

Utilizing ChatGPT in Academic Writing: A Literature Review

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ABSTRACT

This literature review focuses on documenting the perceived potentials and risks of utilizing ChatGPT in academic writing by providing an in-depth exploration from available studies online or in print. Through this literature review, the researcher aimed to provide a research-based insights towards the integration of ChatGPT in education settings. In line with this, this paper may assist educators, students or related stakeholders to have a sound judgement, critical analysis and objective perception on utilizing ChatGPT in the field of education

INTRODUCTION

With the emergence of various artificial intelligence (AI) tools, especially in the academia, investing rigorous research is a must to ensure how educators and related stakeholders may maximize the integration of these AI tools in innovating the quality of education for the 21st century learners.

As the generation is continuously advancing, integration of technology is no longer new to the field of teaching and learning. Every year, the use of AI is getting more rampant and everyone feels the rapid change everywhere, most especially in the academic setting. One of the famous tools that most students use in academic writing is the ChatGPT.

ChatGPT is a kind of AI chatbot that simulates human speech through natural language processing. It responds to any queries, may write emails, compose various contents such as social media posts, articles, essays and alike. It has become an important and increasingly popular technology in various industries due to its advanced natural language processing capabilities and ability to provide personalized interactions with users (Pur War, 2023). It is a free app and available to everyone who wants to access it. Although it also has the more advanced version which needs a subscription, it is called ChatGPT Plus. It makes the lives of the people easier and assists with everyday tedious tasks (Otis, 2024). However, there are concerns about the potential negative effects on using ChatGPT in academic writing such as risk of plagiarism, negative impact on critical thinking, creative authenticity, emotional understanding, accuracy, privacy, initial setup complexity, over-reliance and a lot more (Ngoma, 2023).

ChatGPT, which has become famous not only in the Philippines but also in the global scale, has caught the attention of many. People from different professions and industries, including educators and students, have seen how this innovation aids in various tasks. Even though this is the case, the utilization of this technology garnered different opinions on its benefits and disadvantages.

This paper attempts to provide a comprehensive literature review to aid educators in perceiving ChatGPT as a potential assistive tool in academic writing.

LITERATURE REVIEW

A great number of researchers have studied and proposed every year the importance of technology progression, the effect and the use. There is still a lot to study because of its wide range, especially that every year there are new apps that are being created. Moreover, the evolution of technology can be seen anywhere, especially in the education field. Although the literature covers an extensive range of theories, the following related literature reviews will focus more on the utilization of the ChatGPT in academic writing, the challenges that the student might face, its proper usage, and its strengths and weaknesses.

Potential Advantages of Using ChatGPT in Education

OpenAI created a natural language processing (NLP) model called ChatGPT. ChatGPT was initially created for language generating activities intended for translating and summarizing. Compared to other artificial intelligence tools, ChatGPT provides new ideas and has a conversational style with a consistent identity that gives answers related to the user's questions

(Brown et al., 2020). Thus, it may resemble that as if the user is virtually conversing to someone who may assist them in some tasks.

ChatGPT rapidly gained popularity on a global scale because of its unique features. It can understand vast human topics and provide coherent and contextually relevant responses, it develops a high level of adaptability through continued interaction allowing it to generate accurate and relevant information. Moreover, the versatility of ChatGPT which can be applied to various tasks such as journal writing, translation, customer support, and content creation, makes it valuable in almost all domains and industries (Seminck, 2023). In connection with this, one may infer that this a form of a multi-purpose AI tool despite the main objective, as stated earlier, that it is only intended for translating and summarizing. Thereby, the usage of ChatGPT may be mostly observed in writing-related tasks.

METHODOLOGY

Students from over 100 universities in Ghana had an extremely good response to ChatGPT. They utilized ChatGPT for its convenience, accuracy and higher academic achievement (Bonsu & Baffour-Koduah, 2023). Notably, the awareness of students' utilization of ChatGPT comes from social media, especially Tiktok, and not from educational contexts. The ability of ChatGPT to write a whole essay, answer online examinations and respond to open-ended questions suggest that educators need to educate their students about the ethical usage of ChatGPT to know their limitations and errors. The growing popularity of ChatGPT through various social media platforms makes it accessible to the public, especially anyone who is active in social media. With this, there might be a continuous growing population of its users. As such, social media discourses about the existence and utilization of ChatGPT may be deemed pivotal in advocating for its role in different contexts such as in the education sector.

