Quality Assurance in Edu

Title: Generative AI: Hopes, Controversies, and the Future of Faculty Roles in Education

Journal:	*Quality Assurance in Education*
Manuscript ID	QAE-02-2024-0043.R4
Manuscript Type:	Research Article
Keywords:	Higher education, faculty role, AI, Ethics

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Abstract

Purpose Generative artificial intelligence (GAI) has seen exponential growth in recent years due to its capability to generate original content through natural language processing and comprehensive language models. This paper investigates the transformative impact of GAI on higher education, focusing on the evolving roles of faculty in the classroom.

Design/methodology/approach Using a phenomenological perspective and a process approach, the study involved 40 semi-structured interviews with academicians in higher education.

Findings The findings reveal that GAI currently creates biased and commercially driven learning environments, challenging traditional pedagogical models. Despite its potential for enhancing education, the autonomous nature of GAI often prioritizes commercial interests over pedagogical goals.

Practical Implications The study highlights the need for higher education institutions to develop comprehensive policies, provide training for faculty and students, and design new courses that leverage GAI for personalized learning experiences and enhanced faculty research.

Limitations However, the study is limited to faculty perspectives, suggesting future research should include student viewpoints and diverse educational contexts. This paper contributes to the emerging literature on GAI's impact on education, highlighting its dual nature as both a transformative tool and a potential threat to traditional educational roles and outcomes.

Keywords: Higher education, Faculty role, Generative AI, Ethics.

Introduction

Imagine a student submitting a university assessment consisting of an essay written using ChatGPT. The prevalence of faculty members encountering student work that exhibits a significant reliance on, or is entirely generated by, artificial intelligence (AI) has become an ordinary occurrence in the higher education sector (Baidoo-Anu & Ansah, 2023; Cotton *et al.*, 2024). In parallel, some faculty members are exploring ways to responsibly utilise GAI to improve student learning and promote responsible usage of technologies like ChatGPT, Grammarly, and other AI-powered editing software (Yang *et al.*, 2021). One of the authors of this paper employs Grammarly to improve the lucidity of her writing owing to her dyslexia and to ensure the precision of her intended communication while composing emails. The support from AI text-generating tools has heightened interest in unsupervised computational approaches. Therefore, the role of technologies used for forming meaning has had appreciable controversy considering embedded biases and marginalisation.

According to a report published on Bloomberg, the AI market size reached the value of USD 454.12 billion in 2022 and is assumed to reach more than USD 2,575 billion by 2032, increasing by 19% in less than 10 years (Catsaros, 2023). Generative Artificial Intelligence (GAI) is a subfield of AI that uses machine learning models to generate new data, such as text, images, and music (Acharya *et al.*, 2023). Large datasets are used to train GAI models based on existing data, where they learn the patterns and relationships within that data. Once trained, the models can generate new data that is similar to the training data, but not identical (Carlini *et al.*, 2023). GAI is distinct from traditional AI, which is typically used to analyse and understand existing data as it utilizes new data from scratch. As GAI models become more sophisticated and powerful, education researchers speculate about the major impact such tools will have on learning and its types (Bozkurt, 2023). In education, growth is being driven by several factors; the increasing adoption of AI by different parts of the education sector, the growing demand for AI-powered applications, and the continued development of new AI technologies learning application tools. In terms of education reform, GAI has gained in popularity, disrupting more traditional relationships and pedagogy (Lim *et al.*, 2023). On the commercial side, the growth of the AI market is creating new opportunities for GAI companies. As businesses invest more in AI, they are looking for new and innovative ways to use GAI to improve their operations and create new products and services, where education is a key focus

for many companies that seek to validate their offering (Bahroun *et al.*, 2023). The use of GAI is promised to revolutionize various domains, as well as reshaping and transforming the way they operate.

GAI has recently gained significant attention for its ability to create original content using advanced language models and natural language processing. Tools such as ChatGPT and DALL.E, developed by OpenAI, exemplify the practical applications of GAI in generating text and images, respectively. These tools are widely accessible and have begun to impact educational practices by providing new ways for students and faculty to interact with content (Mate *et al.*, 2023; Limna *et al.*, 2023). Together, these models have showcased the immense potential of GAI in education (Bull & Kharrufa, 2023). As of today, they have manifested in over 350 applications spanning a wide array of domains (Gozalo-Brizuela & Garrido-Merchán, 2023). This underscores the ground-breaking capacity of generative artificial intelligence (GAI) in influencing the trajectory of technology and its diverse contributions across multiple industries, particularly in the realm of education.

