

APPLYING CHATGPT AS A NEW BUSINESS STRATEGY: A GREAT POWER COMES WITH GREAT RESPONSIBILITY

Pongsakorn Limna^{*}, Tanpat Kraiwanit^{**}, Kris Jangjarat^{*},
Yarnaphat Shaengchart^{*}

^{*} Faculty of Economics, Rangsit University, Pathum Thani, Thailand

^{**} Corresponding author, Faculty of Economics, Rangsit University, Pathum Thani, Thailand

Contact details: Faculty of Economics, Rangsit University, 52/347 Phahon Yothin Road, Muang Eke, Pathum Thani 12000, Thailand



Abstract

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ChatGPT (Generative Pretrained Transformer) is currently the most sophisticated chatbot. It can create impressive prose in seconds, unlike other chatbots, and it has generated a lot of hype and doomsday predictions when it comes to student assessment in higher education and a variety of other topics (Rudolph et al., 2023). Nonetheless, despite its impressive capabilities, various reports on ChatGPT have consistently revealed significant remaining challenges (Bang et al., 2023). This study aims to explain the advantages and disadvantages of ChatGPT. A qualitative approach was conducted. In-depth interviews were used with ten key informants, employing purposive sampling. Content analysis and NVivo were utilised to analyse the data. The findings revealed that ChatGPT is a natural language processing (NLP) tool that has the potential to revolutionise the way we communicate. This artificial intelligence (AI) technology can generate text, allowing users to easily create personalised content, and it has gained widespread popularity. However, the reaction has been mixed, with praise for its benefits and potential applications offset by criticism of its limitations and potential drawbacks. Furthermore, ChatGPT is an extremely effective tool. However, it cannot replace human thought and, if not properly fine-tuned, it has the potential to produce biased or insulting content. Thus, it is critical to bear ethical considerations in mind when implementing this technology.

Keywords: Advantages, Disadvantages, Chatbot, ChatGPT, Artificial Intelligent (AI)

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1. INTRODUCTION

In this day and age, artificial intelligence (AI), automation, and robots are no longer considered far-off goals. They have already infiltrated people's

lives and will become more common in the near future. As technological advancements continue to amaze humans, most industries have recently adopted these technologies to remain competitive and improve their quality (Yarlagadda, 2015; Yang

et al., 2019; Yigitcanlar et al., 2023). Furthermore, AI technology has a rich history and is in a constant state of advancement. Its primary focus lies in intelligent agents, which are devices designed to perceive their environment and take actions that maximise their chances of achieving desired outcomes. When we hear the term “AI”, we often envision supercomputers equipped with extraordinary processing power, capable of adaptive behaviour through the inclusion of sensors and other components. These advancements enable computers to possess cognitive and functional abilities resembling those of humans, leading to enhanced interactions between supercomputers and humans. Artificial intelligence encompasses the capacity of a computer program to learn and engage in cognitive processes. Any task performed by a program that typically requires human intelligence is categorised as artificial intelligence as well (Haenlein & Kaplan, 2019; Limna et al., 2022).

OpenAI is an AI research laboratory that aims to advance “friendly AI” for the benefit of humanity. One of their notable creations is ChatGPT (Generative Pretrained Transformer), which is a powerful language model capable of generating text that resembles human language, enabling natural language conversations. This technology has the potential to revolutionise our interactions with computers and is already being integrated into various industries (Cotton et al., 2023; Illingworth, 2023; “ChatGPT could help students cheat”, 2023; Rudolph et al., 2023). Moreover, ChatGPT, the latest popular AI chatbot, has sparked renewed discussions regarding AI’s role in education. It is a text-based language model that students have started utilising to generate essays, annotations, and answers for take-home exams, garnering one million users within the first five days. Students have found applications for ChatGPT in subjects such as literature, history, and coding, yielding remarkable outcomes. Barbara Ashmore, the director and professor of instruction at the Teacher Development Center, and other educators caution against the exclusive use of AI to meet grade requirements, recognizing the potential dangers it poses (Averion, 2023). Additionally, college students may be tempted to exploit ChatGPT to cheat on essay assignments. They can provide specific prompts and questions to the chatbot, copy the generated responses, and incorporate them into their own papers, enabling them to quickly produce essays without exerting the necessary time and effort to create original content. However, it is crucial to emphasise that this practice is highly unethical and, if discovered, can lead to severe consequences such as failing grades and academic penalties. Students need to comprehend the importance of academic integrity and refrain from utilising ChatGPT, or any other technology, for cheating purposes (Illingworth, 2023; King & ChatGPT, 2023).

