



Postgraduate Students' Perceptions on the Benefits Associated with Artificial Intelligence Tools for Academic Success: The Use of the ChatGPT AI Tool

Thulani Andrew Chauke^{*a}, Themba Ralph Mkhize^b, Lina Methi^c, & Ntandokamenzi Dlamini^d

* Corresponding author

Email: Chaukt2@unisa.ac.za

a. Department of Adult Community and Continuing Education, College of Education, University of South Africa, Pretoria, South Africa

b. Department of Educational Foundations, College of Education, University of South Africa.

c. Department of Psychology of Education, College of Education, University of South Africa.


d. Department of Curriculum and Instructional Studies, College of Education, University of South Africa.

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ABSTRACT

Postgraduate students in developing nations, such as South Africa, are increasingly leveraging artificial intelligence tools like ChatGPT to elevate their academic success in the era of the Fourth Industrial Revolution. This study aims to explore postgraduate students' perceptions of the benefits associated with the utilisation of artificial intelligence tools, with a specific focus on ChatGPT, in their academic success at South Africa's historically disadvantaged universities. Employing a qualitative approach, the study intends to gain a deeper understanding of postgraduate views on this subject. The sample comprised 10 postgraduate students pursuing master's degrees at two historically disadvantaged universities in South Africa, selected through purposive sampling. Semi-structured interviews were conducted to gather insights from the participating students. Thematic analysis was then employed to analyse the collected data. The study's findings shed light on the significant advantages of incorporating ChatGPT in students' academic journey, with special focus on research success. The study found that ChatGPT proves beneficial for postgraduate students, with some utilising the AI tool to refine their research topics before submission to their supervisors. Moreover, ChatGPT assists postgraduate students in identifying grammatical errors and paraphrasing their academic writing, thus contributing to the enhancement of their academic writing skills. In light of these findings, the study recommends the immediate development of an innovative policy on ethical use of AI at South Africa's historically disadvantaged universities. This policy should emphasise ethical guidelines for postgraduate students when utilising AI tools such as ChatGPT to ensure responsible and effective integration into their academic success.

KEYWORDS

Artificial intelligence; academic success benefits; ChatGPT; South Africa's historically disadvantaged universities.

INTRODUCTION

Across the globe, artificial intelligence is rapidly revolutionising the higher education sector (Cope et al., 2021). Berendt et al. (2020) emphasise the dual nature of artificial intelligence, associating it with both risks and benefits. Thus, safeguarding academic integrity and human rights is deemed essential during the era of AI in higher education. More so, China has strategically integrated artificial intelligence tools into education, backed by national policies and a unified strategy (Knox, 2020). According to Bartneck et al., (2021), artificial intelligence encompasses the design of machines responsible for building intelligent agents that play pivotal roles in achieving specific objectives. It is also recognised as machine learning, a process through which humans extract new knowledge. Postgraduate students at institutions of higher learning often leverage various forms of artificial intelligence to enhance their academic pursuits. Tecuci (2012:01) defines artificial intelligence as the science and engineering domain concerned with developing systems that exhibit characteristics associated with human intelligence. The artificial intelligence tool under scrutiny in this study is ChatGPT. This study aims to explore postgraduate students' perceptions of the benefits associated with the utilisation of artificial intelligence tools, with a specific focus on ChatGPT, in their academic success at South Africa's historically disadvantaged universities. Postgraduate academic success in this study refers to success in the participants' research. ChatGPT is an artificial intelligence language model developed by OpenAI and is capable of generating human-like text (Baytak, 2024; Brown et al., 2020). As highlighted by Van Dis et al. (2023), ChatGPT plays a crucial role in assisting postgraduate students, especially master's students and doctoral candidates, in expediting their research processes and facilitating the retrieval of accurate information from previous studies for their research endeavours. Imran and Almusharraf (2023) assert that ChatGPT enhances students' productivity in research by offering advanced writing assistance. According to Dwivedi et al. (2023), ChatGPT has a significant impact particularly on the research component of higher education. Postgraduate students in higher education, especially those from well-resourced universities, use ChatGPT to augment their academic performance. Bozkurt and Sharma (2023) point out that the integration of ChatGPT into postgraduate studies has the potential to enhance students' overall learning experience. According to Zhai (2022), ChatGPT plays a pivotal role in improving students' critical thinking and problem-solving skills. Moreover, ChatGPT serves as a valuable tool for assisting students in comprehending a variety of academic challenges that require resolution.