This paper investigates the transformative impact of GAI on higher education, particularly focusing on the evolving roles of faculty in the classroom. The research questions guiding this study are: How is GAI reshaping traditional teaching methods? What are the implications of GAI on faculty-student interactions and the broader educational landscape? The novelty of this study lies in its comprehensive analysis of faculty attitudes towards GAI, highlighting both the hopes and controversies surrounding its integration into educational practices. By examining the faculty perspective, this research fills a gap in the existing literature and provides valuable insights into the real-world implications of GAI on higher education.

Literature Review

Generative AI and the Faculty Role

There is no doubt that the use of generative AI in academic settings has influenced the way the faculty communicates with students. In fact, Guilherme (2019) confirmed that advances in AI could alter education schemes and make them more equitable. This transformation could free up teachers' time, who can then focus more on social emotional learning. By leveraging the extensive capabilities of generative AI, educators could cultivate essential skills, such as creativity, critical thinking, and problem-solving, all of which are crucial for students to successfully navigate in today's world (Aad, 2022; Aad *et al.*, 2024; Raaper *et al.*, 2024; Tang

et al., 2020a). By conducting study at Van Lang University about the attitude of teachers towards the use of ChatGPT in writing classes, Nguyen (2023a) confirmed that ChatGPT had positive impacts on both the teachers and students as it provided diverse learning materials, enhanced student's writing skills and boosted their motivation, and it allowed instructors to gain more free time in order to provide personalized feedback. *Iqbal et al.* (2022) share the same concern; in a study done in Pakistan, they explored the opinions of twenty professors from a private university on the use of ChatGPT in education. Data gathered from in-depth interviews showed that teachers were generally opposed to integrating ChatGPT into their teaching. Most instructors resisted the idea, expressing concerns about potential academic dishonesty among students, breaches of privacy, and lack of adequate support from their peers. Going a bit further, Picciano (2019) predicts that in the future, all academic guidance related to course requirements, major, and careers will be handled by AI application. This might reduce the need for academic advisors and counsellors who would only be involved to provide support in deeply personal matters. One major benefit of the utilization of generative AI in academic settings is its capability to create learning experiences that cater to the varied necessities and backgrounds of each student (Sanger, 2020).

By leveraging prompt engineering, a practice of designing prompts to interact optimally with other inputs in a generative AI tool (Short & Short, 2023), students can receive engaging, interactive, and personalized learning material (University of Tasmania, Australia *et al.*, 2023). During COVID-19, a study explored the application of the Internet of Things (IoT) and AI in educational systems for smart cities discovered that IoT-supported education can offer real-time tracking, data gathering, and aid for distance and online learning *(Khan et al*., 2023). Returning to Iqbal (2022), the use of AI technologies does not only enhance the productivity and efficacy of online education by offering immediate feedback to both students and educators, but also they can be particularly pivotal to the learning of students with disabilities. Furthermore, (Kulik & Fletcher, 2016) affirm that Intelligent Tutoring Systems (ITSs) are a key application of AI in education and have the potential to transform how the education system works. These systems leverage AI algorithms to analyse student data and create customized learning experiences for each individual, which includes aligning content and providing assessments and feedback along with a student's unique learning style and pace. Additionally, ITSs use natural language processing and machine learning to interact with students in a more human-like manner, by which it enhances their engagement and interactivity. Mhlanga (2022) explains that another way AI can assist students, especially during online settings, is through

an AI-powered assistant that can provide immediate assistance and direction in order to help students mitigate the physical absence of their instructors.