Since its introduction, ChatGPT has grown in popularity among a wide range of people. The reaction has been mixed, with praise for its benefits and potential applications mixed in with criticism of its limitations and potential drawbacks (Ivankov, 2023; Lund et al., 2023). Given the significance of ChatGPT, this study aims to explain the advantages and disadvantages of ChatGPT. The study provides a thorough exploration

of the advantages and disadvantages of ChatGPT, contributing to the existing body of knowledge on this topic. It offers valuable insights that can inform decision-making, guide the responsible use of ChatGPT, and serve as a foundation for future studies in this area.

To put the paper into perspective, this paper is divided into six major sections. The introduction serves as the study’s starting point. Section 2 contains a review of the literature. Section 3 describes the research methodology, and Section 4 presents the study’s findings. The findings of the study are discussed Section 5. Finally, the final Section 6 presents the study’s conclusions, limitations, and recommendations for future studies.

2. LITERATURE REVIEW

In November 2022, OpenAI introduced a free preview of their latest AI chatbot, ChatGPT, resulting in a significant increase in OpenAI’s estimated value to approximately \$29 billion. Chatbots are software applications that utilise AI to engage in human-like conversations. Users can submit questions or requests, and the system will provide responses within seconds. Remarkably, within just five days of its launch, ChatGPT amassed one million users, establishing itself as the most advanced chatbot currently available. It distinguishes itself from other chatbots by its ability to generate impressive prose rapidly, which has led to both enthusiastic anticipation and concerns, particularly regarding student evaluations in higher education and various other issues. ChatGPT, an innovative language model, can produce text that closely resembles human-written content, facilitating natural and intuitive interactions with users (Rudolph et al., 2023). OpenAI’s ChatGPT-3 is a powerful language model poised to revolutionise human-technology interactions. This model underwent extensive training on vast amounts of data, enabling it to comprehend and generate text with remarkable human-like accuracy. One of its most compelling features is its potential to enhance natural language processing (NLP) and natural language understanding (NLU) across various applications. ChatGPT-3’s capabilities make it suitable for powering chatbots, virtual assistants, and other conversational interfaces. As voice and text-based interactions with technology continue to gain prominence, these systems play an increasingly vital role (Aljanabi et al., 2023; Pavlik, 2023).

In the rapidly evolving twenty-first century, businesses are confronted with novel technological prospects and challenges. Intelligent automation, an amalgamation of machine learning and artificial intelligence, has emerged as a captivating domain of advancement. Among the driving forces behind intelligent automation, NLP plays a pivotal role by enabling computers to comprehend and generate human language. ChatGPT stands out as one of the foremost NLP models available today. Exploring ChatGPT and intelligent automation holds multiple advantages for businesses. For example, leveraging ChatGPT can facilitate the creation of more genuine and human-like customer interactions, thereby enhancing satisfaction and fostering customer

loyalty (rapidMATION, 2023). Additionally, ChatGPT-3 possesses a notable capability to assist with social media tasks, rendering it an invaluable tool for marketers, businesses, and individuals alike. A key advantage of employing ChatGPT-3 in the realm of social media lies in its proficiency to comprehend natural language inputs. Rather than relying on specific keywords or phrases, marketers can pose queries or prompts for social media content in a manner similar to how they would communicate with a person, making the content creation process more intuitive and user-friendly. Another asset of ChatGPT-3 in the context of social media is its aptitude to provide contextually relevant information. It comprehends the underlying intent of a query and offers information directly pertinent to the social media post or campaign at hand, surpassing the mere provision of generic links or pre-written content. This expedites marketers' access to the required information in a more efficient and effective manner, saving valuable time (Aljanabi et al., 2023). The combination of ChatGPT and intelligent automation harbours the transformative potential for businesses, revolutionising their operational landscape. Enterprises that embrace and explore these technologies will secure a competitive edge in the digital era, effectively meeting the demands of the twenty-first-century marketplace (rapidMATION, 2023).

