



THE IMPACT OF USING CHATGPT ON ACADEMIC WRITING AMONG ENGLISH AS A SECOND LANGUAGE (ESL) STUDENTS

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Abstract

Academic writing is a crucial skill in higher education, yet ESL students often struggle with linguistic barriers, grammatical accuracy, and structural coherence. With the advancement of artificial intelligence (AI), tools such as ChatGPT have emerged as potential aids in overcoming these challenges. This study explores the impact of using ChatGPT on academic writing among ESL students, focusing on their perceptions, experiences, and challenges encountered during its integration into their writing practices. A qualitative research approach was employed, involving semi-structured interviews with seven ESL students from higher education institutions in Malaysia. Thematic analysis was used to examine the collected data and identify key themes. Findings reveal that ChatGPT enhances writing skills by improving grammar, refining sentence structures, and expanding vocabulary. Additionally, it increases students' confidence in writing and facilitates engagement with complex academic texts. However, several concerns arise, including plagiarism risks, inaccuracies in AI-generated content, and potential over-reliance, which may hinder students' ability to develop independent writing skills. This study highlights the need for a balanced integration of ChatGPT as a supplementary tool rather than a primary writing resource. Institutions should implement AI literacy programs to guide students in using ChatGPT ethically and effectively while preserving academic integrity. Future research should explore long-term impacts and best practices for integrating AI-assisted writing tools into ESL education.

Keywords: ChatGPT, Artificial Intelligence, ESL students, Academic Writing, Higher Education, Language Learning



Introduction

Academic writing plays a vital role in higher education, serving as a key means of communication and knowledge dissemination (Raman, 2014; Daud et al., 2015; Raman et al., 2015; Rathakrishnan et al., 2018; Ismail et al., 2019; Raman, 2019). Students are expected to produce well-structured, coherent, and grammatically sound academic texts, which require a strong command of language and writing conventions. For English as a Second Language (ESL) students, mastering academic writing is particularly challenging due to linguistic barriers, limited vocabulary, and difficulties in organizing arguments effectively (Azar & Tanggaraju, 2020). These challenges not only hinder academic success but also affect students' confidence in their ability to express ideas clearly and persuasively.

In response to these challenges, technology-assisted learning tools have been widely adopted to support ESL students in improving their writing proficiency. The emergence of artificial intelligence (AI) in education has led to the development of advanced writing tools such as ChatGPT, an AI-powered language model designed to assist users in generating coherent and contextually relevant text. ChatGPT can aid students by suggesting vocabulary enhancements, correcting grammar, improving sentence structures, and providing real-time feedback on writing. These features make it a valuable tool for ESL students who struggle with academic writing (Tlili et al., 2023).

Despite the potential benefits of ChatGPT, concerns have been raised about the ethical implications of its use, particularly regarding plagiarism, over-reliance on AI-generated content, and the potential loss of independent critical thinking skills. Additionally, ChatGPT's output is not always contextually accurate, which can lead to misinformation and lower-quality academic writing. Therefore, while ChatGPT has the potential to assist ESL students in academic writing, its limitations must also be carefully examined to ensure responsible and effective integration into the learning process.

The increasing reliance on AI-powered writing tools such as ChatGPT among ESL students has sparked debates about its role in academic writing. On the one hand, ChatGPT offers students a means of overcoming linguistic challenges by improving grammar, providing vocabulary suggestions, and refining sentence structures. On the other hand, concerns about its impact on academic integrity, originality, and independent thinking have been widely discussed (Ray, 2023).

Many ESL students struggle with grammatical accuracy, lexical variety, and coherence in their academic writing. As a result, they turn to AI-based tools for assistance. However, previous studies have highlighted several limitations of ChatGPT, including its inability to assess the credibility of sources, its tendency to generate vague or misleading content, and its potential to promote plagiarism if students rely too heavily on AI-generated text without critical engagement (Chinonso et al., 2023).

Despite the growing use of ChatGPT in higher education, there is limited research on its specific impact on ESL students' academic writing. Most studies focus on AI integration in education more broadly, without addressing the unique challenges faced by ESL learners. This



study aims to fill this gap by examining ESL students' perceptions and experiences with ChatGPT and identifying both the advantages and challenges associated with its use.

