

The Perceived Effects of Using ChatGPT on Academic Writing Performance Among Senior High School Students

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Abstract

The rise of generative artificial intelligence (AI), particularly ChatGPT, has reshaped academic practices by providing support in writing, idea generation, and language refinement. Previous studies highlight that ChatGPT and similar AI tools enhance academic writing quality, improving grammar, organization, and coherence among students (Maghamil & Sieras, 2024). This study explored the perceived effects of ChatGPT on academic writing performance among senior high school students. As AI integration in education expands, ChatGPT is increasingly recognized as a resource for grammar, organization, and idea development, though concerns remain regarding originality and academic integrity.

Employing a qualitative-descriptive approach, the researchers gathered insights from Humanities and Social Sciences (HUMSS) students using open-ended questionnaires. Thematic analysis revealed recurring perceptions and experiences. Findings showed that 45.35% of respondents considered ChatGPT effective for generating ideas and gathering information. Additionally, 25.58% believed it improved productivity by assisting in task management and organization. Meanwhile, 15.12% reported that ChatGPT enhanced their understanding of topics by simplifying complex concepts, and 13.95% noted its contribution to vocabulary development.

Overall, the results suggest that ChatGPT can serve as a valuable support system in academic writing when used responsibly. However, the study emphasizes the importance of balancing technological assistance with independent thinking to preserve originality and integrity. These insights reinforce existing literature on the benefits and challenges of AI in education, while offering practical implications for students, educators, and institutions. The findings may also guide future researchers in promoting ethical and effective AI use in academic contexts.

Keywords: Generative Artificial Intelligence; ChatGPT; Academic Writing Performance;

1. Main text

In recent years, Artificial Intelligence (AI) has significantly transformed educational practices by introducing innovative tools that enhance communication and learning processes, particularly in the area of academic writing. Among these tools, Chat Generative Pre-Trained Transformer (ChatGPT), a generative AI model developed by OpenAI, has emerged as a widely utilized resource among students for idea generation, grammatical refinement, and essay organization. Kyambade et al. (2025) emphasize the continuous evolution of AI in fostering personalized learning and interactive communication. Similarly, Estrellado and Miranda (2025) highlight the expanding role of AI tools within the Philippine educational context, particularly in facilitating learning and academic engagement.

Existing literature underscores the relevance of ChatGPT in supporting students with complex writing tasks. Esmas et al. (2024) found that senior high school students are drawn to ChatGPT due to its accessibility and communicative capabilities, enabling them to meet demanding academic writing requirements. Writing remains a fundamental academic competency that cultivates critical thinking, effective communication skills, and career readiness (Hajan, 2025). However, writing proficiency continues to present challenges in the Philippine educational system. The 2022 Programme for International Student Assessment (PISA) results indicated that Filipino learners ranked among the lowest in reading and writing competencies. In response, the World Bank has recommended strengthening literacy and numeracy skills to improve students' performance in international assessments. These findings underscore the urgent need to enhance writing instruction and explore innovative tools that may support student development.

Several empirical studies affirm the positive impact of ChatGPT on students' writing performance. Mahapatra (2024) reported that ChatGPT significantly reduced errors in ESL students' academic writing. Likewise, Esmas et al. (2024) observed that senior high school students who utilized ChatGPT produced more organized and grammatically accurate essays. Khampusaen (2025) demonstrated improvements in grammatical structure, content development, and creativity among EFL learners, while Maghamil and Sierras (2024) identified substantial advancements in syntax, rule application, and topic organization among frequent users.

Despite these documented benefits, concerns regarding excessive reliance, academic integrity, and diminished independent thinking persist. Studies by Ding and Kohnke (2025) and Agbong-Coates (2024) emphasize the importance of examining students' perceptions to ensure responsible and ethical integration of AI in educational settings. Furthermore, AI tools such as ChatGPT may function as "assessment for learning," particularly for second-language learners who encounter difficulties in grammar, organization, and idea development (Khampusaen, 2025; Mabasa & Protacio, 2025). Teng and Huang (2025) further highlight ChatGPT's capacity to enhance academic confidence while raising critical questions about its long-term impact on writing proficiency and strategic thinking.

Although numerous studies have investigated the effectiveness of ChatGPT in improving academic writing, much of the existing literature focuses on college-level students or technical writing outcomes. Limited research has examined the perceived impact of ChatGPT among senior high school students, a group still developing foundational writing and analytical skills. Local studies (Esmas et al., 2024; Khampusaen, 2024) suggest the necessity of exploring how younger learners perceive AI-assisted writing, particularly in terms of motivation, reliance, and ethical awareness.