Numerous prior studies have explored related topics, but they predominantly concentrate on higher education based on European universities where postgraduate students are well advanced in AI – rather than on postgraduate students studying at South Africa's historically disadvantaged universities. Closing this gap, the present study aims to contribute to the literature by investigating postgraduate students in the context of South Africa's historically disadvantaged universities, specifically emphasising the significance of AI technologies such as ChatGPT in enhancing postgraduate students' academic success. Recognising the potential risks

associated with the integration of AI technologies like ChatGPT in academic projects, this study highlights the need for proactive measures. In light of this, it is imperative for academics in the domain of South Africa's historically disadvantaged universities to develop a complimentary course, freely accessible to all first-year postgraduate students. This course will be tailored to provide insights into the ethical considerations and appropriate guidelines governing the use of AI technologies, such as ChatGPT, in their academic journey.

The use of AI technologies like ChatGPT in higher education and benefits for postgraduate students' academic success

AI language models like ChatGPT are widely used by academics and students alike in institutions of higher learning. Academics frequently employ ChatGPT to create quizzes that focus on students' unique skills (Barber et al., 2021). As Atlas (2023) explains, ChatGPT is an important AI tool that can be used for communication purposes in the higher education sector. According to Mohammed et al. (2023), postgraduate students in higher education in India leverage ChatGPT to enhance their reading skills, ultimately contributing to academic success, for instance, by completing specific sections of their research on time. ChatGPT proves valuable for academics and postgraduate students alike in improving their academic writing skills and facilitating the editing process before submission (Baena-Rojas et al., 2023; Khabib, 2022; Nguyen, 2023; Ogurlu & Mossholder, 2023). In both undergraduate and postgraduate settings, students in higher education effectively utilise ChatGPT to enhance their writing style through its digital writing assistance service (Karyuatry, 2018; Ippolito et al., 2022; Rudolph et al., 2023).

According to Mallow (2023), ChatGPT offers continuous academic and personal support to postgraduate students, thereby contributing to the enhancement of their research skills. This support is available 24/7, providing a valuable resource that may not always be accessible through traditional supervisory channels. Ray (2023) emphasises the significance of ChatGPT in the higher education context, particularly among postgraduate students who are embarking on their research journey. The platform aids in the discovery of new knowledge, which is a crucial aspect in the development of their research skills. Postgraduate students benefit from ChatGPT in various ways, including gaining access to relevant resources that facilitate their research (Firaina & Sulisworo, 2023).

Aithal and Aithal (2023) argue that ChatGPT plays a substantial role in guiding students through exploratory inquiries – an essential part of the development of their academic and research skills. Moreover, ChatGPT assists postgraduate students in constructing error-free sentences that are accepted in academic writing (Sallam, 2023). In addition to academic assistance, ChatGPT plays a pivotal role in enhancing postgraduate students' confidence and interest in research by providing guidance on how to conduct scientific research. Fatimah (2018) asserts that academic writing is a crucial skill that students must possess to generate high-quality work. Thus, ChatGPT serves as a comprehensive support system throughout the research journey, assisting postgraduate students with both academic and personal aspects (Tiunova & Muñoz, 2023). Biswas (2023) highlights that for postgraduate students whose research include

delving into the realm of climate change, leveraging ChatGPT presents a unique opportunity to gain insight into climate projections during the course of their research.

Rahman and Watanobe (2023) and Sok and Heng (2023) highlight the challenges that postgraduate students face in conducting literature reviews, citing the time-consuming and difficult nature of the process. However, the integration of ChatGPT has proven to be a valuable solution, effectively reducing the complexities associated with literature reviews and saving postgraduate students' valuable time. Notably, the use of ChatGPT contributes to an enhanced learning experience for postgraduate students by ensuring quick and easy access to research-related information (Farrokhnia et al., 2023). Furthermore, the positive impact of ChatGPT extends to fostering a robust research experience for postgraduates, facilitating their quick adaptation to the research environment (Qadir, 2023). ChatGPT offers postgraduate students an innovative and transformative approach to conducting research (Nisar & Aslam, 2023). In particular, Yan (2023) emphasises that ChatGPT plays a crucial role in enhancing students' academic achievement, particularly for those engaged in research. The tool's capability to assist students in generating compelling topics is highlighted as a valuable contribution to the academic process. Alshater (2022) and Lin (2023) argue that ChatGPT has the capacity to improve academic research in the higher education sector.

