Is ChatGPT an opportunity or a threat? Preventive strategies employed by academics related to a GenAI-based LLM at a faculty of education

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Article Info

Abstract

Within the past decade, enormous strides have been made related to the disruptive effect of AI in education, which has grown exponentially. Recent developments in GenAI conversational models have highlighted the need to investigate this phenomenon in different contexts. This prompted me to investigate academics' views on ChatGPT as a GenAI-based conversation tool at a faculty of education. The conversation theory is foregrounding this research. An exploratory qualitative design study foregrounded the constructivist-interpretative perspective and a sample of eight participants was purposively selected. Semi-structured interviews were generated by Microsoft Teams (transcribed), recordings were downloaded, and themes were identified as guided by the thematic analysis process. Participants echoed sentiments of the usefulness of generative AI tools in promoting or advancing teaching and learning experiences. An awareness of the ethical considerations in using generative AI tools is important before adopting chatbots. To prevent the unethical behaviour of students, it is necessary to create and adopt measures to prevent academic dishonesty. Further research is needed to build on recent gains in academic awareness of GenAI tools for teaching and learning.

Introduction

Artificial intelligence (AI) is not a recent concept in research. Consider, for instance, Isaac Asimov's (1955) famous robotic invention based on the "Three Laws of Robotics", and the first science fiction book, "I Robot". Furthermore, Allan Turing (1950) extended his scholarly work on AI research, which prompted UNESCO to recommend the Ethics of Artificial Intelligence (AI) in the application of machine learning (robots) to prevent abuse, fraud, and security risks. Based on the principles of ethics of AI, different AI tools were developed to minimise academic integrity risks. Those early years of exploring AI in higher education opened many opportunities and challenges to the sector. The rapid development of AI research has a profound impact on higher education. In the past decade, reports revealed that leveraging on the advances in AI-powered solutions has carried enormous benefits to accelerate the UNESCO Sustainable Development Goals and the African Agenda 2063 Strategy (Goralski & Tan, 2023; Kamalov et al., 2023; Abulibdeh et al., 2024).

The turning point in November 2022 was the launch of the large language model, ChatGPT 3.5 (Browne, 2023), a sophisticated conversational tool based on artificial intelligence (AI) by OpenAI, which created an unprecedented movement globally. The characteristics of the infamous updated version, GPT-3.5, which was developed by tech company OpenAI, created a "hype" for the generative AI conversational (GenAI) tool, which responds to user text prompts that are indistinguishable from human actions. Several other GenAI prompting engineering software emerged, such as Claude2 and Llama2, which sparked the so-called "California Dollar Rush" in Silicon Valley (Rudolph et al., 2023; Griffith & Metz, 2023). However, Nemorin et al. (2023) raise a concern that "*many of the claims of the revolutionary potential of AI in education are based on conjecture, speculation, and optimism*" (p. 39). Scholars claimed that amidst the tech war amongst USA tech companies and the hype around different types of chatbots, ChatGPT grew faster than any other chatbot as well as social media platforms like Twitter, WhatsApp, or Instagram (Wodecki, 2023; Yang, 2022). Leveraging the potential of GenAI in education, Holmes, Bialik and Fadel (2019) argue that current GenAI initiatives and other chatbots as large language models (LLMs) have impacted education significantly and have grown exponentially. Given the latter, several scholarly works report on the impact of GenAI on tuition, research, assessment, ethics, deep learning and professional development at higher education institutions (Baidoo-Anu & Owusu Ansah, 2023; Smolansky et al., 2023; Vargas-Murillo et al., 2023; Dwivedi et al., 2023; Wang & Zhang, 2023). In spite of claims of the revolutionary potential of AI in education, concerns are raised about ethical issues and academic integrity (Pisica et al., 2023; Al Matari et al., 2023; Baidoo-Anu & Owusu Ansah, 2023). Some argue that this phenomenon has yet to explore whether GenAI tools have the potential to track learning outcomes across contexts and competencies. At the time of exploring academic staff's awareness of GenAI conversational LLM in teaching and learning (Popenici & Kerr, 2017), a few studies have been conducted at higher education institutions (HEIs) (Smolansky et al., 2023; Peres et al., 2023) but to a lesser extent in the African context (Mhlanga, 2023; Baidoo-Anu & Owusu Ansah, 2023; Adarkwah et al., 2023; Van Wyk et al., 2023).