Faculty in higher education institutions have opposing views regarding the use of GAI tools. On one hand, some are concerned that these tools are capable of quickly generating substantial amounts of well-crafted and unique readable texts that may foster academic dishonesty or provide unfair assistance in programming and problem-solving endeavours (Kasneci et al., 2023). On the other hand, some faculty believe that AI's capabilities are clear. By adopting AI tools, teachers can move away from a uniform teaching method and embrace on a student-focused model, where they can create a variety of learning resources (Kadaruddin, 2023). AI tools enable educators to have virtual assistants, respond to student inquiries, and provide supplementary details delivering personalized assistance instantly (Mhlanga, 2023). For example university professors can leverage Fliki AI to create customized learning materials that cater to their students' specific requirements, and use Leonardo AI to enrich their teaching methods by identifying elements in scientific experiments or interpreting medical imagery (Ruiz-Rojas *et al.*, 2023). Li *et al.* (2020) emphasize the potential aid of AI to instructors through the use of machine learning, using it to automate the grading of students' work leading to a significant reduction in the workload of educators, and thus allowing them a more streamlined and precise evaluation of student learning. At the same time, the surge in powerful AI tools has prompted debates within the education sector, sparking concerns about their ethical utilization, the propagation of misinformation, and potential biases. These concerns encompass implications for both students and faculty members. On one hand, studies have demonstrated that AI can enhance online learning by offering personalization, feedback mechanisms, and analytical insights (Castro, 2019). On the other hand, there are apprehensions regarding how AI might alter the role and purpose of higher education institutions (Ciolacu *et al.*, 2018).

AI tools empower instructors to tailor and adapt learning paths, as well as to cater to the unique needs of each student, thereby fostering increased engagement and active, self-directed learning (Bhutoria, 2022). Preparing difficult subjects and spending time on non-teaching duties, such as class planning, may result in an increased workload, which can ultimately lead to teacher burnout (Agyapong et al., 2022). This burnout is linked to a rise in absenteeism, a high rate of attrition, and a decrease in job performance (Klusmann *et al.*, 2016). Addressing these concerns, (Hashem et al., 2023) conducted a ChatGPT testing study and found that ChatGPT can offer tailored suggestions for

creating lesson plans and preparing instructional materials, providing teachers with valuable time that they can devote to other important aspects of their profession. As technology continues its rapid advancement, it inevitably shapes the social and economic fabric of our world (Kelly, 2016). The workforce undergoes significant changes, necessitating a focus on preparing students to become lifelong, self-directed learners (Cook & Gregory, 2018). As for faulty/teachers, in the realm of teaching, AI serves a three-fold purpose: supporting teachers' professional development, enhancing their teaching capabilities, and providing adaptive teaching strategies (Abrami* et al., 2004). While ChatGPT can aid teachers' professional growth by inspiring them with innovative teaching ideas and self-regulated learning tasks, it falls short in the other two roles, which involve improving teaching abilities and offering adaptive teaching strategies.

AI: The Villain

Even though the use of generative AI can be beneficial in education for both the faculty and learners, it can also pose several challenges. The main concern that faces academics today is the ability of AI tools to generate content that is just as good as, if not better than, those generated by humans (Loh, 2023). In fact, research by (Gao et al., 2023) revealed that ChatGPT was able to review and write scientific papers that appear to be just as good as the ones written by humans, noting that authors and reviewers were able to only identify 68% of scientific papers as being generated by AI tools. Moreover, another study highlighted that the minimal availability of AI detection tools is linked to the high likeliness of usage by students for cheating (Ramberg & Modin, 2019). These developments have caused divergent reactions in the academic writing community. Accordingly, some believe that ChatGPT should be acknowledged in academic writing as a co-author in their publication (O'Connor & ChatGPT, 2023), while others strongly oppose, stating that AI tools lack the inherent ability to be accountable and therefore cannot be recognized as co-others (Kaebnick *et al.*, 2023). In the same line, (Ratten & Jones, 2023) believe that currently, one of the main challenges for educators is designing teaching material that are hard to solve via ChatGPT only. By incorporating recent events into study material, it is important to integrate educational technologies such as ChatGPT rather than discarding them (Mhlanga, 2023). The use of these two conflicting techniques may pose additional challenges for educators, making their already difficult job even more challenging. Taking a more pessimistic perspective, (Picciano, 2019) predicts that the number of full-time faculty might decrease, and those who mainly teach at

universities may experience a loss of purpose where they need to transition from creating and teaching their own content to a tutoring role only. AI technologies have the potential to exacerbate social inequality, which widens the digital divide (Borenstein & Howard, 2021a). The integration of generative AI in higher education has significantly impacted faculty roles, providing tools for personalized feedback and time management. However, the influence of generative AI extends beyond faculty and reshapes the student learning experience as well. This section explores how GAI affects student engagement, learning outcomes, and the acquisition of new skills.