Challenges posed by the application of ChatGPT in academic research within higher education

The adoption of ChatGPT by students in higher education has been widely embraced due to its advantageous nature, promoting collaboration among students (Lewis, 2022). However, despite the numerous benefits associated with ChatGPT, a study conducted by Day (2023) suggests that its use in research may have adverse consequences for students' academic success. Day argues that ChatGPT-generated results may include fake citations, references, and artifact answers, posing potential risks to the credibility of academic work. Furthermore, the presence of ChatGPT in the higher education sector introduces concerns about academic misconduct. According to Dehouche (2021), students may leverage ChatGPT to delegate tasks such as assignment writing and research, thereby potentially compromising the integrity of their academic responsibilities.

During the postgraduate studies journey, cultivating meaningful relationships with fellow students is crucial for the development of essential social skills. However, the integration of ChatGPT in research processes may deprive students of valuable opportunities to engage with their peers, potentially hindering the enhancement of their social skills (Loos et al, 2023). An additional challenge associated with the utilisation of ChatGPT in research is the potential for postgraduate students to overly rely on this AI tool, leading to difficulties in conducting research without its assistance (A. El-Seoud et al., 2023; Makeleni et al., 2023). Wen and Wang (2023) emphasise the importance of acknowledging and dealing with potential challenges raised by ChatGPT in research. It is imperative for academics to recognise their ethical responsibility in imparting knowledge to students regarding the ethical utilisation of ChatGPT (Singh, 2023).

THEORETICAL FRAMEWORK

This study was guided by the technology acceptance model (TAM), which was developed by Fred Davis in 1989. TAM is commonly employed in information and communication technology studies to elucidate user acceptance behaviour, with a specific focus on predicting the adoption and acceptance of new technologies. According to Davis (1989), users generally understand that technology enhances performance in their respective areas of work. Liu (2004) outlines that TAM is founded on two key premises: perceived usefulness and perceived ease of use. This implies that individuals' acceptance and use of technology hinge on their perceptions of its utility in their lives and how it facilitates their work or their daily activities. In the context of this study, the application of the technology acceptance model seeks to comprehend the acceptance and integration of ChatGPT in the postgraduate studies of students engaged in South Africa's historically disadvantaged universities. Moreover, the acceptance and integration of ChatGPT in postgraduate studies are rooted in the belief that ChatGPT is beneficial for academic pursuits (*perceived usefulness*) and that it simplifies research activities, thereby enhancing the ease of use (*perceived ease of use*). Consequently, as postgraduate students recognise the usefulness of ChatGPT in their academic endeavours, they are more inclined to believe that it can streamline their academic journey, leading to an increased likelihood of adopting acceptance behaviour toward ChatGPT.

MATERIAL AND METHODS

This study adopted a qualitative research approach. This research approach is crucial for investigating specific inquiries, particularly in education and social science research. The qualitative research approach is centred on comprehending social issues through the lens of individual personal experiences within their social contexts (Mwita, 2022; Ames et al, 2019). In this study, we chose to employ the qualitative research approach with the intention of delving into the subject under investigation, focusing specifically on the personal experiences of postgraduate students studying at two selected historically disadvantaged universities in South Africa. Purposive sampling was employed to select a cohort of 10 postgraduate students (five males and five females) enrolled at two selected historically disadvantaged universities in South Africa. This non-probability sampling technique is commonly utilised in qualitative research to deliberately choose participants who align closely with the study objectives. Moreover, the selection process took into account the participants' experience and knowledge of the social problem under investigation, as emphasised by Campbell et al (2020). The decision to utilise purposive sampling in this study was driven by the aim to select participants who best matched the study objectives and who possessed relevant knowledge pertaining to the matter under investigation. The inclusion criteria specified that participants must be registered master's students at historically disadvantaged universities in South Africa. More so, the exclusion criteria dictated that postgraduate students pursuing master's degrees in former white-privileged universities were not eligible for inclusion in this study. One researcher initially approached a