Recent developments in GenAI initiatives and other chatbots as large language models (LLMs) have highlighted the need to explore ChatGPT as a GenAI phenomenon in higher education in general, but specifically for a teaching and learning context. I was prompted to investigate academics' experiences of using ChatGPT as a GenAI-based conversation chatbot in teaching and learning at a faculty of education. Based on this exploratory inquiry, the following research questions (RQ) were formulated:

- RQ1: What are the views of academics about GenAI-based conversational chatbots in teaching and learning at a faculty of education?

- RQ2: What measures or strategies do the academics apply to prevent academic cheating of using GenAI-based chatbots by students in teaching and learning at a faculty of education?

Literature review

Conversation theory underpinning the study

In 1966, Gordon Pask delivered his seminal text on the cybernetic model based on learning and competencies at the Ohio Bionics Symposium. This seminal text supported his co-authored publication with Pask and Scott (1972), as an extended version of his cybernetic model based on man-machine learning strategies and competence. This article is underpinned by the Conversation Theory (CT) developed by Gordon Pask (1976) and applied in the context of the hype created by the launch of ChatGPT by OpenAI. The notion is that CT is based on the three constructs of cognition, conversation, and learning. The CT functions on concept-forming and concept-sharing between conversational participants.

I concur that ChatGPT3.5 is a conversational chatbot [cloud-based robot], programmed to understand, interpret, and start conversations with humans [sic...]. It depends on the type of prompting or interactive conversations with the robot-in-the-cloud [chatbot]. Therefore, ChatGPT is a conversational LLM chatbot, which acts on prompting. So why prompt engineering? ChatGPT functions optimally on prompts to generate text. It is computerised as an LLM, based on processes to generate text for understanding and interpretation. Studies reported that academics and students are aware of the benefits and drawbacks of ChatGPT as a conversational LLM chatbot (Megahed et al., 2023; Rudolph et al., 2023). Moreover, research showed that ChatGPT is a conversational robot based on natural language processing (NLP) which engages as a robot with users in a human-like conversation (Adarkwah et al., 2023; Kamalov et al., 2023). Therefore, ChatGPT is a conversational LLM chatbot that supports, creates, and facilitates meaningful interactions and conversations with humans (Wodecki, 2023).

The impact of GenAI-based research on the future of education

Based on the ground-breaking AI work by torchbearers Asimov and Turing, their research has led to tremendous strides in this area and has profound impact on the field of education. This has led to the use of AI tools to enhance teaching and learning experiences. The launch of the first LLM model created hype around ChatGPT as a GenAI-based conversational chatbot. In a newspaper article by Wayne Hu (2023) entitled *"ChatGPT sparks AI 'gold rush' in Silicon Valley", the author made a profound claim that "this wave of AI could be bigger than mobile or the cloud, and more on the scale of something like the Industrial Revolution that changed the course of human history"* (p. 1). Similarly, scholars coined the phrase "California Dollar Rush" to describe (Rudolph et al., 2023; Griffith & Metz, 2023) the frenzy among tech companies to have a stake in the GenAI tech war. This has increased the complexity of prompt engineering paradoxical sentiments and has impacted the future of higher education and business (Oxford Analytica, 2023).

So, this leaves us with an unanswered question, namely whether ChatGPT and similar chatbots should be tagged as either a "friend or a foe" (Pisica, 2023; Matari et al., 2023). I believe that GenAI is the future and faculties of education must ride the wave of GenAI. Moreover, universities can ride the "hype" of popularity created by tech companies. Universities can leverage the amazing capabilities of GenAI chatbots (Bozkurt et al., 2023) and take advantage of creating innovative teaching and learning opportunities without compromising values such as ethics, diversity, equality, social justice, and quality education (Holmes et al., 2019). Research reported that GenAI-based LLM chatbots, for example, ChatGPT, were useful chatbots that generated specific content knowledge and supported specific writing tasks for both lecturers and students (Kaplan-Rakowski et al., 2023; Megahed et al., 2023; Michel-Villarreal et al., 2023). Studies exploring the use of GenAI in education revealed tremendous advances and growth in the teacher education context (Holmes et al., 2019; Wodecki, 2023; Su & Yang, 2023). Studies showed that, for example, ChatGPT and Claude2 not only acted on prompts in a "humanly" manner but could also identify student learning gaps (Lim et al., 2023). On the other hand, ChatGPT is a large language technological robot that uses an instructional approach referred to as prompt engineering (Rose et al., 2023).