Assessment plays a vital role in higher education as it enables the evaluation of student learning and progress. Various methods such as exams, papers, projects, and presentations are employed to assess a wide range of learning outcomes encompassing knowledge, skills, and attitudes. ChatGPT-3 offers potential applications in higher education, particularly in the realm of personalised assessments. It can be utilised to create tailored exams or quizzes for individual students, taking into account their specific needs and abilities. By generating questions aligned with each student's proficiency level, ChatGPT-3 can challenge them to demonstrate their knowledge and skills effectively. This application holds particular promise in courses focusing on language skills or critical thinking (Cotton et al., 2023). Another noteworthy advantage of ChatGPT-3 lies in its ability to assist with academic writing and research. Researchers can benefit from its capacity to generate paper summaries, extract key points, and even provide citations, thereby saving valuable time and enabling them to focus on analysis and interpretation. Furthermore, ChatGPT-3 proves beneficial in generating text for various academic documents, such as research papers, essays, and dissertations. It also offers feedback on grammar, style, and coherence, assisting writers in enhancing their work. Additionally, ChatGPT-3 can comprehend and respond to complex prompts, making it a valuable tool for teaching and learning. For instance, it aids students in understanding and summarising challenging texts while also generating prompts for writing assignments. However, it is crucial to recognize that ChatGPT-3 should not replace human intelligence and creativity but rather serve as a supplement to academic writing. Additionally,

since ChatGPT-3's output may not always be entirely accurate, users should fact-check and review the generated content (Aljanabi et al., 2023).

ChatGPT also has some limitations. One of these is its limited understanding of context and background information. This can be a disadvantage when the model is used in a specific domain or industry where the language, jargon, or references must be understood. Another limitation is its difficulty in understanding, recognising, and generating sarcasm and irony. This is due to the fact that ChatGPT is based on a text data set and may miss the non-literal meaning behind words. In addition, ChatGPT also lacks common sense and general knowledge, which can be a hindrance in certain applications like answering questions and problem-solving. Rather than understanding the world through common sense, the model is based on statistical patterns and correlations. ChatGPT's ability to understand and respond to complex questions is also limited. While it can generate coherent and fluent responses, it may not fully comprehend the nuances of a question and provide a complete and accurate answer. This is especially true for questions requiring reasoning, abstract thinking, and comprehension of multiple viewpoints (Huang et al., 2023; Shen et al., 2023; Vasylyuk, 2023). The development of ChatGPT has sparked both concerns and excitement within academic institutions, as highlighted by Benueyah (2023). This chatbot possesses impressive human-like capabilities that surpass most existing tools available to students and researchers. Its prominence is evident in the millions of Google search results related to ChatGPT and the attention it has received from the academic community and media. While ChatGPT was not specifically designed for academic writing, its potential for use in this domain cannot be overlooked. However, there are legitimate concerns regarding the potential for students to misuse this technology and engage in academic dishonesty. The emergence of powerful AI tools like ChatGPT presents new challenges in combating cheating. Academics are particularly concerned about the epistemic implications associated with the use of ChatGPT in assessments. Despite these concerns, there is a collective determination to explore ways to utilise ChatGPT effectively while addressing ethical considerations. It is important to recognize that certain university programs, such as those in management studies and information technology, may be more susceptible to cheating risks. Therefore, educators must invest efforts in understanding the capabilities and limitations of ChatGPT to ensure its responsible use within the academic setting. By fostering a comprehensive understanding of ChatGPT and its potential impact, educators can develop strategies to harness its benefits while mitigating risks. This involves establishing guidelines, promoting ethical practices, and designing assessment methods that appropriately accommodate the use of AI tools. Through proactive measures, the academic community can navigate the challenges posed by ChatGPT and ensure its integration into academia aligns with the principles of integrity and scholarly excellence.