Generative AI and Student Learning Outcomes

Several studies have been done to assess GAI potential in the field of education. Their accessibility to both teachers and students raised awareness about innovative technological options that offer alternative education sources for students and encourage novel methods of teaching and learning (Tapalova & Zhiyenbayeva, 2022). Some researchers even suggest that it has become impossible to speak about education without addressing the extent of effects that AI has on it (Paek & Kim, 2021).Whether that effect is positive or negative has been subject to debate. Typically, the integration of AI in education displays a positive impact and offers various benefits, such as improved student engagement and achievement, increased efficiency, and personalized learning experiences (Ouyang & Jiao, 2021). Additionally, Chen et al. (2023) suggest that one of the main advantages of using AI to facilitate students' education lies in the application of generative AI chatbots, which provide immediate feedback and enhance student engagement in the learning process. This occurs when there is disequilibrium in the teacher-student ratio. In a study by Schroeder et al. (2022a), where two professors at the University of Central Florida utilized AI-generated courseware as the primary educational tool for their students, they concluded that the AI-generated content was beneficial to instructors. It provided them with fresh material derived from the same resources they had been using for years and allowed them to spend more time tailoring this new content to meet the specific needs of their students. On the other hand, it was advantageous for students as it provided them with formative practice questions enabling them to engage in learning by doing. GAI has the potential to enhance student engagement by providing diverse and interactive learning materials. Studies have shown that tools like ChatGPT can offer immediate feedback and support, helping students to improve their writing and critical thinking skills (Schroeder et al., 2022). However, the over-reliance on these tools may hinder the development of independent

problem-solving abilities (Chen et al., 2020). Generative AI could also potentially reduce the importance of teachers and lead to a higher degree of automation in the field of education causing an academy loss of purpose (Silva & Janes, 2023). Therefore the need for universities to formulate strategies for AI integration at the organizational level.

Interview Methodology

This study utilized a phenomenological approach to explore the impact of generative AI on higher education, particularly focusing on the evolving roles of faculty. The research involved 40 semi-structured interviews with academicians in higher education, conducted in two phases: Phase 1 during the global epidemic from September 2020 to April 2021, and Phase 2 from September 2022 to February 2024, which coincides with the rise of AI.

The sample consisted of 40 academicians, selected to ensure a diverse representation of gender, age, employment status, years of experience, and prior online teaching experience. The respondents provided responses to semi-structured questions that were open-ended in nature. The interviews were carried out on the WebEx or Zoom platforms, with an average duration of 40 minutes each session. Table 1 presents an overview of the sample characteristics. The analysis focused on identifying key themes related to the faculty role, student learning outcomes, and the challenges posed by AI. The first author conducted the initial coding, while the second author cross-checked and validated the themes.

Table I. Sample characteristics.

Characteristics		**Count**	**Frequency**
Gender	Male	22	55%
	Female	18	45%
Age Group	30~39	7	18%
	40~49	10	25%
	50~59	16	40%
	Above or equal to 60	4	10%
Employment Status	Full Time	39	98%
	Part Time	1	2%
Years of experience	5-10 Years	7	18%
	16-20 Years	24	60%

	26 or more	9	22%
Online Teaching pre Covid-19	Yes	22	55%
	No	18	45%
Quiet place at home	Yes	40	100%
	No	0	0%

The interview questions were developed based on a thorough review of existing literature, ensuring they align with the study's objectives. Key sources (Nguyen, 2023b; Tang et al., 2020b) highlighted the potential benefits and challenges of GAI in educational settings, which informed the design of our interview questions. The literature on ethical implications and concerns about academic dishonesty (Borenstein & Howard, 2021b; Lund & Wang, 2023a) also guided the formulation of specific questions. Some sample interview questions are listed below:

1. How has GAI impacted your teaching methods?
2. What are the potential benefits and challenges of using GAI in your classroom?
3. How do you perceive the ethical implications of GAI in education?
4. Can you describe any changes in faculty-student interactions since the introduction of GAI tools?

