

## Refining Words with AI: ChatGPT in Language Editing for Social Sciences – Graduate Students' Perspectives

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### Abstract

In the evolving landscape of academic research, the integration of artificial intelligence (AI) tools offers unprecedented opportunities to enhance the clarity and precision of scholarly communication. This study explores the utilization of ChatGPT (GPT-4), an AI-driven language model, in the language editing processes of social sciences articles, emphasizing the perspectives of graduate students. Employing a qualitative methodology, this study conducted in-depth interviews with 12 purposively selected participants, analyzing the data through content analysis. The findings unveil four core themes discernible in the evaluation of ChatGPT's impact on refining the language editing processes of social science articles among graduate students, delineating both the potential benefits and challenges: enhancement of writing quality, efficiency and time management, learning tool and learning experience, and impediments and limitations. Despite the significant advantages ChatGPT presents in terms of grammatical refinement and stylistic suggestions, it is advisable to regard it as a supplementary tool in the realm of academic writing. The study's findings have implications for future research into AI's role in academia, suggesting the need for continuous evaluation of AI tools' impact on writing quality, learning experiences, the evolving nature of academic publishing, and beyond.

**Keywords:** Artificial Intelligence (AI), ChatGPT, Language editing, Graduate students, Social sciences

## Introduction

Academic writing constitutes a fundamental component of scholarly research and education, characterized by a methodical approach to articulating thoughts. Employed extensively by researchers and educators in scholarly compositions, it facilitates the presentation of data-driven arguments and coherent rationalizations. This mode of writing is pivotal in enabling readers to gain a comprehensive understanding of a subject. Moreover, it provides authors with the opportunity to conduct in-depth analyses of concepts, culminating in thoroughly elucidated theories or conclusions. The application of academic writing varies across disciplines, serving distinct purposes within each field. For instance, scientists utilize this form of writing to delineate their research methodologies and discuss their findings comprehensively. In contrast, literary scholars employ academic writing to construct critiques grounded in factual analysis and evidence-based interpretations (Akkaya & Aydin, 2018; Wilson, 2019). In the social sciences, academic writing serves as a critical tool for conducting and presenting research. It requires a disciplined structure, typically comprising an introduction that sets the stage for the research question, a literature review that situates the research within the existing body of knowledge, a methodology section that describes the methods of data collection and analysis, followed by results, and a discussion that interprets the findings in the context of the broader theoretical and empirical landscape (Bhattacharjee, 2012; MacDonald, 2010). One of the final and most crucial stages of academic writing is the editing process, which ensures that the argument is not only coherent and well-structured but also polished in terms of language, grammar, and style. This step is indispensable for enhancing the clarity and precision of scholarly communication, making it more accessible and impactful. With the increasing integration of artificial intelligence (AI) tools such as ChatGPT, the editing process is undergoing transformation, offering researchers new ways to refine their manuscripts efficiently while maintaining academic rigor (Chauhan, 2022; Curry, 2024; Srivastava & Agarwal, 2024; Tran et al., 2023).

In this digital age, AI is rapidly transforming the landscape of research across various disciplines, heralding a new era of scientific inquiry and innovation. By harnessing the power of AI, researchers can analyze complex datasets, automate mundane tasks, and generate

sophisticated models and simulations with unprecedented accuracy and efficiency. This integration of AI not only accelerates the pace of research but also enhances the quality and reliability of findings. As AI continues to evolve, it is increasingly becoming an indispensable tool in the researcher's toolkit, offering novel solutions to longstanding challenges and facilitating a deeper understanding of intricate scientific phenomena. This shift towards AI-driven research promises to reshape how knowledge is created, shared, and applied, potentially leading to groundbreaking discoveries and technological advancements (Christou, 2023; Ciaccio, 2023; Khalifa & Albadawy, 2024; Pal, 2023).

