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ETHICS OF GENERATIVE AI USE IN HIGHER EDUCATION: A FOCUS GROUP STUDY

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Abstract

Generative Artificial Intelligence (GenAI) tools like ChatGPT and DALL-E are increasingly impacting all aspects of our lives, including education. Educators and students are trying to adapt and learn with this disruptive technology. The objective of this study was to understand and critically evaluate the ethics behind GenAI when used in university settings. We conducted a focus group discussion at a public research university in the Netherlands to understand the challenges and concerns that arise with using GenAI in education. The topics for the focus group discussion were defined based on existing literature on ethical principles of AI in education. The use of GenAI was analyzed from five different perspectives: responsibility, trust, learning, inclusion, and its role in higher education. Participants could choose one of the topics based on their motivations and interests. This was also recorded in a template later to analyze their personal motivations and connection to the topics. Each group had an expert facilitator who helped guide the conversation and observed the discussions. The participants (n=31) were a mix of students, educators, and non-teaching staff. There were two methods through which data was collected. One was from the template that the participants filled in and the second was the notes recorded by the facilitators during the discussions. The study's findings can be categorized as challenges, opportunities, and solutions for better implementation of GenAI in higher education. The responses are currently being evaluated and will have concrete ideas that will be detailed in the final paper. The final paper will shed light on approaches to resolve and address ethical considerations in the use of GenAI.

Keywords: *Generative AI, ethics of AI, higher education, AI literacy.*

1. Introduction

Over the past few years, interest in Generative Artificial intelligence (GenAI) has increased. GenAI uses foundation models, including large language models (LLMs) trained on large amounts of data. Some examples of GenAI tools include ChatGPT, Dall-E, and Stable diffusion. These tools can handle complex data and provide solutions to various problems. They can be used to produce artificially generated content like text, audio, video, etc. GenAI tools have found a place in multiple industries such as healthcare, tourism, entertainment, and even education. Programs like ChatGPT have made GenAI easy to use and accessible to the general public. There have been many attempts globally to understand the impact these tools have on all aspects of education. Despite the numerous advantages these tools can provide to both students and teachers, there are also concerns and apprehensions. To map the landscape in education, several studies have tried to understand how students and teachers perceive GenAI within their institutions. This is a starting step to understand what the advantages and disadvantages are. Similarly, at Erasmus University Rotterdam, an internal study was conducted to understand how students at the university feel about ChatGPT. The results showed that most students were occasional or regular users of ChatGPT and very few had not heard of it before. Looking ahead, there are already some frameworks such as PAIR (Problem, AI, Interaction, Reflection) that support teachers to easily integrate GenAI tools in their curriculum (Acar, 2023). However, with all the advantages there are also concerns that the use of GenAI could lead to a decline in students' critical thinking skills (Civil, 2023) as they become more compliant and dependent on automated tools to complete their work. This fear and concern have led universities to limit the use of GenAI in academic contexts. In this study, we chose to focus on the ethics of GenAI. There are many ethical questions raised when using GenAI tools in academic contexts, some of which we are unaware of. This is a concern not just for students but also for educators working within the university.

The ethical aspects of AI, particularly GenAI, have been frequently discussed in the past. Frameworks and principles tailored to specific contexts have emerged to address these concerns. Adams et al. (2023) conducted a thorough qualitative analysis of current principles for the ethics of AI in K-12 education. The study showcased the need for some context-specific principles such as children's rights, AI literacy, and teacher well-being. Some universities such as UTS have defined principles for the effective and ethical use of GenAI (LX Team, 2024). The student-centric principles guide the usage of GenAI by equipping students to engage critically with it and helping them understand the legitimate use of GenAI in their studies. Teachers also need to be trained on how to use GenAI tools as a part of their curriculum. They should be able to understand how the applications work to effectively support classroom teaching and learning (Chiu, 2023). Several studies have been conducted to understand the ethical concerns of students and teachers when using tools like ChatGPT. Research has emphasized the importance of the sociotechnical context configured by educational practices in ethical considerations (Kitto & Knight, 2019). In addition, Nguyen et al. (2022) conducted a thematic analysis of relevant ethical guidelines and reports related to AI in education and arrived at seven principles. The principles covered a wide range of themes from inclusiveness to privacy. Based on the literature, five topics were defined for the focus groups. The topics were tailored to ensure in-depth discussions occurred in every group and were a starting point for facilitators to manage the discussions. The five topics were: Responsibility, Trust and Misinformation, Role in learning, Inclusion, and Role in Higher education.

2. Methodology

To investigate this research question, a cross-sectional and descriptive study design using the focus group technique was proposed. In this study, we used focus group discussions to collect data on the ethical challenges and concerns of GenAI when used in higher education. A focus group is a qualitative research method that brings together a small group of people to answer questions in a facilitated setting. The goal of the focus group was to create space for participants to share their opinions, attitudes, and concerns. The focus group discussions were held as a part of a larger event called Explore, held at Erasmus University Rotterdam in March 2024. The focus of the event and thereby the focus groups was the ethics of GenAI. The focus group was semi-structured and lasted an hour. Templates were given to both participants and facilitators to help structure the discussion. The goal of the template for participants was to understand their motivation, goals, and concerns when discussing the ethics of GenAI. Once participants filled in their worksheets, an open discussion followed which was hosted by the facilitator. The worksheet for the facilitator was to help make the note-taking process easier.