master's student at the University of Limpopo who is currently pursuing a master's degree, to inquire about other students in the Faculty of Human and Social Science and Education who were also pursuing master's degrees. This initial contact led to the identification of a 23-year-old student engaged in her master's studies, who subsequently directed the researcher to additional eligible participants. A similar approach was employed at the second institution (the University of Venda). Furthermore, the researcher engaged with lecturers and department heads at both universities to identify master's students aged 21 to 30 under their supervision. Once contact information was obtained, the researcher corresponded with participants via e-mail and, in some cases, conducted phone calls. A structured interview was employed to gather data from a sample of 10 postgraduate students. Considering the diverse locations from which these postgraduate students were drawn, the researchers formulated specific research questions and developed an online interview with a link. This link was distributed to postgraduate students via e-mail and WhatsApp, allowing them the flexibility to complete it at their convenience. This approach granted participants the necessary time to reflect on and provide thoughtful responses to pertinent questions.

Table 1.

Structured interview guide – questions

Questions
<ul style="list-style-type: none"> • How would you describe your overall experience using the ChatGPT AI tool in your postgraduate research? • In what specific ways do you believe ChatGPT has contributed to the success of your research endeavours? • Can you share examples of situations where ChatGPT has played a significant role in enhancing the quality of your research skills? • To what extent do you think artificial intelligence tools like ChatGPT have the potential to transform the landscape of postgraduate research? • In terms of efficiency and time management, how do you perceive the role of ChatGPT in expediting certain aspects of your research process?

Thematic analysis was conducted on data from postgraduate students, using all six steps of the process. This analysis helped researchers identify themes and sub-themes aligned with study objectives. The themes were named and the findings were communicated in a research report, which is crucial for disseminating outcomes effectively. Prior to initiating data collection, ethical considerations were diligently upheld. Ethical clearance was obtained from the University of South Africa (Reference: 2023/04/12/90501543/08/AM). Ethical considerations, including informed consent, privacy, anonymity, and confidentiality, were meticulously observed throughout the data collection phase. Although data collection occurred online, with no physical interaction between the researcher and the participants, the researchers, via the

provided link containing the interview questions, furnished participants with details about the study objectives. Furthermore, background information outlining the significance of the study was presented. Additionally, the researchers assured the participants that the information gathered would be utilised for academic purposes. Importantly, participation in the study was emphasised as entirely voluntary, with no incentives offered to participants for their involvement. To ensure the validity and reliability of the study results, trustworthiness was established through certain measures. Credibility was attended to by employing triangulation. A researcher specialising in educational technology was invited to verify the study findings by reviewing participants' transcripts. To enhance transferability, a clear description of the criteria used to sample participants was provided, thereby ensuring that researchers interested in conducting a similar study in the same context would have a comprehensive understanding of participant characteristics. This approach aimed to facilitate the application of the findings to similar studies within the same context. To ensure confirmability, preliminary findings were shared with the participants, and verbatim quotations were incorporated to allow participants to confirm whether the presented information accurately reflected their views. As for dependability, the researcher sought assistance from a second researcher to analyse the data. After the data was independently analysed by both researchers, the findings of this study were compared for consistency and reliability.

RESULTS AND DISCUSSION

This study aimed to explore postgraduate students' perceptions of the benefits associated with the utilisation of artificial intelligence tools, with a specific focus on ChatGPT, for their academic success at historically disadvantaged universities in South Africa. Four themes associated with the benefits of using ChatGPT among postgraduate students in the ODeL environment, particularly with regard to academic success in research, were identified through the collected data. These themes include: (1) Refining research topic; (2) Paraphrasing sentences and enhancing academic writing; (3) Formulating research ideas and problem statements; (4) Saving time in searching for relevant literature. This section presents these themes, supported by verbatim quotes from participants that articulate their claims expressed during the interviews.