In sum, the conversation theory foregrounds this article, namely that ChatGPT is an exciting and value-added conversational chatbot that academics can use to advance teaching and learning spaces. The chatbot brought profound changes related to the future of education. Therefore, lecturers have opportunities to reimagine their praxis because of the increased popularity of chatbots. Lecturers need to rethink the purpose of using chatbots for teaching and learning.

The popularity of ChatGPT as a conversational chatbot at a faculty education

Recently, GenAI in education, in particular ChatGPT, has created hype in teacher education (Yang, 2022; Mohamed, 2023; Antonenko & Abramowitz, 2023). Some of these studies were conducted in contact, blended learning, and open-distance learning contexts (Chan & Hu, 2023; Baidoo-Anu & Owusu Ansah, 2023; Adarkwah et al., 2023; Van Wyk et al., 2023). As reported, GenAI-conversational chatbots showed exponential promise for teacher education. Furthermore, studies conducted in these contexts reported that these chatbots offer pedagogical possibilities for student learning and teaching opportunities (Baek & Kim, 2023; Chan & Hu, 2023; Adarkwah et al., 2023). It could be deduced that the GenAI phenomenon has brought a pedagogical shift in teacher education. For example, lecturers viewed the efficacy of ChatGPT in teaching English Foreign Language students (Mohamed, 2023). Research reported the advantages of using GenAI tools in fostering a student-centred approach (Huang et al., 2022; Antonenko & Abramowitz, 2023). Studies reported that GenAI tools support personalised learning experiences (Chan & Hu, 2023; Li & Wong, 2023; Lodge et al., 2023). It also fulfils students' cognitive needs (Baek & Kim, 2023; Yang, 2022). In the context of this study, academics were exposed to ChatGPT, and they frequently used it for teaching and learning in the faculty of education. To increase the popularity of chatbots for student learning, research reported that teachers implemented innovative approaches to assessing student work in different subjects (Van Wyk et al., 2023; Antonenko & Abramowitz, 2023; Smolansky et al., 2023; Peres et al., 2023).

Ethical dilemmas and academic integrity using GenAI technologies in teaching and learning

Although GenAI tools are available for academics and students, the threat of academic dishonesty, cheating, plagiarism, and copyright infringement has ethical implications for education (Jarrah et al., 2023; Gao et al., 2023; Baek & Kim, 2023; Mhlanga, 2023; Vargas-Murillo et al., 2023; Eke, 2023; Peres et al., 2023). As reported in the latter studies, universities need to revise specific policies related to tuition, research, and assessment practices to prevent cheating and preserve academic integrity at all costs. An empirical study by Cooper (2023) reported key concerns regarding ethical considerations related to the use of copyright infringements by science teachers and students, which could compromise academic integrity. To curb this challenge, academics must be capacitated to use GenAI tools to raise awareness and set an example for students to follow. Studies reported possible remedies to be used by academics on the use of GenAI tools in their praxis (Ali, 2023; Huallpa, 2023; Dwivedi et al., 2023; Cotton et al., 2023; Kelly et al., 2023). Research reported that students use ChatGPT and similar chatbots to cheat academically (Jarrah et al., 2023). In view of the latter challenge, a concern is raised that university policies are "silent" on academic cheating at some faculties of education. Students exploit this policy gap and thus cannot be penalised or sanctioned for plagiarism or copyright infringements for using ChatGPT technologies and similar LLMs in academic writing (Gao et

al., 2023). Therefore, to address the "chatbot in the cloud", I assumed that universities advocate the seriousness of cheating as well as empower students with competencies to use LLM technologies ethically. Therefore, institutions of higher education have a moral duty to popularise preventive strategies to remedy cheating, plagiarism and copyright infringements and advance academic integrity (Mijwil et al., 2023).