3. METHODOLOGY

This study employed a qualitative approach as a research strategy. In-depth interviews were conducted. Qualitative research aims to explain why a specific phenomenon has occurred by elucidating the contexts in which individuals or groups make decisions and behave in specific ways. Additionally, communication in both directions facilitates the collection of additional data throughout an interview (Siripipatthanakul et al., 2022). In-depth interviews provide detailed answers on a specific topic, resulting in accurate information to meet the research objectives (Limsakul & Kraiwanit, 2020). Moreover, to achieve the primary data results, the researchers used the documentary method to review secondary data for appropriate key survey questions. Purposive sampling was used as a sampling method. Purposive sampling is a technique commonly used in qualitative research in which researchers use their expertise to select the most useful sample. The goal is to comprehend everything there is to know about a particular phenomenon or population (Intaprom, 2019; Limna et al., 2021). According to Francis et al. (2010) and Namey (2017), a minimum of six interviews appears to be the optimal number for achieving data saturation in qualitative research. Hence, the study's respondents included ten academics, educators, and experts in the fields of smart AI and Robot-Assistant. The study imposed specific inclusion criteria for participant eligibility. Firstly, individuals were required to be of legal adult age, i.e., 18 years old or older. Secondly, they needed to be Thai residents currently residing within the geographical boundaries of Thailand. Thirdly, the targeted population comprised academics, educators, and experts who possess specialised knowledge and expertise in the domains of smart AI and Robot-Assistant. Lastly, candidates were expected to demonstrate prior familiarity and practical experience in utilising ChatGPT.

Content analysis is a qualitative methodology that enables systematic and objective exploration of targeted phenomena, employing valid inferences drawn from verbal, visual, or written data (Selvi, 2019; Siripipatthanakul et al., 2022). Furthermore, scholars like Bonello and Meehan (2019) and Lemon and Hayes (2020) emphasise the effectiveness of NVivo software in enhancing the breadth and depth of analysis. Hence, in this study, content analysis and the utilisation of NVivo software were employed to analyse the qualitative data gathered from the in-depth interviews.

4. RESULTS

The interviews conducted on the topic of ChatGPT revealed a range of perspectives regarding its impact and potential. Participants acknowledged that ChatGPT is indeed a groundbreaking natural language processing tool with the capacity to revolutionise communication. ChatGPT is a powerful tool as they praised its ability to generate text, allowing users to easily create personalised content, and it has gained popularity among a wide range of people. The reaction, however, has been mixed, with

praise for its advantages and potential applications balanced by criticism of its limitations and potential drawbacks. Several interviewees expressed concerns about its limitations and potential drawbacks. One recurring criticism was the inherent inability of ChatGPT to replace human thought. While it excels at generating text, it lacks the cognitive abilities, intuition, and empathy that humans possess. This limitation hinders its ability to fully understand complex contexts, emotions, and nuances in communication. Another significant concern raised during the interviews was the potential for biased or insulting content produced by ChatGPT. Participants highlighted that without proper fine-tuning and ethical considerations, AI technology could inadvertently generate content that is offensive, discriminatory, or harmful. This raised ethical implications, particularly in scenarios where the technology is used to interact with diverse populations. In conclusion, ChatGPT has demonstrated its potential to transform communication and offer personalised content generation. However, it is crucial to recognize its limitations and potential risks. While it is a powerful tool, it cannot replace human thought and understanding. Additionally, the potential for biased or offensive content necessitates careful fine-tuning and ethical considerations when implementing this technology. By being mindful of these concerns, ChatGPT can be effectively utilised while minimising potential drawbacks and ensuring responsible and inclusive use.