The interview protocol obtained ethical approval from both Durham University and the Lebanese American University, under the respective references DUBS-2020-06-11T10:54:03-wchz36/11 June 2020, and IRB: LAU.SOB.JS1.2/Jul/2020.

All interviewees were assured anonymity and provided consent for the interviews to be recorded. The transcriptions were carried out using Otter.ai. The transcribed interviews constitute qualitative data, with the analysis focusing on the various factors contributing to a successful online teaching experience that was used for another paper (Aad et al., 2024). The other part of the analysis focused on a recurring theme, which was present in all interviews, the role of AI in education, its risks, its and challenges. The outcome from the interviews conduted, provide a deep understanding of the role of AI and its risks in higher education. While the interviewees focused on the online teaching and learning during the pandemic, they all believed AI will accelerate that transition and will add more challenges on Higher Education Institutions (HEI).

The interview transcriptions were saved to NVivo. Following Spiggle's (1994) guiding principles, the data collected was coded and then categorized into definite themes. Different themes emerged, including the AI role in education. While coding the data on NVivo, comparisons were made with other interviews to evaluate if additional interviews were also needed. The interviews were analysed using an inductive approach, and themes were identified as they emerged. As mentioned by Corbin & Strauss (2007), when data is not giving additional insights this means the researcher has reached theoretical saturation and the data collection can be stopped. The first author, worked on the data coding using NVivo while the second author explored and cross checked them manually. The researchers then jointly identified the themes and reconciled the theme of this study.

Interview Results

According to the interviewees in phase 1, faculty believed AI will have a great impact on HEI and their role will change. From the 30 interviewees in phase 1, 28 mentioned that AI will impact their teaching methods and the students' learning outcomes. Table 2 summarizes the most frequently occurring themes across all interviews and the number of interviews in which each theme was mentioned. The same themes reoccurred when running interviews in phase 2.

Table II. Interview themes from phase 1 and 2.

Group	Theme	Overall Frequency of Occurrence	Number of Interviews (phase 1) in which Mentioned	Number of Interviews (phase 2) in which Mentioned
Faculty role will be impacted because of AI	Advantages of AI	20	14	10
	Faculty adaptation to AI and challenges	22	12	10
Students learning outcome	Advantages AI for students	15	8	10
	Students' new skills	24	12	10
Challenges of AI	Faculty concerns	20	9	10

	Ethics	22	8	10

Broad overarching themes emerged from the data collected, including faculty role impact with AI, student learning outcomes and challenges of AI. These first-order themes then led to second-order themes such as advantages of AI, faculty adaptation to AI and challenges, advantages of AI for students, students' new skills faculty concerns, and ethics. The different themes were helpful to understand the various tangible and intangible aspects associated with the emergence of AI. "Advantages of AI" and "Faculty adaptation to AI and challenges" gave more information on how the faculty role will be impacted by AI. The categories "Advantages AI for students" and "Students' new skills" contributed to the impact on students learning outcome. "Faculty concerns" and "Ethics" detailed the challenges of AI.

Faculty Role and Impact of AI

GAI tools have significantly impacted the roles of faculty by providing personalized feedback and efficient content creation. However, concerns about academic dishonesty and job security were prevalent. When asked the question "how do you think AI will impact higher education?", most interviewees mentioned that AI will have positive and negative impacts on higher education.

Interviewee 35, a 37-year-old male, with 5-10 years of experience, from the Americas mentioned:

> "I say that AI is not a fad. I have been saying this for the past years. It is everywhere already and at the finger tip of everyone. On one hand, it provides educators with many benefits, such as it saves time and helps me doing the lesson plans, which I can then refine. This allows me to focus more on student interactions, but it might be threatening for some. And, it needs to be regulated otherwise it will lead to chaos."

Another faculty member mentioned a challenge of AI, which is growing exponentially. She is a 60-year-old female who said:

> "We should control the AI and not be controlled by it. It is a game changer in education for both faculty and students. Some are finding it threatening as it is advancing very

quickly due to the exponential growth of technology. It might replace us."