Strategies to prevent academic cheating with GenAI tools

Scholars argued that to protect the image and integrity of the institutions of higher learning, specific measures must be developed to prevent cheating (Kumar & Mindzak, 2024; McDonald et al., 2024). Chan (2023) is of the view that ethical considerations must be applied and, if needed, policies related to integrity, copyright infringements and praxis of academics should be revised. Given the latter, institutions of higher learning can implement strategies to prevent academic cheating. Literature provides measures or strategies that can be considered to prevent academic cheating of generative AI tools in teaching and learning. Studies by Oravec (2023) and Firat (2023) reported specific cheating-detection strategies and GenAI-empowered skills that could be used to support students in learning to deal with academic dishonesty or plagiarism. Lecturers must advocate and create an awareness of why and how generative AI can be viewed as a learning opportunity to increase competence in GenAI tools. As a measure to prevent cheating or academic dishonesty, students could be given case studies (Sallam, 2023), research- and problem-based projects (Firaina & Sulisworo, 2023) to present the results and have them write and report as a group. Strategies such as group discussions (Castillo et al., 2023), critical conversation forums and online panels are also proposed. These strategies will help to raise awareness of and enhance critical conversations about GenAI technologies to protect academic integrity and freedom and instil a sense of integrity in students' work.

Methodology

Before the study began, an invite was sent to identified participants. During the year, academics were exposed to several webinars on generative AI tools and conferences. Based on this exposure, the participants agreed and signed a consent application to take part in the study. I foregrounded this exploratory qualitative design study from the constructivist-interpretative perspective and sought the views of academics who explored the generative AI-based conversational LLM models. After approval of ethical clearance (Ref EFEC 5-08/2023), an invite was posted to all academics at the faculty of teacher education, an institution of higher learning. The purpose of the exploratory study on ChatGPT was stated. To be selected as participants in the study, specific criteria were stated, namely awareness of GenAI tools {*awareness and early adaptors*} and applying ChatGPT as a GenAI tool in teaching and learning {*adaptability and accessibility*}. For the purpose of selecting the sample for this study, an invite was sent to 42 academic staff in teacher education (faculty of education) at an institution of higher education. The invite requested academic staff to indicate exposure to GenAI technologies through attending conferences, webinars, in-service training or currently used GenAI technologies for teaching and learning. Based on pre-data collection, a quota sample of 9 participants (9/42 = 21.4%) were selected who "met" the criteria to be selected for the study. All participants signed a consent application. Based on information obtained through the pre-interview session (criteria for selection), the faculty of education hosted several webinars, panel discussions and in-service training in GenAI technologies. The purposive quota sampling comprised both males (33.7%) and females (66.7%) academics at a selective institution of higher learning (see Table 1).

Table 1. Biographical information of participants (n=9).

Participants	Code for participants	Gender	Lecturing experience (in Years)
Lecturer 1	L1	Female	8
Lecturer 2	L2	Female	6
Senior Lecturer 1	SL1	Female	9
Senior Lecturer 2	SL2	Female	7
Associate Professor 1	AP1	Female	14
Associate Professor 2	AP2	Male	19
Full Professor 1	FP1	Male	15
Full Professor 2	FP2	Male	23
Manager: Teaching and Learning	MTL	Female	19

The quota sample received dates and times with a link scheduled on Microsoft Teams. All semi-structured interviews were generated by Microsoft Teams {transcribed}, and recordings were downloaded and secured as part of data management. To ensure the trustworthiness of the generated themes reported, the transcripts, Microsoft Teams recordings, and semi-structured interview protocol were sent to the quota sample to verify and validate, through member checking, the correctness of the data generated. An online link sent the recordings, transcripts, and verified extracts and questions posted by participants for them to verify their correctness. After a week, if participants agreed, an e-mail was sent to the study's quota sample. The extracts were analysed manually, and several themes were identified as guided by the thematic analysis process (Creswell, 2012; Nowell et al., 2017).

Findings

The results confirm that, to date, little research has been done using a systematic review based on the methodological framework of ChatGPT as an AI conversational tool. Academics were aware of the potential benefits and drawbacks of the usefulness and functionality of ChatGPT for teaching and learning. Further investigations are recommended to explore similar studies in teacher education.

RQ1: What are the views of academics about GenAI-based conversational chatbots in teaching and learning at an institution of higher education?