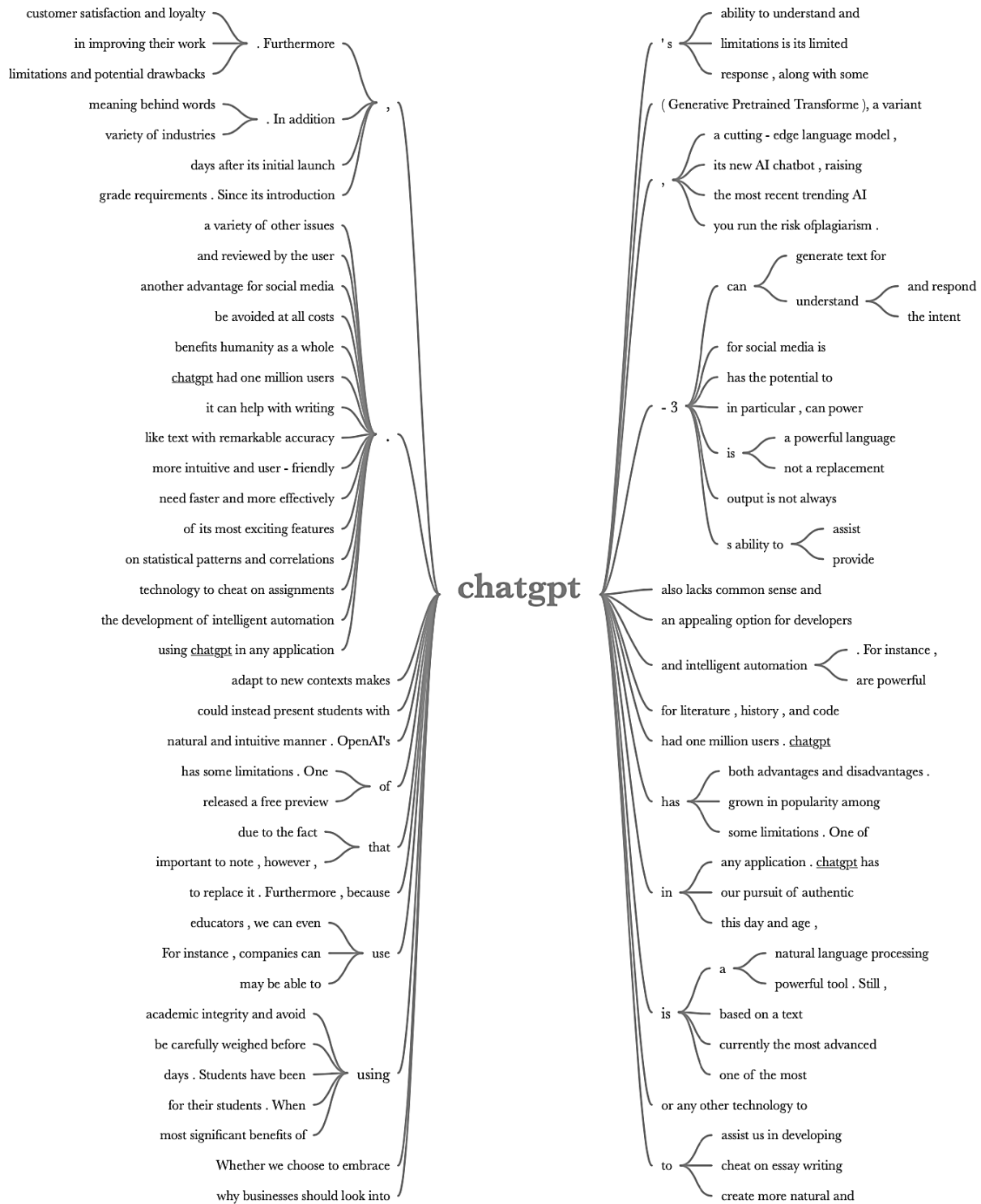
"ChatGPT is an incredibly powerful tool that excels at generating text. It allows users to easily create personalised content, which is a game-changer in various fields such as content creation, customer support, and even personal writing. The ability to generate text in a natural language format has made it accessible and popular among a wide range of people, including professionals, writers, and individuals looking for assistance with their writing projects" (Respondent 1, personal communication, January 3, 2023).

"ChatGPT has simplified the process of content generation and made it more efficient. It can help users save time and effort by providing them with accurate and contextually relevant text suggestions. This versatility has garnered a lot of praise and adoption from different industries" (Respondent 2, personal communication, January 3, 2023).

"When considering the integration of ChatGPT into our assessment practices, we must acknowledge the ethical considerations it poses and its potential impact on academic integrity. It offers us an opportunity to reflect on our current evaluation methods and contemplate necessary changes. While ChatGPT can serve as a useful tool for constructing authentic assessments, it is ultimately the responsibility of instructors to design and implement assessments in a manner that is meaningful and relevant to their students" (Respondent 3, personal communication, January 4, 2023).