Developed by OpenAI, ChatGPT represents a considerable breakthrough in the field of natural language processing (NLP). Departing from the original GPT architecture designed primarily for tasks such as machine translation and text summarization, ChatGPT adopts a generative strategy that facilitates the real-time generation of novel content in interactive dialogues. This feature sets ChatGPT apart from other AI models, including OpenAI's DALL-E, which focuses on creating visual content from textual descriptions. A pivotal characteristic of ChatGPT is its ability to maintain a consistent persona throughout interactions, thereby enhancing the authenticity and continuity of conversations, a marked improvement over more segmented exchanges. This trait arises from rigorous training on an extensive and varied dataset, which includes a wide array of conversational texts such as chat logs, forum discussions, and social media interactions. The extensive training protocol and its unique architectural framework enable ChatGPT to produce responses that closely mirror human conversational patterns, making it a highly adaptable tool across different domains. Remarkably, upon its release to the public on November 30, 2022, ChatGPT swiftly garnered widespread interest, attracting over one million users within just one week, underscoring its considerable appeal. In the realm of education, the deployment of ChatGPT has provoked a range of reactions from educators, pointing to potential shifts in established educational practices. This suggests that ChatGPT's capabilities might influence educational strategies and methodologies, contributing to ongoing debates and discussions within the academic community about the integration of AI technologies in teaching and learning processes

(Klayklung et al., 2023; Lim & Siripipatthanakul, 2023; Roumeliotis & Tselikas, 2023; Shaengchart et al., 2023; Su & Liu, 2023).

ChatGPT has evolved through several versions, each enhancing its capabilities and expanding its potential applications. The initial versions of ChatGPT were primarily focused on generating coherent and contextually relevant text based on user prompts. These versions demonstrated strong language understanding and fluency, but occasionally produced outputs that were overly verbose or factually inaccurate. Subsequent iterations introduced significant improvements in terms of accuracy, fine-tuning the model to minimize biases and ensure more reliable outputs. OpenAI's introduction of GPT-3.5 marked a major leap, offering enhanced contextual awareness and better handling of nuanced conversations. The most recent advancements, particularly with GPT-4, emphasized increased factual accuracy, improved reasoning abilities, and the capacity to engage in more complex tasks, such as code generation, logical problem-solving, and creative writing. GPT-4 also introduced multimodal capabilities, meaning it can process both text and images, allowing for more versatile applications. These versions also incorporate safety mechanisms to prevent harmful or biased outputs, with features like fine-grained user customization and expanded memory to support longer, more dynamic interactions. Each version of ChatGPT builds on the last, refining the balance between generating human-like text and maintaining high standards of ethical AI use (Gandolfi, 2024; KapuŚciński, 2024; Sant, 2024; Yekta, 2024). Table 1 shows the parameters used for training and features of GPT-1, GPT-2, GPT-3, and GPT-4.

**Table 1.** GPT Model Capability Comparison Matrix

	GPT-1	GPT-2	GPT-3	GPT-4
Language Understanding	Limited	Improved	Advanced	Highly Advanced
Text Generation	Basic	Advanced	Very Advanced	Exceptional
Sentiment Analysis	Not Supported	Not Supported	Supported	Enhanced
Text Summarization	Not Supported	Not Supported	Supported	Enhanced
Text Correction	Not Supported	Not Supported	Supported	Enhanced

(Source: Alawida et al., 2023)

Table 1 illustrates the evolution and progression of GPT (Generative Pre-trained Transformer) language models from GPT-1 to GPT-4, comparing five key capabilities across different versions: language understanding, text generation, sentiment analysis, text summarization, and text correction. It shows a clear progression in capabilities, with GPT-1 having limited or unsupported features in most categories, while GPT-4 demonstrates highly advanced or enhanced capabilities in all areas. The comparison reveals how each successive version has brought significant improvements, with a notable jump in functionality occurring at GPT-3, which introduced support for sentiment analysis, summarization, and text correction. GPT-4 represents the most sophisticated version, with "Exceptional" text generation abilities and "Enhanced" capabilities across all other features. This matrix effectively visualizes the technological advancements and increasing sophistication of GPT models over time, highlighting how these AI language models have evolved from basic text processors to highly capable language understanding and generation systems (Alawida et al., 2023).