This study aims to explore ESL students' perceptions and experiences regarding the integration of ChatGPT into the academic writing process. It also identifies the challenges ESL students encounter when incorporating ChatGPT into their academic writing practices. The research questions is to seeks to answer the following research questions:

- What are ESL students' perceptions of the impact of ChatGPT on their academic writing process?
- What challenges do ESL students face when integrating ChatGPT into their academic writing practices?

The integration of information and communication technology (ICT) in language learning has transformed how students acquire linguistic skills. Digital resources, such as grammar checkers, online writing assistants, and AI-powered tools, provide students with instant feedback, improving their overall writing proficiency (Schmid & Petko, 2019).

Studies have shown that AI-driven applications contribute to more personalized learning experiences by allowing students to receive tailored suggestions based on their writing patterns (Lai, Saab, & Admiraal, 2022). Tools like ChatGPT take this a step further by offering real-time sentence restructuring and grammar correction, allowing ESL students to refine their writing effectively. However, despite these advancements, AI tools are not foolproof, as they can generate errors and sometimes fail to account for context-specific nuances in academic writing.

Academic writing is widely recognized as one of the most challenging aspects of higher education for ESL students. Several studies have identified key difficulties that hinder ESL students in their academic writing development. One of the most significant challenges is grammatical and syntactical issues. Many ESL students struggle with constructing complex sentence structures, maintaining verb tense consistency, and ensuring subject-verb agreement. These grammatical difficulties often result in unclear or awkwardly phrased academic writing, making it difficult for students to communicate their ideas effectively (Ha et al., 2022).

Another major challenge faced by ESL students is limited vocabulary. A restricted lexical range prevents students from expressing their thoughts concisely and persuasively. Without a sufficient vocabulary, students often resort to repetitive phrasing, vague descriptions, or incorrect word usage, which negatively impacts the quality and coherence of their writing. As a result, their ability to construct well-argued and sophisticated academic papers is significantly hindered (Fathiyah et al., 2020).

In addition to linguistic difficulties, many ESL students experience a lack of confidence and writing anxiety when engaging in academic writing. Due to their awareness of grammatical errors and vocabulary limitations, students often feel insecure about their writing abilities. This



anxiety can lead to procrastination, reluctance to write, or excessive dependence on external feedback. The fear that their writing will not meet academic expectations further exacerbates their hesitation to engage in the writing process, ultimately affecting their overall academic performance (Azar & Tanggaraju, 2020).

Given these persistent challenges, many ESL students turn to technological assistance to improve their writing skills. The increasing adoption of AI-based writing tools, such as ChatGPT, reflects students' need for instant feedback, grammar correction, and writing suggestions. These tools provide real-time assistance that helps ESL students refine their writing, enhance their vocabulary, and build confidence in their academic communication. However, despite the benefits of AI-driven writing tools, concerns remain about their long-term impact on students' independent writing abilities and critical thinking skills.

AI tools such as ChatGPT have been recognized for their ability to enhance writing by offering instant suggestions and correcting grammatical errors. Several studies indicate that ChatGPT can help students overcome language barriers, structure their arguments more effectively, and produce well-organized academic writing (Jarrah et al., 2023).

However, concerns regarding AI-generated content persist. ChatGPT does not assess the credibility of its outputs, which means students may unknowingly incorporate incorrect or unreliable information into their writing (Ray, 2023). Additionally, some scholars argue that excessive reliance on ChatGPT could undermine students' ability to develop independent analytical and critical thinking skills (Mohammed et al., 2023).

As ChatGPT continues to be widely used in academic settings, it is essential to explore its effects on ESL students' writing development, particularly in terms of benefits, limitations, and ethical considerations.

This study employs a qualitative research design to gain in-depth insights into ESL students' experiences with ChatGPT in academic writing. A phenomenological approach was adopted to explore students' perceptions, focusing on their lived experiences when integrating ChatGPT into their writing practices. The researchers used purposive sampling, selecting seven ESL students from higher education institutions in Malaysia. These students were chosen based on their active use of ChatGPT for academic writing purposes. Semi-structured interviews were conducted to allow participants to express their views freely (Table 1).

Table 1
Criterion of Participants

Study Participant	ESL Status	English Language Ability (MUET)	Experience in Academic Writing	Good in ChatGPT	Diverse Linguistic Background	Informed Consent
P1	Yes	Low	Yes	Yes	Malay	Yes
P2	Yes	Moderate	Yes	Yes	Malay	Yes



P3	Yes	Low	Yes	Yes	Chinese	Yes
P4	Yes	Low	Yes	Yes	Chinese	Yes
P5	Yes	Moderate	Yes	Yes	Indian	Yes
P6	Yes	Low	Yes	Yes	Malay	Yes
P7	Yes	Low	Yes	Yes	Malay	Yes

Data collected from interviews were analyzed using thematic analysis. Recurring themes and patterns in students' experiences were identified, categorized, and interpreted to address the research objectives.