After data analysis, several themes emerged from the data:

- Using generative AI tools in promoting and/or advancing teaching and learning experiences of students.

- Generative AI conversational tools such as ChatGPT are likely changing the face of higher education.

- Creating awareness and ethical considerations for the use of generative AI tools.

Using generative AI tools in promoting and/or advancing teaching and learning experiences of students

The majority of participants (90%) in the study were positive about the usefulness of the generative AI apps, while 10% were concerned about cheating and academic dishonesty. Furthermore, 80% of them were registered and used the free version of ChatGPT-3.5 for teaching and learning. Participants viewed generative AI conversation modules as a prompt engineering tool that benefitted teaching and learning. One participant said she used specific case studies to promote problem-solving skills and academic writing opportunities. This participant said:

> "I am using ChatGPT as a prompt engineering tool to generate specific case studies. I use these case studies to promote problem-solving skills and academic writing opportunities. For example, my master's degree students received a ChatGPT-generated case study, they evaluated the content, in-text referencing, language editing (grammatical errors), paraphrased the case study and presented each case study for the group to critique their presentations" (FP2).

Another participant found ChatGPT useful, capacitating postgraduate students with academic writing skills. She echoed:

> "I found one specific AI tool, ChatGPT, very useful for helping my students with their academic writing. In my view, GenAI tools can be banned, embraced, ignored, designed around it or go back to traditional assessment practices. But gives it a chance to evaluate where it is useful and reliable for your context" (AP1).

Generative AI conversational tools such as ChatGPT are likely changing the face of higher education

Participants believed that the hype about ChatGPT and other LLM chatbots is here to stay, but higher education must adjust their policies and guidelines related to assessment, plagiarism, academic dishonesty, and ethics. Participants agree that generative AI tools have disrupted the sector and are likely to change the face of education. L1 opined: "*When ChatGPT was launched last year, a hype was created, and disrupted the higher education sector. Higher education needs to adjust policies such as ethics, exams, and assessment*".

Most participants had read an article or attended a webinar or conference on ChatGPT. AP1 said: "*Since the day I heard about ChatGPT, everybody, including my students, has been*

experimenting with this tool." However, SL2 is of the view that tech companies have invested to gain an advantage in AI-generative apps for profit-making. She said: "*Last week, I read an article about the so-called 'California Dollar Rush'. Tech companies invested millions of dollars in generative LLM chatbots. One tech company, OpenAI, invested millions of dollars. A tech war erupted among US companies to see who claimed the most dollars*" (SL2).

Creating awareness of the usage of GenAI conversational tools and the ethical implications of using GenAI tools

Participants were cognisant of how fast the generative AI tools emerged since the first chatbot was launched. They said academics must be mindful of the advantages and drawbacks of AI conversational models before jumping to use them in teaching and learning. FP1 is aware of the tools available: "*Several others have been developed, Claude 2 and Llama2. There is a war among tech companies to get a bigger slice of the chatbot pie. But what about the ethical implications. Are we addressing the real issue of cheating*". Many mentioned that the "elephant in the cloud" is about ethics. In addition, several participants raised concerns about ethics and how to detect cheating or plagiarism.

> "ChatGPT has sparked heated debates around ethical issues like academic dishonesty and cheating by both academics and students. But there are also generative AI-detection tools to detect academic dishonesty and cheating. I used Turnitin as well GPTZero for tracking generative content in assignments. ChatGPT can easily generated any text or an assignment or even a research proposal" (SL1).

According to this participant, another major issue to be addressed is revising the existing policies related to research, assessment, and ethics as a matter of urgency. "*As an institution, stakeholders were informed of the revision of policies related to tracking of an assignment or text was written by a generative AI software. An awareness was created and policies such as teaching and learning, ethics, assessment, academic integrity, and research were approved*" (L3).

RQ2: What measures or strategies do the academics apply to prevent academic cheating by students using GenAI-based chatbots in teaching and learning?

Different themes emerged from the data analysis process, discussions, and specific extracts from participants:

- Combat academic fraud, cheating and dishonesty through authentic assessment/alternative assessment tasks.

- Empower students with digital literacy skills in using GenAI detection tools as a preventive measure to discourage cheating.