Kim (2023) discusses the rising interest in AI chatbots, particularly ChatGPT, developed by OpenAI, and their implications in academic authorship. Despite the increasing use of ChatGPT, ethical concerns about attributing authorship to AI in scientific articles have emerged. A publication in *Nature* emphasizes that AI cannot be held accountable for the claims made in scholarly works, highlighting the need for human oversight. Kim illustrates this point through an example where ChatGPT provided a detailed response about the effects of streptozotocin-induced diabetes on bone growth in rats. While the chatbot offered specific references, they were ultimately found to be fabricated, underscoring the risks of relying solely on AI-generated content for factual accuracy. In contrast to traditional paid language editing services, ChatGPT has demonstrated advantages, particularly for non-English speaking authors, by producing refined sentences quickly and for free. However, the article stresses that while AI can assist with language editing, it should not be credited as a co-author, as its primary function is to enhance clarity rather than contribute original ideas. Authors are urged to validate any new ideas generated by AI through empirical research and to disclose the use of AI in their work. Given ChatGPT's propensity to generate misleading information, thorough human review and verification of its outputs are essential before incorporation into academic writing.

Chukwuere (2024) investigates the role of ChatGPT in the current academic landscape, highlighting its remarkable ability to generate human-like text responses. The study explores ChatGPT's impact on various academic tasks, including writing assistance, data analysis, literature reviews, and scientific collaboration. Through a rapid literature review, the research identifies both the benefits and limitations of using ChatGPT in academic research, such as its potential for data collection and collaboration, as well as concerns about plagiarism. The study concludes that, when used responsibly, ChatGPT holds significant promise for enhancing academic research and fostering interdisciplinary cooperation, offering transformative possibilities for the future of scholarly work.

The primary objective of a scientific article is to present new information substantiated by evidence, necessitating rigorous scrutiny of all claims before publication. While authors may utilize English-editing services during the publication process, these services should not receive co-authorship. Employing ChatGPT solely for language editing poses no issues in preparing scientific manuscripts. However, any novel ideas proposed by ChatGPT must be empirically validated, and their results should be independently verified by human researchers. As previously demonstrated, the current version of ChatGPT can potentially produce erroneous information; thus, it is imperative for human authors to thoroughly review and confirm the accuracy of the information produced by ChatGPT before its inclusion in their articles. Additionally, any AI assistance must be disclosed in the publication (Gaggioli, 2023; Kim, 2023). Furthermore, Golan et al. (2023) observe that AI has become a crucial and transformative technology across various sectors. Its applications permeate nearly every field and industry, with academic writing being a particularly dynamic area that has substantially incorporated AI-based tools and methodologies. Kim (2023) notes that many authors, especially those from non-English speaking backgrounds, frequently utilize language editing services provided by various publishers. The study contrasts these traditional paid services with ChatGPT, highlighting that ChatGPT offers significant advantages in certain aspects. Notably, ChatGPT's ability to produce more refined sentences surpasses that of unedited texts. Additionally, ChatGPT can provide edited paragraphs within seconds and is currently available at no cost to users. Despite these benefits, the current version of ChatGPT may generate inaccurate

information. Therefore, it is crucial for authors to rigorously scrutinize and validate the content generated by ChatGPT before its inclusion in scholarly publications, ensuring the integrity and credibility of the scientific discourse.

