Breaking Barriers in Academic Writing: The Uses of Chat AI Models in Empowering International TESOL Students

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ABSTRACT
This study explores Chat AI, specifically Chat Generative Pre-trained Transformer (GPT), among international TESOL students to enhance academic writing. The research addresses the complexity of academic writing for TESOL students and the potential of Chat AI as a promising tool by investigating perceptions, experiences, and impacts. Previous studies note positive outcomes like increased motivation and creativity but also identify limitations, including occasional inaccuracies. Using purposive sampling, this qualitative study involves five international TESOL students with Chat AI experience. Semi-structured interviews, lasting 15-30 minutes, are conducted in person or through video conferencing, recorded, transcribed, and anonymized for thematic analysis. Findings reveal positive perceptions of Chat AI, highlighting convenience, accessibility, and prompt feedback. Despite benefits in idea generation, vocabulary improvement, and template provision, limitations include occasional inaccuracies and plagiarism concerns. Despite drawbacks, Chat AI is seen as valuable for writing proficiency. International TESOL students view Chat AI positively, appreciating its functionalities. Suggestions include incorporating correct references to address plagiarism concerns and establishing responsible usage guidelines. Continued research is recommended for a comprehensive understanding and broader insights from teachers.

INTRODUCTION
Academic writing stands as a cornerstone in higher education, demanding students to navigate the intricacies of crafting high-quality papers that align with the stringent requirements of their courses. Jabar Al-Atabi (2020) aptly defines writing as expressing thoughts and ideas on paper, capturing the essence of this critical skill. Furthermore, Rahmat et al. (2023) characterize student academic writing as a pivotal evaluation metric for universities, schools, and preparation for advanced education.

International Teaching English to Speakers of Other Languages (TESOL) students, predominantly hailing from outer circle countries where English functions as a second language or lingua franca, confront formidable challenges in academic writing. The overlay of linguistic and cultural barriers compounds the inherent difficulty of mastering this skill. Statistics from UNESCO (2021) reveal a growing trend in the enrollment of international students, emphasizing the increasing importance of addressing the unique needs of this diverse student population in academic writing.

Over recent years, exploring natural language processing has led to groundbreaking developments, exemplified by Chat AI models like Chat Generative Pre-trained Transformer (GPT) from
OpenAI. These models, as envisioned by researchers such as Dergaa, Karim, Piotr, and Helmi (2023), are designed to generate text responses that emulate human conversations, answering queries and serving various functions, including essay writing, research paper summarization, and even computer code generation.

This study explores how international TESOL students harness Chat AI models to elevate their proficiency in academic writing. Beyond merely investigating tool usage, the research delves into students’ nuanced perceptions and experiences engaging with this technological intervention. The socio-economic implications are significant, as proficiency in academic writing directly correlates with improved employment opportunities for international students (Rahmat et al., 2023). Moreover, the study aims to discern the broader implications of Chat AI on academic writing, contemplating its potential impacts and influences. The methodology incorporates in-depth interviews with a carefully selected group of respondents, offering a platform for these students to share insights from their firsthand encounters by employing a qualitative research approach.

The inquiry harbors the intention of shedding light on the transformative role that Chat AI models might play in dismantling the barriers international TESOL students face in academic writing. By unraveling the intricacies of these students’ interactions with AI-driven writing assistance, the study endeavors to contribute valuable insights to the discourse surrounding the convergence of technology and language learning.

LITERATURE REVIEW

Academic Writing

Writing poses a considerable challenge for international students, transcending mere linguistic hurdles. This cognitive activity demands intricate thinking encompassing the evaluation of content, form, sentence structure, vocabulary, pronunciation, and spelling, as highlighted by Mursyid (2023). Moreover, Mursyid (2023) emphasizes that the difficulty in writing extends beyond the generation and organization of ideas to the creation of coherent and comprehensible texts.

Academic writing is indispensable for Teaching English to Speakers of Other Languages (TESOL) students. Fang (2021) underscores the significance of academic writing as a means for formally expressing ideas bolstered by support from researchers. It is not merely about stringing words together but involves a meticulous process of logical sequencing and proper construction. As elucidated by Fang (2021), academic writing is a dynamic process encompassing the creation, sharing, assessment, and dissemination of knowledge and ideas within academic domains. Therefore, Proficiency in academic writing bestows the TESOL student a sense of influence, power, and control within the expansive realm of knowledge.