Refine research topic

Constructing a research topic for postgraduate students poses challenges at both historically disadvantaged universities and former white-privileged universities in South Africa, demanding essential research skills. However, the increasing use of artificial intelligence tools, such as ChatGPT, in higher education has significantly eased the process for postgraduate students engaged in historically disadvantaged universities. This study found that postgraduate students at the historically disadvantaged universities in South Africa who face challenges in formulating researchable topics, specifically in the field of leadership and management education, have found ChatGPT to be a valuable resource for refining their research topics. The findings of this study agree with the findings of Zhai (2022), that emphasised the pivotal role of ChatGPT as a

crucial AI tool for postgraduate students, helping them to overcome the challenges encountered during their research journey. Participants in the study emphasised the significance of ChatGPT in guiding them through the refinement of their research topics. Some of the participants indicated the importance of ChatGPT in assisting them to refine their research topics as follows:

"I had some initial ideas for my research, but I struggled to pinpoint a unique and viable topic within the context of my community. Seeking guidance, I turned to ChatGPT to articulate my thoughts. Thanks to ChatGPT, I received a valuable and research-worthy topic that I am now exploring in my study." Participant 1

"Choosing a researchable topic may seem straightforward at first glance, but in reality, it can be quite challenging. Upon observing various obstacles that teachers face in rural-based schools, I am motivated to address and solve these issues through my research. The challenge I encountered was the absence of a specific topic. Consequently, I articulated the problem I aimed to tackle and sought assistance from ChatGPT to generate a research topic. Subsequently, ChatGPT provided me with a suitable research topic." Participant 2

"I initially had a research topic for my master's degree that I wasn't satisfied with. Seeking improvement, I turned to ChatGPT to refine the research topic. With ChatGPT's assistance, I successfully enhanced the quality of my research topic, earning approval from my supervisor. I am grateful for the valuable support ChatGPT provided, making it a significant asset for postgraduate students like me by offering diverse ways to enhance our research endeavors." Participant 3

Based on the preceding discussion among the participants, it is evident that the integration of ChatGPT in postgraduate studies plays a crucial role in aiding postgraduate students to navigate the intricacies of research. Alshater (2022) indicates that ChatGPT has the capacity to improve postgraduate students' academic research. This study has revealed that the advancements in AI tools, exemplified by ChatGPT, offer numerous benefits for postgraduate studies – thus, for higher education, particularly at historically disadvantaged universities. Notably, postgraduate students have emphasised how ChatGPT guides them in formulating research topics that meet academic standards and gain acceptance from their mentors. ChatGPT assumes a pivotal role in fostering improved scholarly outcomes, primarily owing to its capability to assist students in crafting proficient and research-worthy topics (Yan, 2023).

Paraphrasing sentences and enhancing academic writing

Errors in academic writing are common among postgraduate students whose native language is not English but who use it as their language of learning. Against this backdrop, postgraduate students are likely to seek assistance in producing dissertations of a high academic standard – free from jargon and grammatical and spelling errors. Fatimah (2018) states that it is necessary for students to be taught skills in academic writing. This study revealed that postgraduate students who are busy with their master's studies through historically disadvantaged universities find ChatGPT useful as language writing assistance in their research proposal.

"Before submitting a section of my research to my supervisor, I ensured that the language used in my work adheres to academic standards. To achieve this, I use ChatGPT to edit my writing before submission." Participant 4

" Academic writing can pose a challenge for those of us who use English for learning purposes. To avoid grammatical errors in my research, I rely on ChatGPT not only for editing but also for seeking advice on improving my academic writing. Upon receiving guidance, I incorporate it into my work. I must acknowledge that, thanks to ChatGPT, my academic writing has shown notable improvement." Participant 5

"Balancing writing and editing research simultaneously can be a challenging and time-consuming task. To streamline this process, I depend on ChatGPT to paraphrase my work. My approach involves reading a paragraph and then requesting ChatGPT to rephrase it in high-quality academic writing. This methodology ensures that my work meets the standards of quality academic writing. Consequently, I believe ChatGPT is a valuable AI tool that the higher education sector should embrace, without concerns about its potential negative impact on scholarly work." Participant 6

The above excerpt highlights that postgraduate students engaged in historically disadvantaged universities in South Africa utilise ChatGPT for editing and paraphrasing their academic research, specifically for their master's studies. This observation aligns with the findings of Imran and Almusharraf (2023) and Day (2023), who assert that ChatGPT aids students in producing high-quality work by offering support in the editing process. Additionally, the current study emphasises the significant utility of ChatGPT as an AI tool for postgraduate students, particularly in enhancing their academic writing skills through effective paraphrasing. Sallam (2023) further affirms that ChatGPT plays a crucial role in ensuring that postgraduate students generate research that is free from poor sentence construction.

