effectiveness depended on students' ability to regulate its use critically and maintain academic integrity.

Strategies Used by EFL Students to Overcome Thesis-Writing Challenges

The findings revealed that EFL students adopted various adaptive strategies to overcome challenges in AI-assisted thesis writing. Participants used AI selectively for grammar correction, vocabulary improvement, sentence refinement, and idea generation while maintaining responsibility for developing their own research ideas and arguments. They also evaluated AI-generated outputs by comparing them with credible academic references and revising them according to the research context. These findings support (Putri et al., 2025), who found that students integrate AI throughout the planning, drafting, revising, and editing stages, and

(Nugroho et al., 2025), who emphasized the importance of digital literacy and responsible AI use in academic writing.

In addition to using AI, participants strengthened their writing through independent drafting, reading academic literature, and regular consultations with supervisors and peers. They also maintained academic integrity by limiting AI use to technical support rather than content generation. Consistent with (Fatqurhohman et al., 2025) these findings demonstrate that AI should function as a thinking aid rather than a replacement for students' creativity and intellectual contribution. Overall, successful AI-assisted thesis writing depended on balancing technological support with independent learning, critical thinking, and ethical academic practices.

CONCLUSION

This study explored the challenges, perceptions, and strategies of EFL students in using Artificial Intelligence (AI) during undergraduate thesis writing. The findings indicate that AI has become an important support tool; however, its effectiveness depends largely on students' linguistic competence, critical thinking, self-regulated learning, and ethical awareness. EFL students encountered four interconnected challenges: linguistic, cognitive and academic, AI-related, and affective. Linguistic limitations, difficulties in developing academic arguments, concerns regarding the reliability and ethical use of AI-generated content, and emotional factors such as anxiety and reduced confidence collectively influenced the thesis-writing process.

The study further revealed that participants perceived AI as beneficial for improving writing efficiency, generating ideas, enhancing grammar and vocabulary, and supporting academic writing. Nevertheless, they acknowledged that AI-generated outputs require critical evaluation because excessive dependence may reduce cognitive engagement, increase the risk of inaccurate information and citation errors, and raise concerns about academic integrity.

To address these challenges, students adopted adaptive strategies, including preparing writing outlines, critically evaluating AI-generated content, independently revising drafts, consulting supervisors and peers, and verifying information using credible academic sources. These findings suggest that AI functions most effectively as a complementary learning tool rather than a substitute for students' academic competence. Therefore, the successful integration of AI into undergraduate thesis writing requires a balanced combination of technological support, critical thinking, independent learning, and responsible academic practice.

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