Despite the increasing integration of AI tools like ChatGPT in academic writing, a significant gap remains in understanding their impact on the specific needs and experiences of graduate students in the social sciences, particularly in Thailand. While existing literature acknowledges the general capabilities of AI in refining language and improving readability, empirical research focusing on the subjective experiences of students actively utilizing these tools is limited. Furthermore, the effects of ChatGPT on adherence to disciplinary editorial standards, especially regarding the articulation of complex ideas and academic rigor, have not been thoroughly examined. In Thailand, where educational standards and the demand for high-quality research are rapidly evolving, graduate students face the dual challenges of clearly expressing intricate concepts while meeting stringent editorial requirements. ChatGPT offers a promising solution by assisting in the refinement of language and structure in academic articles. This study aims to investigate how graduate students in Thailand perceive the effectiveness of ChatGPT in enhancing their writing processes, thereby contributing valuable insights into the evolving role of AI in shaping academic conventions within the social sciences. Through in-depth interviews and content analysis, this research seeks to provide a comprehensive understanding of how AI tools, exemplified by ChatGPT (GPT-4), are reshaping academic writing in this context.

## **Research Objective**

The objective of this study is to explore the effectiveness of ChatGPT (GPT-4) in enhancing the language editing processes of social sciences articles from the perspectives of graduate students.

## **Methodology**

This study employed a qualitative research methodology to explore individual perspectives and experiences regarding ChatGPT usage in academic writing. The essence of qualitative research lies in its ability to provide nuanced explanations for observed phenomena.

Central to this approach is the valorization of open-ended dialogue in interviews, which not only enriches the data pool but also deepens the researcher's understanding of the subject matter (Akyıldız & Ahmed, 2021; Bryda & Costa, 2023). Semi-structured interviews were used to facilitate a detailed and goal-oriented data collection process aligned with the research objectives. This format is advantageous for addressing key research questions while allowing the flexibility to explore specific topics comprehensively. It enables the researcher to guide the conversation, ensuring that discussions remain focused on the intended themes. This flexibility is crucial for maintaining the relevance of the dialogue to the research goals for both the interviewer and the interviewee. The semi-structured format fosters a dialogic interaction, encouraging open and expansive responses that help capture a holistic view of the subject matter under investigation (Islam & Aldaihani, 2022). The interview protocol was carefully crafted to gather perceptions from individuals engaged in language editing for social sciences articles regarding ChatGPT as a facilitative tool. The interviews, conducted in English, were structured around open-ended questions to stimulate detailed discourse. They could be conducted either in person or remotely, with audio recordings used to aid thorough analysis of the discussions. Additionally, the study utilized a documentary method, analyzing secondary data sources to extract primary data insights. This comprehensive methodological approach was designed to deepen the understanding of language editing for social sciences articles and the role of ChatGPT within it. The questions used in the interviews are listed in the Appendix.

Purposive sampling was employed as a strategic method for participant selection, characteristic of qualitative research. This approach involves the selective recruitment of individuals based on the researchers' informed judgment, tailored to meet the specific needs of the investigation (Brod et al., 2009; Zickar & Keith, 2023). Purposive sampling focuses on enriching understanding of a particular group or phenomenon. The study aimed to recruit 12 participants, including social sciences graduate students in Pathum Thani, Thailand, chosen for their direct experience, expertise, and involvement with social sciences articles and ChatGPT. The study's participants were Ph.D. students from different universities, enrolled in a social sciences program. The inclusion criteria specified individuals 18 years or older who are actively involved in language editing for social sciences articles, with recent experience or knowledge

related to ChatGPT (GPT-4). This targeted recruitment strategy was designed to collect rich, contextually relevant data, enhancing the depth and integrity of the study's findings. The interview data were gathered in March of 2024. Table 2 presents the demographic information of the study's participants.