In the field of teaching and learning, the emergence of ChatGPT has aroused diverse views among educators because its potential applications could revolutionize existing educational approaches (Baidoo-Anu & Ansah, 2023). ChatGPT has brought a lot of impact to students' education to learn in various ways. First, it offers individualized and accessible assistance for students' inquiries as well as get feedback on academic topics (Caratiquit & Caratiquit, 2023). Moreover, ChatGPT quick prompt responses can address students' academic issues and encourage continuous learning experience (Ekin, 2023). Furthermore, it provides study guides, book recommendations, resources and websites relevant to students' needs and interests to better grasp the lessons (Cotton et al., 2023). Therefore, in the emergence of ChatGPT, especially in the academe, studies found that the said AI tool may provide scaffolding for both teachers and students.

RESULTS AND DISCUSSION

Potential Risks of Using ChatGPT in Writing

Despite the potential benefits of ChatGPT in the educational sector, there are also few challenges that students face in maintaining academic integrity and originality in writing tasks when utilizing ChatGPT. First, a higher possibility of plagiarism, an artificially generated essay can be used by students to cheat and submit as their own work which contradicts the purpose of educating students (Dehouche, 2021). Students who purposely violate academic integrity in the past through the use of contract cheating or paper mills will likely not hesitate to use ChatGPT or other AI tools, but other students will need guidance on how to avoid inadvertently cheating (Barrett & Pack, 2023). Students' perceptions on academic dishonesty have historically been unclear or incomprehensive and rarely aligned with teachers' expectations (Tantum, 2022). Despite the acknowledged benefits of ChatGPT, numerous researchers also stated that it has its own risks, especially when the utilization is not ethical leading the students to potentially commit academic dishonesty.

Improved learning outcomes, ability to work with a variety of assessment tasks, ability to evaluate writing tasks, provide feedback, and moderate success in exams were identified as the strengths of using the ChatGPT. Meanwhile, decreasing critical thinking, performance differences between subjects, and lack of insights in all types of assessment tasks were pointed as the weakness of using it. It can be used as students scaffolding for assessment tasks; however, cheating, gaining advantage in exams, and difficulties in building performance assessment models were considered threats to using ChatGPT in teaching and learning (Mai et al., 2024). In addition to these challenges, the utilization of chatbot systems can affect some students' skills that they need to learn such as critical thinking skills, creativity, and collaborative thinking skills which includes their ability in creative writing. This may become a barrier to the education sector to foster and develop their cognitive and creative writing skills (Shidiq, 2023).

Learners of all ages face a great deal of competition for their time, and some may be tempted to cheat by, perhaps, using an artificial intelligence program to compose their initial copy, whereas such a problem could be prevented through human creativity (Keller, 2023). Thus, students will have to be cautious when using ChatGPT, especially if they want to obtain information. In this context, teachers must clearly establish that ChatGPT, like any other AI tools, is just a tool that may assist the students but it is not the end-all.

According to the study conducted by Klayklung et al. (2023), overreliance on ChatGPT may lead to a lack of creativity, critical thinking and problem-solving skills which destabilize the originality of students' work. It is significant that students are aware that ChatGPT is a supplement tool for their creativity and originality rather than a substitute for them. As much as ChatGPT may provide feedback on any written output and make it sound like it is from a person, we must be reminded that ChatGPT is a form of AI. As an AI tool, ChatGPT may lack necessary skills to actually train its users in terms of critical and creative thinking skills if being compared to an actual teacher.

Another challenge is that students assume that ChatGPT provides credible sources of information. ChatGPT is not designed to produce credible sources but

it is programmed to provide relevant information to generate plausible-sounding text. (May, 2023). Some students are unaware that ChatGPT is not an internet search engine or a reliable source of information. With the majority of students using ChatGPT for the homework assistance and exam preparation they have seen to be exceeded in academic performance. In most cases even when they don't verify the answers provided by ChatGPT they still use it rather than researching on their own (Pawar et al., 2023).

Studies of Khalil & Er (2023) and Rudolph et al. (2023) stated that ChatGPT can be both exciting and scary especially when utilized in educational institutions. There are numerous concerns being raised wherein ChatGPT is deemed to potentially stop the executive functioning of many individuals. Therefore, one may infer that since ChatGPT is an AI tool, it is actually based on its users whether this AI tool will provide something beneficial or otherwise. Since many studies recognized both the benefits and its potential risks, ChatGPT may, therefore, be perceived differently in terms of various contexts and different reasons for its usage.