Formulating research ideas and problem statements

ChatGPT has radically changed how the new cohort of postgraduate students at the historically disadvantaged universities in South Africa conduct their research. In addition, this AI tool has become part of postgraduate students' life and research journey. This study found that ChatGPT enhances postgraduate students' research skills by assisting them in brainstorming and formulating a research idea that helps them to navigate through their research. Alshater (2022) indicates that ChatGPT is among the useful AI tools for students – particularly for those who are busy with their research – since ChatGPT has the capacity to guide students on how to write their research, which is crucial in the research process. One of the participants had the following few:

"Before drafting the problem statement for my research proposal, I outlined my research topic, aim, and objectives. I then sought assistance from ChatGPT to provide insights and points for the problem statement related to my chosen topic. Subsequently, I plan to delve into extensive research on the identified problem statement to further explore the nuances of the

subject under investigation. I believe that utilising this tool has proven to be a valuable asset in enhancing my research process.” Participant 7

“When faced with challenges in articulating specific aspects of my research, I turn to ChatGPT for assistance in generating ideas. For instance, tackling the composition of a study contribution can pose a significant challenge, and during such moments, I depend on ChatGPT to guide me in crafting this particular section effectively.” Participant 8

“I rely on ChatGPT on generating research ideas such as how produce a quality master’s dissertation.” Participant 9

Based on the above statements, it is evident that postgraduate students drawn from historically disadvantaged universities in South Africa perceive ChatGPT as a valuable asset contributing to their academic success, specifically in the realm of research. The study highlights that these students depend on ChatGPT to facilitate the generation of research ideas, allowing them to save time and to produce high-quality research. Furthermore, ChatGPT is instrumental in assisting postgraduate students in the development of various research sections. These findings align with a study conducted by Aithal and Aithal (2023), emphasising the increasing ease with which students can conduct research and produce quality work through the assistance provided by a variety of AI tools, including ChatGPT. The initial phases of the research process, particularly the generation of research ideas, pose a significant challenge for postgraduate students. This study, therefore, shows the reliance of postgraduate students on ChatGPT for assistance in generating research ideas. However, a contrasting viewpoint is presented, suggesting that excessive reliance on ChatGPT for conducting research may not be conducive for students. This perspective, articulated by A. El-Seoud et al. (2023), posits that such dependence could potentially deprive students of the opportunity to independently conduct quality research, ultimately preventing the acquisition of valuable research skills.

Saving time in searching for relevant literature

From the study findings it is deduced that it may be difficult for postgraduate studies enrolled at historically disadvantaged universities in South Africa to conduct and write a literature review in time. Lack of skills in conducting and approaching a literature review is what makes postgraduate students spend more time on the literature review section. However, postgraduate students interviewed in this study show that since the launch of ChatGPT they have improved in searching relevant literature and writing their literature review section. Some of the participants had the following to say:

“I must admit, the literature review has consistently posed a significant challenge for me. I have grappled with the complexities of conducting a thorough literature review and seamlessly integrating my own perspective. Earlier this year, a friend pursuing a master's degree at a different university introduced me to ChatGPT. Since then, I have sought academic guidance from ChatGPT, learning valuable insights on effective literature review search strategies and techniques for articulating my voice within this section.” Participant 10

"ChatGPT guides me on efficiently finding previous studies and searching for information online. My typical approach involves sharing details about my study with ChatGPT and seeking advice on how to approach the literature review, including the necessary information. After receiving advice, I proceed to search for relevant literature online. This process helps me save time in my literature review." Participant 7

The above assertion reveals a clear indication that postgraduate students perceive ChatGPT as a valuable artificial intelligence tool, guiding them in the execution of their literature reviews. Moreover, postgraduate students studying through historically disadvantaged universities in South Africa benefit from academic guidance provided by ChatGPT, assisting them in optimising time management during the literature review process. The present study findings substantiate the conclusions of Al-Ghazali and Alqohfa (2023), Mallow (2023), Ray (2023), and Firaina and Sulisworo (2023), all of whom posit that ChatGPT serves as an invaluable tool for postgraduates in their research endeavours by facilitating expeditious information retrieval from the internet. Additionally, ChatGPT aids postgraduate students in approaching the literature review section with adherence to robust academic standards.