In terms of adaptation to the use of AI Interviewee 35, who was the youngest interviewee interviewed in phase 1 and 2, mentioned that:

> "AI is nothing but a sophisticated and proactive program. It is a smart algorithm. Educators need to learn how to prompt it and how to use it for their advantage. It can save them time, time that they could use for more research or critical thinking".

But also, there is a role that needs to be played by the institutions to help in the adaptability, as Interviewee 25, who was interviewed in phase 1 and 2, a 60-year-old male, Dean in the EMEA, mentioned that:

> "Faculty need to survive and thrive in the AI age. It is our responsibility as leaders in higher education to strategically help faculty and students to adopt this technological change, understanding the benefits of AI, what and how to use it, and limiting its drawbacks"

This aligns as well with what interviewee 35 said:

> "What I believe should be done now is proper professional development for all staff. Some will resist, some will be sceptical, some will adapt, and some will move forward willingly. So definitely not all will be able to thrive this new era, but change should happen; otherwise, we might see many universities closing their doors soon".

However, Interviewee 40, who was part of phase 2 and is a prominent academician who used to preside an American University, said:

> "There are no ifs there are absolutely we need as institutional education to really adapt to what's going on and make sure while we are adapting not to forget about how to educate students, they're coming to us with incredible ability you know technological ability but we need really. I always said that we need to be careful not to graduate automatons and if we are to do that, we had better learn about it."

Student Learning Outcomes

GAI enhances student engagement by providing diverse and interactive learning materials. However, the over-reliance on AI tools may hinder the development of independent problem-

solving skills. Interviewee 30, a 58-year-old Male from the Asia Pacific, who held a Deanship position, and was part of phase 1 and phase 2 interviews, mentioned:

> "AI is affecting education and all sectors. We will see more automations and more layoffs. New skills are needed and these skills should be acquired in higher education. Our teaching approach should change; otherwise, our students will not be employable. We need to invest more in resources and technology. We need to work hand in hand with the tech industry and bring it on board, inside our campuses, and close to our students. We need to admit that academia should bridge the gap with the industry specifically the tech industry. Students seem more engaged when using AI-generated content, as it is often more tailored to their interests and learning styles. So, we need to embrace that and adopt AI"

These new skills need to be acquired with the help of the institutions, who should now change their model and adapt to the new changes that are occurring because of the AI revolution. Interviewee 30 elaborated further by stating that:

> "It is about time to change the 4 years program. Our curriculum offerings should change. Students now should learn cyber security, data analytics, and yes, hacking. What I mean, of course, is the white hacking I think it is called. So, how to be proactive against cybercrime. We need to provide them with the opportunity to use technology safely and honestly".

Therefore, the need to adapt and embrace this technology, Interviewee 25 said:

> "AI can cause job elimination, lead to corruption, unethical behaviour, but also it can help in reducing redundant jobs, be a better writer, designer, and even programmer. Educators need to embrace it and accept that this is it, things will change. We need to know how to prompt AI. This is a program we need to learn how to us; otherwise, we will be replaced."

Ethical Implications

Ethical considerations, including data privacy, algorithmic bias, and the potential for misuse, are significant concerns for faculty. Developing policies and guidelines to address these issues ~~is~~ are crucial. Faculty are challenged by AI in some instances and might be concerned as

mentioned by interviewee 25:

> "Recently we have seen a lot of biasness in the use of AI. Now, AI should be used. There is no doubt about that. Some are scared about it and consider it the villain, which will replace their jobs. But in reality, this will shape anyone's job and take it to another level. Now, as I said, there is bias in many AI tools. Who did the algorithm? Who is behind the tool? So, I would say always take it with a grain of salt and question its accuracy."

Ethics was a concern mentioned by some of the interviewees, as this is a challenge that institutions will face and will need to address. Interviewee 4, a 74-year-old male, pointed out that:

> "…I also pointed out to the ethical challenges that AI will generate. These need to be addressed, and it is of utmost importance to create clear guidelines on the proper use of AI for both students and staff."