**Table 2.** Respondents' Demographic Information

No.	Gender	Age	Experience with ChatGPT	Academic Level	Program
R1	Male	29	Yes	Ph.D.	Public Administration
R2	Male	32	Yes	Ph.D.	Business Administration
R3	Male	33	Yes	Ph.D.	Economics
R4	Male	43	Yes	Ph.D.	Laws
R5	Male	45	Yes	Ph.D.	Sociology
R6	Male	42	Yes	Ph.D.	Public Administration
R7	Female	29	Yes	Ph.D.	Education
R8	Female	27	Yes	Ph.D.	Psychology
R9	Female	33	Yes	Ph.D.	Economics
R10	Female	34	Yes	Ph.D.	Economics
R11	Female	44	Yes	Ph.D.	Education
R12	Female	28	Yes	Ph.D.	Business Administration

(Source: Authors)

The demographic information presented in Table 2 provides a comprehensive overview of the 12 respondents (R1–R12) who participated in the study. The sample exhibits a balanced gender distribution, comprising six males and six females. The participants' ages range from 27 to 45 years old, with a notable concentration in their late 20s to early 30s, and several participants in their early to mid-40s. All respondents reported having experience with ChatGPT, indicating their familiarity with the technology being studied. In terms of academic qualifications, all participants were pursuing Ph.D. degrees across various social science disciplines. The academic programs represented include Public Administration (2 participants), Business Administration (2 participants), Economics (3 participants), Laws (1 participant),

Sociology (1 participant), Education (2 participants), and Psychology (1 participant). This diverse disciplinary representation within the social sciences provides a rich cross-section of perspectives while maintaining the focus on doctoral-level academic expertise. The even gender distribution, varied age range, and diverse academic backgrounds contribute to a well-rounded sample for investigating ChatGPT's role in academic writing and language editing.

Content analysis was the primary method for data analysis, facilitating the meticulous and unbiased examination of textual, visual, or verbal content. This qualitative technique is instrumental in identifying meaningful patterns, themes, or categories from the data, enabling insightful conclusions and interpretations. The process involved systematic categorization of data, ensuring the validity of the inferences made through inductive reasoning (Finfgeld-Connett, 2014; Shava et al., 2021). Furthermore, to enhance data management and analysis, a word frequency analysis was performed, visualizing the most frequently occurring words to identify key themes and concepts. The use of a word cloud facilitated a more organized and detailed exploration of the collected data, allowing for more accurate navigation of its complexities (Heimerl et al., 2014).

## Results

The participants demonstrated a systematic approach to using ChatGPT for editing their academic work in social sciences. Graduate students primarily utilized ChatGPT for three key editing functions: grammatical refinement, stylistic enhancement, and structural improvement. For grammatical editing, participants would input their draft paragraphs for immediate feedback on grammar, syntax, and punctuation errors. In terms of style, they employed ChatGPT to suggest more refined vocabulary choices and to maintain consistency throughout their documents, particularly in lengthy academic papers. Students reported submitting their work in segments to ChatGPT for real-time corrections and suggestions, which helped them refine their arguments and improve overall document coherence. Moreover, the majority of participants noted using ChatGPT as an iterative editing tool, running multiple drafts through the system to progressively improve their writing. The tool was particularly valuable for non-native English speakers, as it helped them produce more polished sentences quickly. However, participants emphasized their practice of thoroughly



social sciences. The AI's ability to maintain style consistency throughout a document helps in preserving the coherence and readability of lengthy academic papers, which can often become disjointed over multiple revisions.

*“ChatGPT can enhance academic writing by providing immediate feedback on grammar and syntax. The real-time corrections are helpful for catching those common grammatical mistakes. It ensures the text meets professional standards, which is crucial for academic work. Also, ChatGPT substantially improved my papers' readability by suggesting clearer sentence structures and more precise academic vocabulary. Moreover, I found the tool particularly helpful in maintaining consistency throughout lengthy academic manuscripts.”* (A graduate student in Public Administration, interviewed on March 10, 2024).

*“I have utilized the language editing services offered by various publishers. Compared to paid English-editing services, ChatGPT has proven more advantageous in certain aspects. Its ability to produce more refined sentences exceeds those of the unedited versions. It can provide an edited paragraph within seconds and is currently available for free to everyone”* (A graduate student in Business Administration, interviewed on March 10, 2024).