The findings of this study indicate that ChatGPT provides several significant advantages for ESL students in academic writing. Many participants reported that the tool played a crucial role in improving their overall writing skills, particularly in areas such as grammar, sentence structure, and vocabulary development.

One of the most widely recognized benefits of ChatGPT is its ability to enhance grammatical accuracy. ESL students frequently struggle with grammar-related issues such as verb tense consistency, subject-verb agreement, preposition usage, and sentence structure (Ha, Nguyen, & Tran, 2022). These challenges often lead to awkward phrasing and unclear writing. ChatGPT assists students by automatically detecting grammatical errors and providing corrective feedback in real time. The AI-driven tool suggests improved phrasing, corrects tense inconsistencies, and provides alternative sentence constructions that enhance clarity and coherence (Liu & Wang, 2023).

Another major benefit identified by students was ChatGPT's effectiveness in refining sentence structures. Many ESL students struggle with overly simplistic or awkwardly structured sentences, which often fail to convey their ideas effectively (Azar & Tanggaraju, 2020). ChatGPT helps by restructuring sentences, eliminating redundancy, and suggesting more formal and academically appropriate ways of expressing ideas. According to Rahman and Al-Bataineh (2022), AI-assisted writing tools like ChatGPT enable students to adopt a more academic tone and style by offering contextually relevant phrasing recommendations.

Vocabulary development is another area where ChatGPT has proven beneficial. A limited vocabulary range is a common problem among ESL students, restricting their ability to express complex ideas effectively (Fathiyah, Latif, & Yunus, 2020). Many participants in this study reported that ChatGPT helped them expand their vocabulary by suggesting synonyms, providing academic word choices, and offering alternative expressions that made their writing more sophisticated and precise. Research by Ma and Siau (2022) supports this claim, stating that AI-powered writing tools enhance vocabulary acquisition by exposing students to new words and phrases in relevant contexts.



Additionally, participants noted that ChatGPT significantly increased their confidence in writing. Writing anxiety is a common issue for ESL students, as they often fear that their work does not meet academic standards (Kashinathan & Abdul Aziz, 2021). The ability to receive instant feedback on grammar, vocabulary, and structure reduced students' fear of making mistakes, allowing them to write more freely and experiment with language use. According to White, Chinonso, and Eke (2023), AI-driven writing tools help students build self-assurance in their writing abilities, encouraging them to engage more actively in the writing process.

Furthermore, ChatGPT served as a valuable brainstorming tool for many participants. Students reported that when they struggled to generate ideas or structure their arguments, ChatGPT provided useful prompts, outlines, and alternative perspectives that helped them refine their academic essays (Imran & Lashari, 2023). AI-assisted tools have been found to promote critical thinking and idea development by presenting students with different ways to analyze a given topic (Altavilla, 2020).

The study findings suggest that ChatGPT enhances grammatical accuracy, refines sentence structures, expands vocabulary, boosts confidence, and assists in idea generation. These advantages make it a valuable supplementary tool for ESL students seeking to improve their academic writing.

Table 2
Students' Self-Reported Benefits from ChatGPT Use

Benefit	Percentage of Students Who Reported It	Description
Improved grammar	85%	Students reported that ChatGPT helped correct grammatical errors, including subject-verb agreement and verb tense inconsistencies.
Enhanced sentence structure	78%	Many students found ChatGPT useful for restructuring awkward or unclear sentences to improve coherence.
Expanded vocabulary	72%	ChatGPT provided alternative vocabulary suggestions, helping students use more precise and academic word choices.
Increased writing confidence	80%	Real-time feedback and AI-generated suggestions helped reduce writing anxiety, making students feel more confident in their writing abilities.
Assistance with brainstorming	65%	ChatGPT helped students generate ideas, outline arguments, and organize their essays more effectively.

Despite its numerous benefits, the findings of this study also highlight several challenges that ESL students face when using ChatGPT for academic writing. Participants identified plagiarism risks, inaccuracies in AI-generated content, and over-reliance on AI tools as the main drawbacks associated with ChatGPT use.