As TESOL students grapple with the complexities of academic writing, the multifaceted nature of this skill becomes apparent. The challenges extend beyond linguistic nuances to encompass the strategic arrangement of ideas and adherence to formal conventions. Fang’s (2021) insights provide a contextual understanding, positioning academic writing as a requisite skill and a conduit for intellectual empowerment. Recognizing the broader implications of mastering academic writing, TESOL students can navigate the academic landscape more effectively, contributing meaningfully to the scholarly discourse.

Chat AI

Chat AI was promising to aid in academic writing. It is made to give detailed responses to answers and questions. Although it is meant to talk like a person, many users have found it useful for academic writing, stories, poems and more. Golan et al. (2023) confirm that Chat AI has become the most important technology, especially in academic writing, with the most rapid development. More researchers are now studying the possibilities of using chat AI in academic writing. In the study of Utami et al. (2023), they provide perceptions on using Artificial Intelligence in teaching academic writing among Indonesian students. They proved that AI may help students in the initial writing stage, such as planning, developing topics, and creating a draft.

Further, AI can be accessed anywhere and anytime, proving to be a flexible program for students. The researchers additionally state that AI positively impacts the teaching and learning process through the excitement AI provides, which makes students more motivated. However, Utami et al. (2023) clearly
state that the program would still need more research to improve its features, and while there are positive impacts, the quality of students’ writing has not improved. In addition, the originality and accuracy of the AI’s output need to be further inspected.

Sumakul et al. (2022) observed that using AI in the teaching-learning process positively impacts EFL students in Indonesia. The students perceived that AI is a big help in the writing process as it assisted them in creating their short story’s theoretical concepts, writing process, and language. Besides, the students found it helpful in building creativity and imagination as they could change inputs and prompts and try different results. Moreover, Sumakul et al. (2022) explain that in a face-to-face class, students tend to shy away from asking teachers questions, while when using AI, they are more confident. In addition, students were more enthusiastic to learn while using AI, indicating that AI can be a helpful program to motivate students to write more.

Sumakul et al. (2022) allege that AI may sometimes confuse students despite its benefits. Instances when AI generated unrelated parts of the story and similar story patterns were observed, which made the story uncoherent and unnatural. The researchers further concluded that technology could aid writing, but teachers must assist students. To improve writing proficiency among the EFL students in Hassan Abu Bakr’s government language school in Egypt, Abdalkader (2022) investigated the impact of using multiple artificial intelligence (AI) platforms on writing fluency. They have concluded that using AI was effective in enhancing the components of writing fluency. The students prefer using AI as a supportive learning environment as they can learn in a relaxed and successful manner. Accordingly, it was also observed that AI has enhanced rapport among learners as they have the chance to interact using AI.

Further, they asserted that most students have enjoyed using AI as it promotes active learning. However, Abdalkader (2022) insist that AI will not replace teachers or the social interaction they provide. Further, AI can be a part of the lesson to aid the teaching and learning process as gamifications.

The researchers also suggested that writing fluency can be integrated into oral and writing activities through different applications. Additionally, teachers must be aware of existing AI models that may be used in consonance with the learners’ needs and goals. Existing research indicates that Chat AI models can be an effective tool in improving academic writing. However, further research must be considered to fully understand the specific opportunities and threats before integrating them into the TESOL program so students can break the barriers in academic writing.

METHODS

The study used a qualitative method. Since international TESOL students were just a few, purposive sampling will be used by selecting five students from the total eight in their second and third trimesters. There is a chance that students may not have used Chat AI and may have no idea how to use it. Purposive sampling was used to amend the situation in which the researcher had to identify students with in-depth knowledge of Chat AI models. Purposive sampling is a technique where the researcher decides who among the population can be respondents proficient and knowledgeable of the topic selected (Etikan et al., 2016). The study will employ a semi-structured interview in person or through video conferencing. It will last for approximately 15-30 minutes. Further, it will be audio-recorded with the student’s consent to ensure accurate data collection and analysis. The recorded data will be transcribed and anonymized for research purposes.

The recorded interview will be transcribed verbatim and analyzed using a thematic analysis. The researchers Dawadi (2021) and Braun and Clarke (2012) described the thematic analysis involving identifying and organizing themes and patterns. In addition, the researchers described the thematic analysis as a series of phases, including Familiarization of data, generating initial codes, Searching for themes, Reviewing themes, Defining and naming themes, and finally, Writing reports. The phases allow the researcher to gain a coherent and comprehensive data analysis.