- Advocate and inculcate principles of integrity, morality, and ethical responsibility in using GenAI-chatbot strategies in academic writing.

- Design authentic assessment tasks that cannot easily be generated by GenAI chatbots but are applied to real-life contexts for meaningful learning.

Combat academic fraud, cheating and dishonesty through authentic assessment/alternative assessment tasks

Most of the participants (90%) agreed that it is necessary to create and adopt measures to prevent academic fraud, cheating and dishonesty. They view the purpose of using chatbots as generating content for students to evaluate and reflect on. If any form of cheating or fraud is detected in assignments, research projects or writing pieces, those students must face the consequences of their actions. Some participants proposed harsh punishment, such as expulsion from all academic activities, forfeiting of grades or deregistration from courses or qualifications to avoid cheating or academic dishonesty. Participants proposed, for example, creating case studies, problem-based projects and writing reflections to minimise the use of GenAI apps to write on behalf of the student. Based on measures to combat or prevent academic fraud or dishonesty, MTL mentioned: "*I set problem-based learning tasks for students to reflect, resolve and evaluate each task either or as a group. Each group evaluates the task performed by another group and grades each task according to assessment criteria*". Moreover, participants are of the view that lecturers have the means to combat cheating by switching from traditional to alternative or authentic assessment. SL1: "*I developed project-based learning as an alternative assessment opportunity for each student to reflect, plan, implement and present the final project as part of the portfolio as an authentic assessment. These alternative assessment tasks minimise the use of ChatGPT to write for the student*".

Empower students with digital literacy skills in using GenAI detection tools as a preventive measure to discourage cheating

Participants regarded it as their responsibility to set an example by educating students and creating an awareness of the different detector tools available to discourage cheating. One participant empowered her students by exposing them to the use of detector tools to combat cheating in the course. She said: "*Since ChatGPT was launched, I have exposed my students to this generative tool. This was my way to create an awareness that detection tools will be used as a preventive measure to discourage cheating*" (SL2). Another lecturer echoed the same sentiment: "*Internal emails to staff and students posted or sent several communications (social media platforms) that the use of generative software was not allowed. This is a measure to prevent academic dishonesty*" (FP1).

Advocate and inculcate principles of integrity, morality, and ethical responsibility in using GenAI-chatbots in academic writing

Different types of detector tools are available to prevent plagiarism or academic dishonesty (Awan, 2023; Chaka 2023; Lim, 2023). These studies reported that students confirmed using GenAI software to cowrite assignments and other projects. To remedy this challenge, participants should foster academic integrity to improve writing skills and guide them appropriately in the use of AI technologies. Established guidelines in the use of GenAI technologies, for example, citing and referencing in academic writing, should be shared with students. On the other hand, studies revealed an increase in cheating, which raises ethical concerns and moral dilemmas in academia. In most cases, reliance on GenAI can undermine student learning and diminish programme accreditation (Jarrah et al., 2023, Gao et al., 2023).

For some participants, the best way is to advocate strategies to prevent cheating. They believe it is important to advocate principles of integrity and ethical responsibility in using GenAI as a value-driven opportunity to advance their learning. It is vital to expose students to detector software to discourage cheating. AP1 said: "*Before students submit an assessment task, a generative AI declaration is assigned. I explained the similarity in the text of each work. There is no excuse for being ignorant, and if detected cheating, it is punishable with deregistration in my course*". However, some participants were positive and believed that generative tools should be embraced. SL1 said: "*Let us be positive about generative tools. If the human spirit overcame two world wars, 4IR and the pandemic, it could propel itself beyond the 21st Century. It needs a spirit of 'embrace it, design around it with a possibility attitude' by embracing all the generative AI tools in advancing education.*" Some view ethics and collective responsibility as vital strategies to advocate the use of chatbots in teaching and learning. MTL mentioned: "*Inculcate a sense of ethical and collective responsibility amongst our students. I like the critical conversations about ethics and zero-tolerance of fraud using generative AI tools. I am of the view that we should protect the image, qualifications, and values of our institution*".