*“ChatGPT suggests better vocabulary, which can make complex ideas in social sciences much clearer and more precise. Plus, ChatGPT helps maintain a consistent style throughout the document. This is so important for keeping lengthy papers coherent and readable”* (A graduate student in Economics, interviewed on March 10, 2024).

## 2. Efficiency and Time Management

The speed with which ChatGPT operates allows graduate students to receive feedback and make corrections much faster than would be possible with traditional human editing. This rapid turnaround facilitates quicker revisions and supports a more dynamic writing process where students can iteratively refine their arguments and structure. The availability of ChatGPT ensures that students can work on their papers at any time, which is particularly beneficial for those balancing various responsibilities or working in different time zones, thus making efficient use of limited time.

*“The real-time feedback on grammar and syntax helped me produce more polished academic work efficiently”* (A graduate student in Public Administration, interviewed on March 10, 2024).

*“We can quickly get feedback on our drafts with ChatGPT. It is much faster than waiting for edits from a human editor. That speed makes a huge difference. It allows us to revise our work promptly, which really helps in refining our arguments and the overall structure of the paper”* (A graduate student in Laws, interviewed on March 11, 2024).

*“The ability to receive feedback at any time is a game-changer, especially with our varying schedules. The 24/7 availability means we can work on our papers whenever we find the time. It is perfect for those of us juggling jobs or in different time zones”* (A graduate student in Sociology, interviewed on March 11, 2024).

### 3. Educational Tool and Learning Process

Beyond mere text editing, ChatGPT serves as an educational tool that promotes ongoing learning and skill development in academic writing. By interacting with this AI, students can gain insights into better writing practices and understand the nuances that elevate the quality of their work. The AI's feedback can act as a continuous learning mechanism, encouraging students to analyze and reflect on their writing style and structure. This aspect of ChatGPT is invaluable as it complements other educational resources such as writing centers or academic advisors, providing a supplementary means of learning that is both flexible and accessible.

*“I've started using ChatGPT not just for editing, but as a learning tool for writing. It is amazing how much you can improve by just interacting with the AI”* (A graduate student in Public Administration, interviewed on March 10, 2024).

*“ChatGPT can give feedback that goes beyond basic grammar. It helps me see better writing practices and understand the nuances that make my writing stronger”* (A graduate student in Sociology, interviewed on March 11, 2024).

*“When I work on a paper, I frequently run my drafts through ChatGPT. It does more than correct mistakes; it provides feedback that helps me understand better writing practices and the finer points that improve the quality of my work. It is like having an interactive guide. It is not just about spotting errors. The AI comments on style and structure, offering suggestions that make you think critically about how your writing flows and how effectively you're arguing your points”* (A graduate student in Education, interviewed on March 11, 2024).

#### 4. Challenges and Limitations

Despite its advantages, the application of ChatGPT in academic settings is not without challenges. One significant limitation is the AI's potential lack of deep contextual understanding, which is crucial in grasping the complex theories and specific jargon of social sciences. This might lead to suggestions that, while grammatically correct, could be contextually inappropriate. An overreliance on AI for editing tasks could impede students' development of critical writing skills and independent thinking. Ethical concerns also arise regarding the authenticity and originality of AI-assisted academic work, compounded by potential risks related to data privacy and the security of sensitive information.

*“Sometimes I worry that it could suggest changes that make sense linguistically but distort the meaning I am trying to convey, especially with nuanced theoretical discussions”* (A graduate student in Public Administration, interviewed on March 10, 2024).

*“It is important to consider how relying too much on AI could affect our own skills. There’s a risk that if we depend on it for everything, we might not develop our ability to critically analyze and revise our work as effectively. It is like using a calculator for every simple math problem; over time, you might find that your basic math skills start to deteriorate because you’re not practicing them”* (A graduate student in Economics, interviewed on March 10, 2024).

*“There are ethical considerations. Using AI in our academic work brings up questions about the originality and authenticity of our writing. How much of the edited work can we claim as solely our own?”* (A graduate student in Economics, interviewed on March 11, 2024)

*“I think we should be more judicious in how we use ChatGPT. It is undoubtedly a powerful tool for certain tasks, but maybe we should limit its use to initial drafts or less critical parts of our work”* (A graduate student in Education, interviewed on March 11, 2024).