RESULTS AND DISCUSSION

The data collected from the semi-structured interviews with international TESOL students who have used Chat AI models for academic writing were carefully reviewed, coded with the help of Atlasti23, and themed following the thematic analysis process. It will provide an understanding of the use of Chat AI models in empowering students’ academic writing.
Perceptions of International TESOL Students

Convenience and accessibility were deemed the most appealing attributes of chat AI in this study. Respondents perceived that chat AI is helpful and efficient in improving writing as they compared search engines with chat AI. While it also cited that they are confident in asking chat AI rather than an actual person, there were some hesitations due to possible plagiarism issues. However, most respondents explored how chat AI can improve their writing. Respondents were initially captivated after their first try with Chat AI, and most of them were surprised, amazed, and curious about the things it can do and how efficient it can be in searching. As one respondent mentioned, "My friends told me about it. I find it very useful when I struggle with my assignments." The respondents conveyed that their initial acquaintance with Chat AI models, specifically Chat Generative Pre-trained Transformer (GPT), originated from recommendations provided by friends. This introduction to the technology coincided with a period when the respondent grappled with challenges in their academic assignments. The reference to "difficulties with assignments" implies that the respondent encountered obstacles or complexities in their coursework, leading them to explore alternative support means. The respondent's favorable view of Chat AI as a valuable tool for overcoming academic challenges becomes apparent. This positive outlook suggests that the respondent deems Chat AI a resourceful solution to the difficulties encountered in their assignments. This statement underscores the significance of peer influence in acquainting individuals with innovative tools like Chat AI. Qadir (2023) conveys that technology played a practical and beneficial role in aiding the respondent with their academic tasks. Lund and Wang (2023) emphasize the pragmatic utility of Chat AI in effectively addressing specific academic challenges, thus showcasing its potential as a valuable resource for students navigating complexities in their coursework. Also, Utami et al. (2023) agree that their students were motivated to use Chat AI to improve academic writing.

One of the good things that most respondents pointed out is the immediate feedback, which they perceived as highly valuable since they can make immediate revisions and ask multiple customized questions as long as possible. It aligns with the study of Sumakul et al. (2021), where they found that students were more confident and enthusiastic to ask questions using AI. Also, Cotton et al. (2023) stated that the immediate feedback feature is recognized as a significant strength of Chat AI, amplifying its efficacy as a supportive tool for users needing real-time guidance and assistance. Additionally, Utami et al. (2023) stated that since Chat AI is internet-based, it can be accessed anytime and anywhere for convenience.

Chat AI has also been compared to other search engines where they find the former directly, specifically in providing answers to academic questions. Respondent A cited, "It’s easier to use than Google since it’s very specific. When you ask questions, the answer you get is very specific to the questions, unlike Google, you have so many choices of websites". The respondent expresses a preference for Chat AI over the Google search engine. The respondent highlights the ease of use of Chat AI due to the specificity of the answers it provides. According to Biswas (2023), when posing questions, the received answers are very specific to the inquiry, in contrast to the experience with Google, where there are numerous choices of websites. Also, Pavlik (2023) values Chat AI’s ability to offer focused and tailored answers, highlighting the technology’s excellence in providing accurate and directed solutions.

However, some hesitated to use it after some precautions from the teachers, especially about plagiarism, which Turnitin can scan. One respondent even cited, "I am afraid of using it after the school emailed me that my assignment has been created using Chat AI." In this statement, the respondent conveys discomfort regarding using Chat AI after receiving an email from the school stating that their assignment was created using Chat AI. This statement reflects the respondent's concerns about the implications of using Chat AI in an academic context. The respondent expresses concerns about academic integrity, which may be related to the school's policies regarding using assistive technology in assignment creation. The discomfort expressed may stem from ethical considerations or concerns about potential violations of academic policies. Biswas (2023) noted that some individuals may feel apprehensive about legal, security, or academic integrity when using technologies like Chat AI. Thus, a
clear understanding of school policies regarding such technology can help address concerns and clarify applicable limitations (Yan, 2023).

Surprisingly, they have explored how to use it to aid in making assessments, especially in academic writing. A respondent said, "Grammar correction and vocabulary suggestions were among the most convenient." Another indicated, "Sometimes what you are doing is very simple, but ChatGPT can suggest better and more formal words that you can use in assessment, and it is well-structured, too." These statements collectively underscore the valuable role of ChatGPT in refining language usage, offering improved vocabulary choices, and structuring content that aligns with academic standards. The respondents' remarks indicate a positive perception of ChatGPT's capabilities in assisting with language enhancement, particularly in grammar and vocabulary refinement scenarios for academic assessments. Overall, respondents have positive perceptions of chat AI in improving writing. Chat AI presents opportunities for improving academic writing skills. Its effective integration requires careful consideration of ethical, academic, and practical implications (AlAfnan et al., 2023). Continued research and educational initiatives can further explore and refine the role of Chat AI as a supportive tool in the academic writing process.