Interview 10 agrees that the ecology of higher education is resistant to change, but this cannot last:

> "Higher education ecology is known to be resistant to change. But, if that persist, we will see many big university landmarks disappearing. It is time for the big change. Students know what they want and they want it fast. Faculty can no longer be the sage on stage they need to move on and embrace the use of AI to create a new teaching approach which fosters engagement and collaboration."

He added:

> "I cannot understand how some universities banned the use of ChatGPT or any other generative AI tool. I personally encourage the faculty in the management department to incorporate AI into their lessons and to challenge students to use it in creative ways in their courses. AI will be part and parcel of the core curriculum in all courses. As educational institutions, we need to change our mindset or else we will be left behind and loose our students and our faculty, but we need to have clear policies and guidelines in place."

On the other hand, Interviewee 40 said:

> "Try to come up, really, with something that is very very important to provide them, as well, with the ethical edge, which is really critical thinking, with really defining what's right and what's wrong, and if we don't do that you know, I know it's a major challenge."

Discussions

This study examined the role of AI in Higher Education Institutions (HEIs) and the impact it will have on faculty. There is a multifaceted role of faculty using generative AI that will have implications for educational institutions, policy-makers, and future researchers. Faculty members are increasingly adopting generative AI tools in their teaching practices which indicates a shift towards more technologically enhanced teaching methods using innovative pedagogical approaches. The positive impacts of AI on student engagement, as highlighted in our study, align with studies by (Schroeder et al., 2022), while the negative impacts resonate with the concerns raised by (Chen et al., 2020). Teaching can now be tailored to ones needs, which creates a more personalized experience. This impact will spread to students and HEI as well. These findings align with many previous researchers (Guilherme, 2019; Tang et al., 2020a). Faculty will need to embrace the new technology and use it to their advantages. Our findings support previous research by (Nguyen, 2023b) and (Tang et al., 2020b)on the benefits of AI for faculty, but also highlight concerns raised by (Lund & Wang, 2023a) and Borenstein and Howard (2021) regarding academic dishonesty and job security. As mentioned by Nguyen (2023), AI usage can have many positive impacts on faculty performances. Similarly, students are more engaged through a non-static content leading to increased participation and interest in educational materials. It is a must for faculty to adapt and be able to use the AI tools that will lead to that type of participation. In accordance with previous research, (Iqbal et al., 2022; Lund & Wang, 2023), the main challenge of integrating generative AI is biasness and lack of skills which makes it compulsory for institutions to provide adequate support, training, and resources; in addition to clear policies, best practices, and guidelines. The issues of bias and privacy identified in our study are consistent with the challenges discussed by Iqbal *et al.* (2022) and Borenstein and Howard (2021). Many have adapted to the use of AI and are now using it intuitively for every task they want to achieve. While AI is considered a threat or the "villain" that will replace jobs, many are becoming addicted to it. Its usage is creating ethical considerations, especially in higher education. Therefore, there is a need to create a task force at the country level, which is led by the government and ministries of education, that helps

secure proper use of AI and to develop safety measurements. Alan Turing once said: "May not machines carry out something which ought to be described as thinking, but which is very different from what a man does" (Turing, 2009), but we do not want to reach a stage where man will stop thinking and solely rely on AI. We want AI to help educators augment and advance their skills. Academic misconduct is increasing in higher education. Addressing these issues by creating policies and appropriate awareness is of utmost importance before fully adopting its use. This is an evolving tool. We need to be cautious on how to use it to our advantage and not the other way around. Future directions for higher education institutions should include establishing robust policies, developing new courses and training programs for both faculty and students, and leveraging generative AI to create more personalized learning experiences and enhance faculty research. It is time for higher education to overhaul their systems and adapt to the transformative changes brought by AI.

Implications for Research

Our study contributes to the growing body of knowledge on GAI by providing unique insights from the faculty perspective. The findings suggest several avenues for future research:

1. **Exploring Student Perspectives**: Future research should include student viewpoints to gain a holistic understanding of GAI's impact on education.
2. **Longitudinal Studies**: Long-term studies are needed to assess the sustained impact of GAI on teaching practices and student learning outcomes.
3. **Cross-Disciplinary Approaches**: Investigating the integration of GAI across different disciplines can provide a comprehensive view of its benefits and challenges.