"It is important to note that utilising ChatGPT comes with the risk of plagiarism. Due to its ability to generate accurate and comprehensive content quickly, users may be tempted to copy information from external sources without proper attribution."

Figure 3. Word tree (ChatGPT)



Source: Authors' elaboration using Nvivo.

5. DISCUSSION

This study explained the advantages and disadvantages of ChatGPT. The findings revealed that ChatGPT, as a natural language processing tool, holds the potential to revolutionise communication by generating text and allowing users to create personalised content. It has gained popularity across diverse user groups. However, the response to ChatGPT has been mixed, with both praise for its

advantages and potential applications and criticism of its limitations and potential drawbacks. One crucial consideration is that while ChatGPT is a powerful tool, it cannot replace human thought. If not properly fine-tuned, it runs the risk of producing biased or insulting content. Therefore, ethical considerations should be at the forefront when implementing this technology, ensuring responsible use and mitigating potential negative consequences. The findings align with a study by

King and ChatGPT (2023) that AI and chatbots are neither good nor bad in and of themselves, but they do deserve more attention in terms of their potential for misuse, such as in higher education. While these technologies have the potential to greatly improve our lives and various industries, they also have the potential to be used for nefarious purposes such as assignment cheating or other unethical practices. As AI and chatbots evolve, it is critical that we consider the implications of their use and take steps to prevent their misuse. This could entail enforcing strict policies and regulations, as well as educating people about the importance of ethical behaviour when using these technologies.

Educators can leverage ChatGPT to assist in the development of assessments. Rather than posing a specific question, presenting students with ChatGPT's response, along with marking instructions, can prompt them to provide feedback on the appropriate grade for the automated response and explain their reasoning. This approach can foster critical thinking and encourage students to engage with the automated system in an evaluative manner. The decision to embrace ChatGPT for authentic assessment should be accompanied by a thorough examination of the ethical challenges it poses to academic integrity. However, this presents an opportunity for educators to reflect on their evaluation methods and consider the need for change in assessing student performance. The responsibility lies with instructors to design and implement assessments in a meaningful and relevant manner that aligns with their pedagogical goals and ensures fairness. The findings of this study align with several previous studies. For instance, Pavlik (2023) confirmed the implications of generative AI for journalism and media education. Lund and Wang (2023) indicated that ChatGPT has the potential to advance academia and librarianship in both frightening and exciting ways. However, in the race to create new scholarly knowledge and educate future professionals, it is critical to consider how to use this technology responsibly and ethically, as well as how we, as professionals, can work alongside this technology to improve our work rather than abusing or allowing it to abuse us.

It is important to be mindful of the risk of plagiarism when using ChatGPT. The tool's ability to generate accurate and detailed content at a rapid pace may tempt users to copy and paste information from external sources without proper attribution. This behaviour can have serious legal consequences and must be avoided at all costs, emphasising the importance of upholding academic integrity. Similarly, Deng and Lin (2022) and George et al. (2023) concluded that ChatGPT is a powerful language model with numerous benefits, including transformer architecture, customisation capabilities, fast and scalable response times, cost-effectiveness, and the ability to handle a wide range of languages. However, it has several drawbacks, such as limited domain knowledge. Moreover, Rahman et al. (2023) have highlighted the practical applications of ChatGPT in academic research, including new idea generation, outlining research topics, and summarising large texts to identify key findings. However, they also observed some limitations in using ChatGPT to write an academic article, such as

the potential for misleading research problems, questions, and gaps. Additionally, ChatGPT cannot conduct statistical analysis due to its inability to access datasets. Therefore, the researchers recommend that ChatGPT should be used as an e-research assistant to complement the work of a researcher and improve efficiency, rather than as a tool to write a research article alone. It is important for researchers to take accountability for using ChatGPT and to mention its use in the article to maintain research integrity.