**The Use of Chat AI**

It can be observed that chat AI has aided respondents in academic writing. A common problem among students in writing is using accurate vocabulary and correct grammar structure, but chat AI has solved these problems. Generating ideas and topics is useful during the start phase of writing. Using templates and suggestions makes academic writing less stressful and motivating. It is a consensus from the respondents that Chat AI is helpful, with the uses it provides to the students, for instance: "Chat GPT is like very helpful, you know doing any sort of assignment especially that we are in master's degree, and we have limited time." In this statement, the respondent expresses that Chat GPT is highly beneficial, particularly when dealing with various assignments at the master's degree level where time constraints are a significant factor. The mention of being at the master's degree level underscores the complexity and demanding nature of the academic workload at this level. The respondent highlights the time limitations associated with master's-level studies, indicating that Chat GPT is crucial in optimizing efficiency and addressing the challenges posed by tight deadlines. Imran and Lashari (2023) reveal the practical utility of Chat GPT as a time-saving tool that aids master's degree students manage their assignments effectively. Also, Baskara (2023) reflects a positive perspective on how technology, specifically Chat GPT, can contribute to the academic success of students facing advanced and time-sensitive coursework.

Chat AI provides a range of uses in academic writing among international TESOL students. These were grammar corrections, sentence structuring, and generating ideas for assignments. Respondent D also pointed out, "It gives us so many ideas. It provides many ideas and topics related to the topic searched." Respondent B also conurs, “For me, the results serve as a guide in doing academic writing, so at least Chat AI provides ideas on the topic." In those statements, the respondents highlight the expansive and idea-generating capabilities of Chat GPT, emphasizing its role in providing a wealth of ideas and topics relevant to the user's search. The respondents suggest that the technology goes beyond simple information retrieval, actively contributing to generating novel concepts and topics. This specificity enhances the relevance and applicability of the generated ideas, making them directly pertinent to the user's area of interest or inquiry. Sumakul et al. (2021) reflect a positive experience with Chat GPT's capacity to inspire and broaden the user's perspective by providing diverse ideas and topics. Abdalkader (2022) also mentioned that students may use Chat AI in the initial writing stages, where topics and ideas provided by Chat AI can be helpful. Ali et al. (2023) highlight the tool's potential to serve as a creative catalyst and a valuable resource for users seeking inspiration and content for various purposes.

It can also be observed that Chat AI has provided them with templates and suggestions. It, in turn, makes academic writing less intimidating and further motivates them to tackle assignments. "Chat GPT provides me with an introductory statement, so what I did I applied it. The format provided helped me make a proper paper" quoted from a respondent. The respondent has utilized ChatGPT to craft an introduction or background statement within a specific context, and the format provided by ChatGPT has assisted the speaker in correctly composing papers or writings. The respondents wish to convey that they employed
ChatGPT to formulate introductory statements or background information. Ali et al. (2023) stated that ChatGPT might provide a format or basic framework that aids the respondents in organizing their text or papers in a manner that is appropriate and accurate. Chat GPT is a valuable tool for organizing introductory statements or background information (Roe et al., 2023). By providing a structured format or foundational framework, ChatGPT facilitates the user in composing their texts or papers in a manner that is both suitable and accurate (Abdalkader, 2022). The utilization of ChatGPT in this context implies a streamlined and efficient approach to the composition process, where the tool's capabilities contribute to the clarity and appropriateness of the generated content (Hwang et al., 2023; Ali et al., 2023).

Respondent E also reported that Chat AI can be used in other ways, for instance: "I used it to summarize ideas in an article since I don’t like to read. Everything is easy since I don’t need to go through all the pages.” In this interview statement, the respondent uses a tool, presumably ChatGPT, to summarize ideas from an article. The reason for employing this tool is a personal aversion to reading, indicating a preference for a more efficient and convenient way to grasp the content. By utilizing the tool for summarization, the interviewee highlights the ease it brings to the process, emphasizing the avoidance of going through all the pages of the article. Su et al. (2023) suggest a preference for a concise and time-saving method of obtaining information, demonstrating how technology can be harnessed to streamline content consumption for individuals who may find traditional reading less appealing or time-consuming.