In response to this identified gap, the present study aims to examine senior high school students' perceptions of ChatGPT in relation to their academic writing performance, including its advantages, limitations, motivational influence, degree of reliance, and ethical considerations. Supported by findings from De La Salle University Integrated School (2024), this research seeks to contribute meaningful insights for educators, curriculum developers, and policymakers to guide the responsible and effective integration of AI tools in secondary education.

METHOD

The research method employed in this study was the qualitative-descriptive survey method, which was designed to gather the perceptions and experiences of a specific group of respondents. This approach was appropriate for the study since it made use of a paper-based questionnaire with open-ended questions that allowed students to express their thoughts in their own words. The instrument was focused on capturing detailed descriptions of the perceived effects of using ChatGPT on academic writing performance. Similarly, on the study of Mahapatra (2024) titled "Impact of ChatGPT on ESL Students' Academic Writing Skills: A Mixed Methods Intervention Study," the qualitative-descriptive component of the research used open-ended questions and narrative reflections to gather detailed insights from students. This approach allowed participants to describe in their own words how ChatGPT influenced their writing processes, particularly in grammar improvement, idea organization, and writing confidence. The study showed that a qualitative-descriptive method is effective in capturing the nuanced perceptions and experiences of students regarding Artificial Intelligence (AI)-assisted writing. To ensure accessibility and convenience, the survey was administered in printed form and answered by hand. This setup gave students the opportunity to reflect carefully on the question and share their personal perspectives, making the collected data more authentic and aligned with the qualitative-descriptive nature of the research.

1.1. Table: The Effects

"It helps to write a paper that is grammatically correct."
"Enhancing academic performance by generating ideas, improving organization, and refining language."
"Nakatutulong na mas mapalawak ang kaalaman o magbigay ng explanasyon sa isang bagay" (It helps broaden knowledge and provide an explanation about something)
"It can teach you various techniques and formats that can help you with your literary performance."
"Nakakapagbigay ideya o mga halimbawa, at mas nakakunawa sa mga tanong na nakalilito" (It gives an idea and examples, and it helps to understand confusing questions)

1. Information Gathering

The findings of the study revealed that 45.35% of Grade 12 Humanities and Social Sciences students perceived ChatGPT as a highly effective tool for information gathering. Students reported that the platform facilitated the acquisition of relevant information, provided supporting details, and generated ideas for their academic writing tasks. Responses such as “give explanations,” “generating ideas,” and “finding answers” indicated that students consider ChatGPT a convenient and efficient resource. These results are consistent with the findings of Blahopoulou et al. (2025), who emphasized that students use ChatGPT as a practical tool to search, understand, and organize knowledge efficiently.

2. Productivity

Approximately 25.58% of respondents indicated that using ChatGPT enhanced their productivity. Students noted that the tool helped them organize ideas, generate drafts, manage time efficiently, and complete school tasks more quickly, contributing to better-structured academic outputs. These findings support the assertions of Fauzi et al. (2023), who highlighted ChatGPT’s role in improving productivity by aiding in time management and resource accessibility. Similarly, Ammari et al. (2025) pointed out that ChatGPT supports deeper comprehension and clarity in academic discourse, which aligns with students’ reports of improved understanding of topics through its explanatory and simplification features.

3. Vocabulary Development

The study also revealed that 13.95% of students believed ChatGPT contributed to the development of their vocabulary. Students’ responses included references to vocabulary expansion, learning new word meanings, and correcting errors in writing. This finding aligns with Alsagoor et al. (2025), who emphasized the tool’s adaptability and immediate feedback, enabling learners to explore word meanings and test usage in context. Likewise, studies by Kohnke et al. (2023), Kasneci et al. (2023), and Ali (2024) confirmed that ChatGPT serves as a supportive language learning aid, enhancing vocabulary breadth, accuracy, and fluency.

4. Understanding of Topics

Around 15.12% of respondents stated that ChatGPT improved their understanding of academic topics. Students indicated that the tool clarified lessons, simplified complex ideas, and provided clear examples that strengthened their comprehension. These findings correspond with the studies of Deng et al. (2024) and Kasneci et al. (2023), which highlighted ChatGPT’s ability to deliver tailored explanations, instant feedback, and simplified discussions, thereby enhancing learners’ grasp of difficult concepts and supporting mastery of academic content.

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