*“While ChatGPT is great for grammatical corrections and basic style suggestions, it does not fully grasp the complex theories or the specific jargon we use in our field. The feedback might be technically correct, but it can miss the mark contextually”* (A graduate student in Laws, interviewed on March 11, 2024).

*“It might be best to use ChatGPT as a supplementary tool rather than a primary editing resource. We can benefit from its speed and efficiency without compromising the depth and integrity of our work”* (A graduate student in Psychology, interviewed on March 11, 2024).

## **Discussions and Conclusions**

The qualitative approach adopted in this investigation provides a nuanced understanding of the students' experiences, highlighting both the potential enhancements and the challenges faced while incorporating AI into their academic writing workflows. The study revealed ChatGPT's significant impact on enhancing both the readability and academic rigor of social sciences research articles. In terms of readability, the AI tool demonstrated strong capabilities in improving grammatical accuracy, refining sentence structures, and maintaining stylistic consistency throughout academic manuscripts. Participants reported that ChatGPT was particularly effective in suggesting more precise vocabulary and improving document flow, which enhanced the overall clarity of their academic arguments. Regarding academic rigor, the tool proved valuable in maintaining a consistent scholarly tone and supporting proper academic formatting, though its effectiveness was somewhat limited by its understanding of discipline-specific terminology.

and complex theoretical frameworks. The research showed that ChatGPT's real-time feedback and editing capabilities led to more polished final manuscripts with clearer presentation of ideas and better-organized content. However, the study emphasized that optimal results were achieved when users adopted a balanced approach, using ChatGPT as a supplementary tool rather than a primary editor. This approach involved careful human oversight, regular validation of content accuracy, and integration with traditional editing methods to maintain the authenticity of academic voice while benefiting from AI assistance. While the tool significantly improved technical aspects of writing, participants noted the importance of verifying all suggestions against original meanings and reviewing changes for academic appropriateness, particularly in field-specific contexts. The findings suggested that ChatGPT's effectiveness is maximized when combined with human expertise, creating a synergistic approach that enhances both the readability and scholarly quality of academic writing.

ChatGPT significantly boosts the quality of academic writing by providing instant feedback on grammar and syntax, making it highly effective in identifying and correcting common grammatical errors. This ensures that the writing adheres to professional standards. Moreover, ChatGPT's capability to suggest precise vocabulary helps in articulating complex ideas clearly, which is particularly valuable in the social sciences. Its ability to maintain consistency in style is crucial for keeping lengthy academic papers coherent and readable, even through multiple revisions. The speed of ChatGPT is a major asset, allowing students to receive rapid feedback and make necessary corrections quickly. This is especially beneficial for those juggling various responsibilities or operating across different time zones, enabling efficient time management and flexible working hours. Furthermore, ChatGPT acts as a dynamic educational tool, enhancing students' understanding of effective writing practices and the nuances that elevate the quality of their work. It serves not just as a proofreader, but as an interactive guide that provides valuable insights into writing style and structure. The study's results were consistent with Mahapatra's (2024) findings, which substantiated a notable positive influence of ChatGPT on students' proficiency in academic writing, and students' perspectives regarding this impact were predominantly favorable.

Imran and Almusharraf (2023) also affirmed the substantial role of the AI chatbot, ChatGPT, as a writing assistant across various disciplines. Their analysis and findings underscore that the introduction of ChatGPT heralds a new era of boundless advancements in science, technology, and education. Furthermore, Athanassopoulos et al. (2023) revealed that ChatGPT could serve as a valuable language learning tool and contribute to the teaching process, particularly for students with refugee or migrant backgrounds. Golan et al. (2023) indicated that the adoption of AI-based tools for scientific writing should be more broadly embraced.