**Limitations**

Respondents find Chat AI quick and specific to queries deemed reliable. However, since it is an emerging program, drawbacks and limitations exist. Most of these are wrong and repeated answers and lack reliable references. It has been observed that as respondents further use chat AI, they also observed that they need to improve their questioning skills to get the right answers. Altmé et al. (2023), Abdalkader (2022), Sumakul et al. (2022), and Utami (2023) all agreed to some inaccuracies and mistakes in the response generation, which aligns with this study, for instance: “Chat AI did not give the correct answers, and sometimes it is too general.” The respondent expresses dissatisfaction with Chat AI, pointing out two specific issues. First, the respondent mentions that Chat AI did not provide accurate answers, indicating a perceived lack of precision or correctness in the responses generated by the system. Second, the respondent notes that the AI’s responses are sometimes too general, suggesting that the information may lack specificity or detail. This feedback highlights potential limitations in the accuracy and specificity of the Chat AI’s responses, pointing to areas where improvements may be needed for a more satisfactory user experience.

But then again, there was also the issue of respondents asking the wrong questions, which would eventually lead to providing wrong and unreliable answers. Chen (2023) asserted that there is an art to typing these precise words and framing them so Chat AI will provide quality answers. It was in concurrence with the respondents’ experience when they observed that Chat AI repeatedly gave the same answers, but when asked properly, it gave the correct answer. For instance, respondent E asserted, “Chat AI gives repeated answers to my questions, so I asked again until it gives the correct answer.” Another statement from respondent B: “There are times that you are confused about the right word to use when asking Chat AI. So probably Chat AI is also confused with my question, and it doesn’t give the correct answer.” From the statements of the two respondents, it can be concluded that several challenges are encountered in using Chat AI. Respondent E highlights the issue of repeated answers provided by Chat AI, necessitating them to inquire until they repeatedly obtain the correct response. Meanwhile, respondent B points out confusion in word selection that may impact Chat AI’s comprehension of the questions, ultimately resulting in inaccurate answers. This further shows that proper structuring of questions is crucial.

There were also concerns about the potential of relying too much on Chat AI and the risk of plagiarism since no references were provided. The respondents were asked: “What aspects of academic writing could be improved by chat AI?” They concur that there is room for improvement in Chat AI, particularly in enhancing the reliability of its responses through the incorporation of dependable references.
Impact on Writing Improvement

The experiences of respondents showed that there were positive impacts on their writing. Using chat AI, the respondents were inspired to write as it provides ideas and topics, making writing easier, especially during writing blank syndrome. They all agreed that Chat AI can provide vocabulary enhancement. They reported learning new words and phrases through suggestions and corrections. The researcher asked, "Were there any changes in your writing upon using Chat AI?" Respondent A answered, "Yeah, somehow, because of the suggestions it provides, you can enrich your vocabulary," respondents B and D agreed with A, adding that it provides more scholarly words. Respondents C and E emphasize that they must improve how they write the questions to get the correct answer.

It was also inferred that there is grammar improvement since Chat AI has identified and corrected errors in their writing. During the interview, respondents were asked: “Can you describe any instances where you felt the feedback or suggestions provided by Chat AI Models were particularly helpful?” Respondent A replied: “Yes, so just like I mentioned a while ago, it can give you a correct answer and sentence structure. If you are making an assessment, you need to type something verbatim, which will give you suggestions for correct grammar and vocabulary.” The respondents concluded that the grammar corrections series helps them learn more.

CONCLUSION

This research focuses on utilizing Chat AI models among international TESOL students enrolled in the Master of Arts TESOL program at a private higher education institution in Sydney. The study reveals a positive perception among students regarding Chat AI’s role in academic writing. Students appreciate its convenience, accessibility, and efficiency in improving writing skills compared to traditional search engines. The customization of questions adds to its appeal, and respondents feel more confident seeking immediate feedback and guidance from Chat AI.

Various applications of Chat AI in academic writing were identified, including idea generation, template provision, suggestions, sentence structuring, and grammar corrections. These functionalities alleviate the stress associated with academic writing, motivating proactive engagement in assessments. However, concerns about plagiarism were noted due to the lack of credible references. Respondents acknowledged occasional inaccuracies but emphasized the importance of properly structured questions. As Chat AI continues to evolve, ongoing research is essential to understand its long-term impact. The study’s focus on TESOL students suggests the potential for broader respondent pools, and insights from educators could enhance findings. To address concerns about plagiarism, incorporating a feature providing correct references could enhance Chat AI’s reliability. Recognizing its utility, educational institutions may establish guidelines for responsible use, and targeted training could educate students on proper program utilization. The study’s insights are valuable for researchers, students, educators, curriculum developers, and policymakers.

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REFERENCES