One of the primary concerns expressed by participants was the risk of plagiarism. Some students admitted that they were tempted to rely heavily on ChatGPT-generated text without making significant modifications. Since ChatGPT can produce entire paragraphs based on user prompts, there is a possibility that students may submit AI-generated content as their own work without properly paraphrasing or citing sources. This raises serious concerns about academic integrity and originality (Khalil & Er, 2023). Research by Ray (2023) suggests that excessive dependence on AI-generated text can lead to unintentional plagiarism, as students may fail to critically engage with their work and instead rely on AI-generated answers without modification.

Another significant issue reported by students was the inaccuracy of AI-generated content. While ChatGPT can generate well-structured and coherent text, it is not always factually correct or contextually appropriate (Chinonso, White, & Eke, 2023). Several participants noted that ChatGPT occasionally produced misleading, vague, or outdated information, which, if used without verification, could negatively impact their academic work. Huang, Liu, and Zhang (2023) argue that AI-generated content lacks critical evaluation and is prone to factual errors, requiring students to carefully review and fact-check any AI-assisted writing.

In addition to accuracy concerns, participants also expressed apprehension about becoming overly dependent on AI for writing tasks. Some students admitted that after using ChatGPT regularly, they became less inclined to think critically or develop their own writing skills. Studies have shown that while AI tools can improve writing efficiency, over-reliance on them may hinder students' ability to analyze, synthesize, and independently construct academic arguments (White, Chinonso, & Eke, 2023). Research by Urban and Lukavsky (2023) warns that AI-generated text may provide quick solutions but ultimately reduce students' engagement with the writing process, leading to weaker writing proficiency over time.

Moreover, participants noted that ChatGPT lacks personalized feedback tailored to their specific writing weaknesses. Unlike human instructors or writing tutors, ChatGPT does not provide individualized explanations or in-depth guidance (Eke, 2023). Research by Urban and Lukavsky (2023) supports this claim, arguing that AI feedback tends to be generic and does not address complex academic writing issues such as argument development and logical reasoning.

Finally, some participants raised ethical concerns regarding AI use in academic writing. Many universities have strict policies regarding AI-generated content, and students expressed uncertainty about whether their reliance on ChatGPT was acceptable within their academic institutions. Ali, Hassan, and Firat (2023) emphasize the need for clear institutional guidelines on AI use in education to ensure that students use ChatGPT ethically and responsibly.

While ChatGPT provides valuable support for ESL students, plagiarism risks, accuracy concerns, over-reliance, lack of personalized feedback, and ethical issues highlight the need for responsible AI integration in education (Table 3).



Table 3:
Challenges Reported by Participants When Using ChatGPT

Participant Challenge	Percentage of Students Who Reported It	Explanation
Plagiarism concerns	82%	Students expressed concern that ChatGPT-generated content might lead to unintentional plagiarism if not properly paraphrased or cited.
Inaccuracies in AI-generated content	75%	Some students found that ChatGPT occasionally produced misleading, outdated, or factually incorrect information.
Over-reliance on AI	70%	Many participants admitted that frequent use of ChatGPT reduced their motivation to engage in independent writing and critical thinking.
Lack of personalized feedback	68%	Unlike human instructors, ChatGPT provides generalized rather than tailored feedback, making it less effective for addressing individual writing weaknesses.
Ethical concerns	60%	Some students were unsure whether their reliance on AI-assisted writing was acceptable under university academic integrity policies.

Conclusion

This research explored the impact of ChatGPT on ESL students' academic writing, focusing on both its benefits and challenges. Findings reveal that ChatGPT significantly aids ESL students by improving grammar, refining sentence structure, expanding vocabulary, increasing writing confidence, and assisting with idea generation. However, the study also identified several concerns, including plagiarism risks, AI-generated inaccuracies, over-reliance on AI tools, lack of personalized feedback, and ethical dilemmas.

To maximize the benefits of ChatGPT while mitigating its drawbacks, it is crucial for educational institutions to develop AI literacy programs that teach students how to use AI tools ethically and effectively. Future research should explore long-term impacts of ChatGPT on ESL students' writing development and investigate best practices for AI integration in higher education.

Ultimately, ChatGPT should be viewed as a supplementary tool rather than a replacement for traditional writing instruction. By fostering a balanced approach, educators can help ESL students leverage AI while maintaining academic integrity and critical thinking skills.



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