However, the application of ChatGPT in academic settings is not without challenges. Its potential limitations in understanding complex theories and specific jargon could lead to contextually inappropriate suggestions. Relying heavily on AI might also hinder the development of essential writing skills and critical thinking. Additionally, ethical concerns about the originality and authenticity of AI-assisted work, along with data privacy and security risks, suggest a cautious approach to its use. The study's findings align with Mondal and Mondal (2023), highlighting concerns about the reliability of ChatGPT and the potential risks associated with its use. An (2024) demonstrated that while the findings demonstrate significant improvements in writing skills and stimulated critical thinking, challenges such as the potential over-reliance on AI tools were also acknowledged.

In conclusion, while ChatGPT offers significant advantages for grammatical corrections and style suggestions, it should be considered a supplementary tool in academic writing. Using it judiciously allows graduate students to leverage its capabilities without compromising the depth and integrity of their scholarly work. Consistent with the suggestions of Mondal and Mondal (2023), it is crucial to maintain human judgment in the writing process and to utilize ChatGPT as a complementary resource rather than a substitute for human effort. Researchers and writers are thus encouraged to ensure the responsible and effective application of ChatGPT in their academic endeavors.

## Research Implications

This study's exploration into the efficacy of ChatGPT in language editing holds significant implications for the academic community, particularly in the realm of scholarly communication. The findings suggest that AI tools like ChatGPT have the potential to catalyze broader adoption within academic circles, offering avenues for enhancing both the quality and accessibility of academic work. For graduate students, in particular, the study highlights promising opportunities for improving writing proficiency and streamlining the article preparation process, thereby reducing the time and effort typically required for these tasks. Moreover, the insights derived from this research could guide the development of AI tools specifically tailored to meet the unique needs of social science researchers, further advancing the integration of technology into academic practices. By elucidating ChatGPT's potential impact on academic writing, this study makes a valuable contribution to ongoing scholarly discourse. The identification of key themes—including improvements in writing quality, efficiency, pedagogical benefits, and the associated challenges—offers a nuanced perspective on the role of AI in language editing. Importantly, the study emphasizes that ChatGPT should be viewed as a supplementary tool rather than a substitute for human expertise in academic writing. This underscores the necessity of preserving human judgment, critical thinking, and deeper engagement with the content, ensuring that AI tools enhance rather than replace these essential elements of the research process. The study's findings also pave the way for future research into AI's evolving role in academia, advocating for the continuous evaluation of AI's impact on writing quality, educational experiences, and the future of academic publishing.

## Limitations and Recommendations for Future Studies

The study's sample size was restricted to only 12 graduate students from Pathum Thani, Thailand, potentially limiting the applicability of the findings to broader populations. Moreover, the specific context of Pathum Thani may constrain the generalizability of the results to graduate students in other geographical locations or cultural settings. Future research endeavors should strive to incorporate larger and more diverse sample sizes

to bolster the generalizability of the findings. Conducting cross-cultural studies in various cultural contexts can provide a more comprehensive understanding of ChatGPT's efficacy in language editing processes across diverse backgrounds. While qualitative methodologies offer valuable insights, they may lack the statistical robustness needed to draw definitive conclusions about the overall effectiveness of ChatGPT in language editing processes. Employing a mixed-methods approach that combines quantitative measures with qualitative methods can yield a more nuanced and comprehensive analysis of ChatGPT's impact on language editing processes. Furthermore, the study's reliance on the subjective viewpoints of graduate students may introduce bias into the findings and interpretations. Additionally, the study's narrow focus solely on the perspectives of graduate students overlooks the insights of other stakeholders such as professors, editors, or language professionals. For future studies, longitudinal studies tracking the usage of ChatGPT over an extended period can offer insights into its sustained effectiveness and any evolving perceptions among users. Additionally, involving a broader spectrum of stakeholders, including professors, editors, and language professionals, in future research endeavors can capture diverse perspectives on the utility of ChatGPT in academic writing.

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