Design authentic assessment tasks of learning experiences that cannot easily be generated by GenAI chatbots but are applied to real-life contexts for meaningful learning

Participants opined that authentic learning experiences should be designed and adopted to raise awareness of and prevent cheating among students. Such measures should change the usefulness of chatbots. Webinars on generative AI conversational tools are valuable strategies to increase awareness. Discussion forums and online panels should be created for critical conversations about detector software, and the need for the adoption of detector tools in teaching and learning should be emphasised. One participant echoed:

> "Our college hosted several webinars on ChatGPT and other generative tools. To prevent cheating with generative tools, design and conduct independent research projects that require students to design data collection tools and generate findings or write context-based case studies that need specific solutions that cannot be generated by AI tools" (SL2).

SL1 said how he created strategies for meaningful and authentic learning opportunities:

"In one of the study units that focuses on topics such as unemployment and poverty as contemporary economic issues, students are grouped, to solve real-world problems, which requires critical thinking, collaboration, application of research skills and creativity for a group presentation is an alternative assessment practice strategy".

Discussion

This study is underpinned by the Conversation Theory of Pask and methodologically aligned to the constructivist-interpretivist paradigm, exploring academics' views of GenAI as a LLM chatbot. Furthermore, strategies are proposed for the design and application of authentic assessment tasks in real-life contexts as measures to combat academic dishonesty using GenAI software tools in an institution of higher education. Findings revealed that academics are of the view that GenAI tools could be advantageous in teaching and learning, but students must be empowered with digital literacy skills to use GenAI detector tools effectively to combat cheating, fraud, dishonesty, and plagiarism.

The first research question explored participants' view of GenAI, specifically ChatGPT as a conversational LLM tool, to promote and advance the teaching and learning experiences of students. Participants are of the view that the ChatGPT as a GenAI-conversational tool could be used by them (lecturers) to empower students by prompting chatbots to generate specific case studies, problem-solving activities and project-based learning tasks, and advance academic writing skills (Kaplan-Rakowski et al., 2023; Wodecki, 2023; Gamage et al., 2023). Participants echoed sentiments about the usefulness of ChatGPT as one of the generative AI tools in promoting and advancing pedagogy as well as student learning experiences (Megahed et al., 2023; Castillo et al., 2023). FP1 said: "*Based on the usefulness, a participant found the ChatGPT useful and capacitated postgraduate students with academic writing skills*". Another issue that emerged from the interviews is that disruptive generative AI conversational tools are likely to affect higher education. Mohamed (2023) reported that the lecturers viewed ChatGPT as effective in teaching English foreign language students. However, participants were worried about the affordability and accessibility of these generative AI tools for disadvantaged students (Farrelly & Baker, 2023) because tech companies had invested hugely in gaining an advantage in AI-generative apps for profit-making.

A major issue that participants raised and that requires urgent attention, is ethics. This issue needs to be addressed and incorporated into learning programmes. An awareness of GenAI and ethical considerations in the use of GenAI tools, as well as following a zero-tolerance policy, must be advocated. Participants rated awareness and ethical considerations as very important considerations before adopting chatbots in practice. Furthermore, academics needed to be cognisant of the speed of the emergence of new generative AI tools since the launch of ChatGPT 3.5 in 2022. Studies concurred that ethical compliance in the use of GenAI tools by students is a crucial principle (Baek & Kim, 2023; Eke, 2023; Cotton et al., 2023). These studies reported that lecturers expressed concerns about an increase in academic dishonesty and cheating by students, which may compromise or jeopardise their academic careers. Moreover, participants agreed that higher education needed to address this concern through policy changes. One participant echoed that "*the chatbot in the cloud [sic...meaning the elephant in the room] is a serious matter and must be dealt with speed to stop cheating and dishonesty by students*" (MTL). Several studies highlighted ethical issues as a great concern which must be addressed urgently (Cooper, 2023; Mhlanga, 2023; Vargas-Murillo et al., 2023). Participants concurred that ethics is at the heart of preventing and detecting cheating or academic dishonesty. SL2 raised: "*Since it became known, generative AI tools sparked heated debates around ethical issues like academic dishonesty and cheating by both academics and students*". Although AI-detection software is available to detect academic dishonesty and cheating, it is often costly (Awan, 2023; Chaka 2023; Lim, 2023; Oravec, 2023).