According to the study conducted by Firaina and Sulisworo (2023), most of the lectures have a positive response about the advantages of brought by ChatGPT and it allows them to overcome challenges related to their English proficiency, facilitate the translation of scientific articles, and stimulate idea generation tailored to their specific needs. However, there were limitations on the utilization of ChatGPT and the need to critically evaluate the information and to use it selectively, critically and ethically. In connection with this, the role of integrating AI technology, such as ChatGPT, is crucial in modernizing the educational system; however, educational stakeholders must be cautious on using it since it may positively and negatively impact the teaching-learning process.

ChatGPT in Philippine Education

In the study of Caratiquit & Caratiquit (2023), ChatGPT is found to be an academic support tool, learning motivation, and may assist students' academic performance. The recognition of its mediating role to learning motivation may give in-depth insights for educational professionals and policymakers to develop effective interventions that utilize AI-based tools to strengthen students' motivation and result in improved academic performance. Thus, based on these findings, ChatGPT is deemed to have a significant part towards the learning experience of the students, not just only content-based learning but at the same time providing student motivation.

However, concerns raised by educators regarding ChatGPT that students may be tempted to download and use it in writing their papers to complete their requirements. Some believe that this user-friendly tool could spark a "cheating epidemic" in schools. Educators and institutions concerned with these tools come for two reasons; first, these artificial intelligence tools such as ChatGPT may promote academic dishonesty, and second, they may contribute to the growing number of students who lack critical thinking skills, who are unable to reason independently and lack of judgment (David, 2023).

The versatility, usefulness and convenience in academic activities of ChatGPT paved the way for its rapid popularity in Philippine educational institutions. However, a considerable number of concerns from educators about ethical issues, plagiarism, loss of students' integrity and originality and overreliance on technology have become a big challenge in education (Robledo et al., 2023). According to the study conducted by Dalan (2023), despite the potential advantages of artificial intelligence integration in Philippine education, there are several challenges and limitations that need to be addressed, such as ethical concerns, technological limitations and pedagogical considerations.

Another study conducted by Fabella (2023), on 88 first-year college students from a private higher institution in Rizal towards their attitudes on the positive and negative features of ChatGPT, the positive features of ChatGPT are viewed by students as moderately agreeable, particularly the statement "ChatGPT enables users to make additional adjustments to their questions till they are happy with the response" which gained the highest weighted mean. Nevertheless, the negative features of ChatGPT are viewed by students as moderately agreeable, particularly the statement "Chat GPT can be prone to mistakes," which received the highest weighted mean. The results of this study indicate that ChatGPT is not totally beneficial to students since the latter indicate that students agreed to its negative features.

CONCLUSION AND RECOMMENDATIONS

The significance of the paraphrasing technique and summarization in effective academic writing, encompassing understanding, analyzing, synthesizing and evaluating source material, as well as selecting information, organizing papers, and revising work stressed by Regala-Flores & Lopez (2019). This research delves into the cognitive and metacognitive dimensions of these activities, exploring the student's perspectives. The study found out based on the essays from 120 freshmen undergraduates at a Manila-based university that most of the participants have limited English proficiency, inadequate reading comprehension skills, insufficient vocabulary, and suboptimal documentation practices. Their findings provide insights for the development of pedagogical interventions and classroom instructions targeting the identified challenges faced by second language (L2) students in the realm of paraphrasing and summarizing.

In the study of Obenza et. al. (2023) revealed a moderate level of concerns among university students in Region XI. The findings have a solid propensity for incorporating generative artificial intelligence technologies, particularly ChatGPT, into their learning and educational practices. The study also underscored the impact of generative AI on various aspects including assignments, social interactions during coursework, problem solving, and leadership skills, as well as potential over-reliance on generative AI technologies. Overall, the study found a positive perception towards the utilization of generative AI technologies such as ChatGPT.

ADVANCED RESEARCH

This literature review paper only aims to provide a thorough documentation of the status of ChatGPT in educational institutions particularly when being perceived as an AI tool for academic writing. In this way, the paper provided numerous studies to identify the potential advantages and disadvantages of ChatGPT as well as its implication to Philippine education. As such, the researcher recommends future researchers to explore the lived experiences of ChatGPT users, be it educators or students, to produce an in-depth discussion towards the role of ChatGPT in academic writing.

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