While ChatGPT offers advantages such as generating human-like responses and adapting to new contexts, there are considerations to be weighed. These include the computational requirements of the tool and potential privacy concerns. Careful evaluation of these factors is essential before integrating ChatGPT into any application or system. The findings align with studies of Sallam (2023) and Sharma and Sharma (2023) that the widespread use and adoption of ChatGPT also raises potential security concerns and the risk of cyber-attacks. As with any technology connected to the internet, there is a possibility of unauthorised access, data breaches, or malicious exploitation. Safeguarding user data and ensuring the privacy and confidentiality of interactions are crucial considerations when implementing ChatGPT or any similar AI system.

In conclusion, ChatGPT presents both advantages and disadvantages in transforming communication. Ethical considerations, such as fine-tuning for unbiased content generation, are paramount. Educators can leverage ChatGPT for assessment purposes but should be vigilant about plagiarism risks. Ultimately, a balanced assessment of the computational requirements and privacy concerns is necessary when considering the application of ChatGPT in various contexts. According to Ch'ng (2023), we live in a data- and content-driven world. With the availability of AI chatbots, we can generate a plethora of them with a few keystrokes on our keyboards. ChatGPT is undeniably a powerful and versatile language model with the potential to revolutionise how we learn and interact with machines. "*Water can carry a boat but also overturn it*", as the Chinese proverb goes. This expression serves to emphasise that everything has advantages and disadvantages, and it is, therefore, critical to be aware of potential hazards and take the necessary precautions. With this in mind, it's important to use this tool responsibly and ethically to ensure that the output matches the desired use cases.

6. CONCLUSION

ChatGPT stands out as one of the most sophisticated chatbots currently available, capable of generating impressive prose within seconds. Its capabilities have garnered significant attention and raised concerns, particularly in the context of student assessment in higher education and other domains. However, despite its remarkable achievements, reports and studies consistently highlight several challenges that remain to be addressed. This study provided a comprehensive understanding of the advantages and disadvantages of ChatGPT through qualitative research involving in-depth

interviews with key informants, a nuanced analysis was conducted using content analysis and NVivo. The findings shed light on the potential of ChatGPT as a revolutionary natural language processing tool, transforming the way we communicate. Its ability to generate text has made content creation more accessible and contributed to its widespread popularity. However, the reaction to ChatGPT has been mixed, with both praise for its benefits and potential applications, as well as criticism of its limitations and potential drawbacks. It is crucial to recognize that while ChatGPT is an effective tool, it cannot fully replace human thought. Moreover, if not properly fine-tuned and supervised, it has the potential to generate biased or insulting content. Ethical considerations must be at the forefront when implementing this technology to ensure its responsible and appropriate use. In summary, ChatGPT demonstrates immense potential and has generated considerable excitement in various fields. It offers new possibilities for communication and content creation. Nevertheless, it is essential to recognize its limitations and address the challenges it presents. With careful development and ethical implementation, ChatGPT can contribute positively to our interactions, but it should always be regarded as a tool that complements human intelligence rather than a replacement for it.

The present study makes a substantial contribution to the existing literature on the advantages and disadvantages of ChatGPT. The outcomes of this research have notable implications for future research endeavours in this

field, providing valuable insights that can guide and inform subsequent investigations. Additionally, the findings of this study can assist scholars in broadening their research horizons by incorporating previously unexplored elements. However, it is important to acknowledge the limitations of the study, which present opportunities for future research. The study employed a purposive sampling technique with a limited sample size of ten key informants. Future studies could benefit from a larger and more diverse sample to capture a wider range of perspectives and experiences related to ChatGPT. This study utilised a qualitative approach with in-depth interviews. Combining qualitative data with quantitative methods, such as online surveys or experiments, could provide a more comprehensive understanding of the advantages and disadvantages of ChatGPT. Furthermore, the study focused on the immediate advantages and disadvantages of ChatGPT. Future research could investigate the long-term effects of ChatGPT implementation, considering factors such as user satisfaction, impact on productivity, and changes in communication patterns. While the study briefly mentioned ethical considerations, future research should delve deeper into the ethical implications of ChatGPT. This includes exploring issues related to privacy, data security, algorithmic bias, and potential unintended consequences of using this technology. By addressing these research gaps, we can advance our understanding of ChatGPT and develop guidelines for its responsible and effective utilisation.

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