The second research question investigated the measures or strategies academics applied to prevent academic cheating by students using ChatGPT in teaching, learning and assessment. Participants proposed authentic assessment or alternative assessment tasks to be applied in real-life contexts, empowering students with digital literacy skills in using GenAI detection tools, and inculcating principles of integrity, morality and ethical responsibility in using GenAI-chatbot strategies as value-added tools to prevent cheating and plagiarism. However, literature as well as participants concur that disruptive generative AI conversational tools are here to stay and will change the face of higher education. The availability of GenAI tools compelled universities to address policy revisions, and awareness amongst staff and students is of vital importance to prevent cheating (Chan, 2023; Dwivedi et al., 2023; Ali, 2023; Ali & Djalilian, 2023; Brendel et al., 2021). According to participants, these are very important strategies against academic dishonesty. To combat academic fraud, cheating and dishonesty, participants felt it was necessary to create and adopt a "zero-tolerance" policy to prevent academic dishonesty. Furthermore, lecturers could design case studies, research- and problem-based projects for students to present the results and have them write and report as a group (Firaina & Suliswaro, 2023; Ismail et al., 2023; Hassoulas et al., 2023). SL2 said, "*In my course, I designed project-based learning opportunities, for engagement, collaboration, implementation, and reporting the final project as part of a portfolio [authentic assessment]*". Studies advocate the use of AI chatbot strategies to prevent academic dishonesty (Firat, 2023; Ali, 2023; Debby et al., 2023). Several participants believe it is vital to expose students to detector software to discourage cheating. Participants opined that authentic learning experiences should be designed and adopted to raise awareness of and prevent cheating among students. Such assessments should be based on real-life applications to evaluate student competence. MTL echoed: "*Webinars on generative AI conversational tools are a valuable strategy to increase awareness*". According to Castillo et al. (2023), discussion forums as authentic assessments can create critical conversations about GenAI detector software and motivate students to adopt detector tools.

Conclusion

Scholarly works have been published since the launch of the first GenAI conversational tool, ChatGPT. The hype around GenAI tools as a large language model (LLM, GenAI) has highlighted a fundamental pedagogical change in higher education. This exploratory study revealed that the ChatGPT phenomenon has affected teaching and learning at a faculty of education. Participants are of the view that GenAI-based tools could advance teaching and learning at the faculty of education. Therefore, it is an opportunity to create teaching and learning for students. Literature and empirical findings in this study reported two critical issues that faculties of education must consider: creating an awareness campaign and developing ethical guidelines for using GenAI tools like ChatGPT by students and academics. Some participants viewed ChatGPT as both a friend and foe for the academic project. To prevent unethical behaviour of students, it is necessary to create and adopt measures to prevent academic dishonesty, cheating or plagiarism. Participants suggest using specific case studies, problem-solving activities, project-based learning tasks and advancing academic writing skills as strategies to empower students.

Recommendations

This study made significant contributions to advance GenAI-based LLM research in the context of a faculty of education. Furthermore, it advances the growing body of knowledge of generative artificial intelligence applied by academics in education. The study extends the epistemological (knowledge of the subject) of GenAI, in particular, how the Conversation Theory foregrounds the study. Moreover, this study proposed strategies to create an awareness of detector tools to prevent academic dishonesty and protect academic integrity. It is recommended that the universities revise policies, expose students to GenAI detector tools, and create an awareness of ethical considerations for using GenAI tools. Because of the "silence" in the use of GenAI tools for academic purposes, ethics and integrity policies must be adjusted to address this matter urgently. Further research is needed to build on recent gains in academic awareness of GenAI tools for teaching and learning. In addition, research must explore whether ChatGPT as an LLM application enhances students' creativity and critical thinking skills. Finally, it is suggested that ethics, tuition, research, assessment practices, and continuous professional development initiatives in faculties of education be revised.

Limitations

Scholarly works have been published about the impact, benefits, and challenges of ChatGPT in different fields, subjects, disciplines, and contexts, but to a lesser extent in the faculty of education. Although the hype around GenAI tools as a large language model (LLM) has highlighted the learning opportunities, they also present a threat to academic honesty in higher education. The views of academics from a single institution of higher learning were presented, but further research must be conducted at other HEIs. The findings of this small sampled exploratory study cannot be generalised; thus, a larger study must be undertaken that may yield different results.

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