Overall, the findings of this study revealed that postgraduate students engaged in master's studies through historically disadvantaged universities in South Africa recognise the benefits associated with the integration of ChatGPT in their academic endeavours, particularly in the realm of research success. This finding aligns with previous studies affirming ChatGPT's utility as an AI tool for students, offering valuable research assistance (Dwivedi et al., 2023; Lin, 2023). Additionally, this study shows the significant role of ChatGPT in enhancing language proficiency among postgraduate students – a critical aspect of producing high-quality work at this academic level. Scholars such as Ippolito et al. (2022) and Rudolph et al. (2023) support this study finding by highlighting ChatGPT's effectiveness in providing writing assistance. The findings of this study are consistent with Davis's (1989) technology acceptance theory, which posits that postgraduate students engaged in South African historically disadvantaged universities perceive ChatGPT as beneficial, leading to its increased acceptance in their academic pursuits. Notably, the tool assists them to generate research ideas. Furthermore, the study showed that postgraduate students consider ChatGPT to be valuable, contributing to a smoother academic journey by facilitating the editing and paraphrasing of their scholarly work. The findings contribute to the advancement of the technology acceptance model by emphasising that postgraduate students perceive ChatGPT as a significant AI tool that enhances their academic success. In particular, the tool's ease of use in academic endeavours is identified as a key factor influencing its acceptance. In addition, the findings indicate that postgraduate students are inclined to foster a positive attitude towards ChatGPT. However, it is imperative to acknowledge the study's limitations. Firstly, the sample size is relatively small – only 10 participants participated in this study. Consequently, the outcomes presented here may not be generalisable to the broader population of postgraduate students enrolled in historically disadvantaged universities in South Africa. Secondly, the interviews were conducted online,

allowing postgraduate students to complete them at their convenience without direct researcher involvement. This methodology lacks the researcher's ability to observe participants' body language, which is a crucial aspect in qualitative research. Based on these limitations, future research on the same topic should employ mixed research approaches targeting postgraduate students at historically disadvantaged universities in South Africa and should involve a large sample size. By gaining insight into the perspectives of postgraduate students regarding the matter under investigation, the study's findings will offer valuable information. Policymakers and academics at historically disadvantaged universities in South Africa can use this information to formulate effective strategies that promote the ethical use of ChatGPT in historically disadvantaged universities.

CONCLUSION AND RECOMMENDATIONS

This study revealed that integrating ChatGPT into research significantly enhances the academic success and research outcomes of postgraduate students enrolled in historically disadvantaged universities in South Africa. Non-native English-speaking postgraduate students at those universities particularly benefit from incorporating ChatGPT in their research journey. This AI tool proves instrumental in overcoming language barriers, thereby improving the quality of academic writing produced by postgraduate students. The study concludes by emphasising that ChatGPT is a pivotal AI tool that should be embraced by historically disadvantaged universities in South Africa. It is valued for its inherent potential to enhance postgraduate student retention and to significantly contribute to the research outputs of postgraduate students. The study recommends the immediate development of an innovative AI ethical use policy in South Africa's historically disadvantaged universities. Such a policy should emphasise ethical guidelines for postgraduate students when utilising AI tools, such as ChatGPT, to ensure responsible and effective integration into their research outputs and ultimately contribute to their academic success. Academics responsible for teaching research methodology at historically disadvantaged universities in South Africa should integrate the use of AI tools into research practices, with a strong emphasis on ethical considerations. The curriculum for research methodology should specifically make provision for the application of AI tools, such as ChatGPT, by providing guidance on how, where, and when to incorporate them into the research process. Furthermore, academics should emphasise the significance of critical thinking throughout the research journey. This emphasis aims to empower postgraduate students to avoid complete reliance on AI tools like ChatGPT and encourages them to view these tools as aids for proofreading and refining their academic writing. By fostering critical thinking skills, postgraduate students can leverage ChatGPT to enhance their work while maintaining a balanced and thoughtful approach to their research endeavours.

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