These research directions are derived directly from themes identified in our study, particularly the need for a balanced understanding of GAI's impact (Theme 1: Impact on Faculty Roles, Theme 2: Student Learning Outcomes).

Implications for Practice

The practical implications of our findings highlight the need for higher education institutions to develop comprehensive policies and provide training for both faculty and students:

1. **Policy Development**: Institutions should create guidelines for the ethical use of GAI, addressing concerns such as data privacy and algorithmic bias (Theme 3: Ethical and Practical Implications).
2. **Faculty Training**: Providing training on how to effectively integrate GAI into teaching practices can help faculty leverage its benefits while mitigating risks (Theme 1: Impact on Faculty Roles).
3. **Student Education**: Educating students on the appropriate use of GAI tools can foster independent learning and critical thinking skills (Theme 2: Student Learning Outcomes).

These recommendations are based on our findings related to the challenges and opportunities presented by GAI.

Implications for Society

The societal implications of GAI in education are significant, influencing public attitudes and potentially affecting the quality of life:

1. **Influencing Public Attitudes**: By demonstrating the benefits and addressing the ethical concerns of GAI. Educational institutions can foster a more informed and balanced public perception of AI technologies (Theme 3: Ethical and Practical Implications).
2. **Enhancing Educational Equity**: GAI has the potential to provide personalized learning experiences, making education more accessible and equitable for diverse student populations (Theme 2: Student Learning Outcomes).

These societal impacts are consistent with our findings on the transformative potential of GAI in education

Conclusion

This study provides a comprehensive analysis of the impact of generative artificial intelligence (GAI) on higher education, focusing on the evolving roles of faculty and the implications for teaching and learning. Through 40 semi-structured interviews with academicians, we identified that GAI offers significant benefits for faculty, including time-saving capabilities and the provision of personalized feedback. However, concerns about academic dishonesty, job security, and the potential for GAI to prioritize commercial interests over pedagogical goals

were also prominent. While GAI has the potential to enhance student engagement and provide diverse learning materials, risks associated with over-reliance on AI tools and privacy issues must be carefully managed. The study also highlights critical ethical considerations, such as bias and fairness in AI algorithms, as well as data privacy and security, necessitating the development of robust policies and training programs to ensure ethical AI integration in education. This paper is among the first to explore the impact of GAI on higher education from the faculty perspective, providing unique insights into the hopes and controversies surrounding AI integration and contributing to the nascent literature on GAI's role in reshaping educational practices. Our study emphasizes the dual nature of GAI as both a transformative tool and a potential threat to traditional educational roles and outcomes.

Limitations and suggestions for future research

This study includes interviews limited to the faculty members perspectives from business schools. Further scholars are encouraged to collect data from a more diverse population to gain a holistic understanding of GAI's impact on education. Furthermore, a longitudinal study would serve to capture the retrospective view of faculty who are currently using generative AI in their classrooms or for their research. Additionally, this research could expand by collecting data from students' viewpoints with the aim of capturing how AI is impacting their learning outcome and whether it is preparing them for the future of work and improving their employability.

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Table I. Sample characteristics.

Characteristics		Count	Frequency
Gender	Male	22	55%
	Female	18	45%
Age Group	30~39	7	18%
	40~49	10	25%
	50~59	16	40%
	Above or equal to 60	4	10%
Employment Status	Full Time	39	98%
	Part Time	1	2%
Years of experience	5-10 Years	7	18%
	16-20 Years	24	60%
	26 or more	9	22%
Online Teaching pre Covid-19	Yes	22	55%
	No	18	45%
Quiet place at home	Yes	40	100%
	No	0	0%

Table II. Interview themes from phase 1 and 2.

Group	Theme	Overall Frequency of Occurrence	Number of Interviews (phase 1) in which Mentioned	Number of Interviews (phase 2) in which Mentioned
Faculty role will be impacted because of AI	Advantages of AI	20	14	10
	Faculty adaptation to AI and challenges	22	12	10
Students learning outcome	Advantages AI for students	15	8	10
	Students' new skills	24	12	10
Challenges of AI	Faculty concerns	20	9	10
	Ethics	22	8	10