Table 1. The template for participants and facilitators.

Prompts for Participants	Prompts for Facilitators
Q1: What was your motivation for picking this topic? What are the stakes for you? **Q2**: On your own, articulate a specific question (or questions) on the topic, focusing on ethical implications/aspects.	Challenge(s) Opportunity(ies) Solutions Big idea(s)

2.1. Topics of discussions

After the literature reviews, five themes were defined as the topics of discussion for the focus groups. Experts from all across the university were chosen to facilitate these focus groups based on their expertise.

- Responsibility: GenAI's role in education raises questions on ownership and accountability. In this context, it could entail mastering prompting, evaluating generated responses and foreseeing implications.
- Trust (Misinformation): GenAI's reliance on diverse data sources and potential misinterpretation emphasizes the critical role of information literacy in higher education.

- Role in Learning (incl. research & student-teacher collaboration): GenAI's integration in education challenges the traditional teacher-student dynamic, potentially fostering new collaborative learning models and reshaping roles in the classroom.
- Inclusion: GenAI's dual role in education can both bridge and widen disparities, through enhancing accessibility while also amplifying biases and inequalities in affordability and inclusivity.
- Role in higher education: GenAI's impact on professional sectors and higher education demands ethical consideration due to evolving roles and expectations, shaping both learning practices and outcomes.

2.2. Participants

Thirty-one participants attended the focus group discussions and were allowed to select a group based on their interests. The topic and a short description were presented to assist their decision-making process. This approach was chosen to give participants autonomy and facilitate in-depth conversations. The group consisted of students, teachers, and university staff members occupying roles such as educational specialists, policy advisors, and information specialists. Five facilitators facilitated the discussions and were experts in a variety of fields from law to research.

Table 2. The participant distribution.

Participant profile	Number of participants
Student	12
Teachers	3
University staff	16

2.3. Limitation

The study had a few limitations. The distribution of participants across groups was unequal which resulted in some groups having fewer members. This was a direct outcome of some topics receiving more attention than others. The sample was relatively small and thus represented a limited number of perspectives from the overall university.

3. Results

The data from the focus groups was analyzed in two levels. Initially, the discussions within each group were analyzed to extract insights on the specific topics. Subsequently, a secondary analysis was conducted based on participants' profiles (students, educators, university staff) to identify overlaps in concerns and proposed solutions. This approach aimed to observe common themes and patterns across the diverse participant groups. The takeaways from each group are listed below.

Responsibility: All participants had a shared concern about the lack of critical perspective regarding responsibility in the use of GenAI. Apart from challenges, there was also discussion about opportunities for improvement. The key focus was on equipping students to prompt and reference correctly. One actionable idea was for students and educators to co-create regulations for the use of GenAI within the university.

Trust: Participants had specific questions about how to measure trust and inform students about the risk of misinformation. Some participants were skeptical about GenAI usage questioning its utility. A very diverse range of definitions emerged regarding the concept of trust. Concerns arose about what is right and wrong when using GenAI. In terms of potential solutions, increasing awareness and implementing policies were suggested. Participants also discussed the notion of validating and accrediting sources.

Learning: Some participants had clear questions about understanding what needs to change in the current curriculum to support students better. Others wanted to know what a healthy balance between working on their own and using GenAI could be. Discussions revolved around the possibility of a universal approach to implementing GenAI in learning. Students were also concerned with the gray area between using GenAI to support their own work and the likelihood of the assignment becoming a creation of the tool itself.

Inclusion: Participants wanted to address concerns about how GenAI could aggravate existing inequalities. Strategies to mitigate these biases and prevent them from impacting academic work were discussed. A common agreement was the necessity of AI literacy in universities, stressing the importance of its implications for both students and educators. Some participants were skeptical about the feasibility of achieving a fully unbiased GenAI model, because of biases in the real world that impact the training data.

Role in Higher Education: Participants raised overarching questions regarding how developments in GenAI impact current learning and testing practices. The idea of a balance between creativity and cheating was discussed to address concerns from students. Looking ahead, the possibilities of using GenAI in university work were explored. The group noted that there is a lack of critical thinking among students when utilizing such tools, emphasizing the necessity for guidance and reflection.

4. Discussion

Aside from insights from each of the groups, patterns emerged across the groups as well. When analyzing the data based on the participant profiles, it was clear that students across all groups expressed concerns about the impact of GenAI on their education. They expressed the need for guidance and support from faculty and educators to help navigate this new reality. University staff expressed role-specific concerns and shared a common objective of enhancing awareness of GenAI usage. Teachers and educators expressed a desire to support students in utilizing GenAI and understanding its implications. There was an overlapping theme of wanting a structured framework for integrating GenAI tools into the existing curriculum.

While analyzing the data we also realized that a lot of insights and findings focused on GenAI usage in higher education and less so on the ethical concerns behind them, one reason behind this could be the lack of AI literacy which needs to be established before discussing ethical considerations. Another reason could be the lack of clarity on what ethics entail. There is a general agreement on terminology to describe ethics and ethical issues, but there are different interpretations and understandings (Ryan et al., 2021). Conversations were also limited by the topics defined for the focus groups. Three main themes emerged from the discussions. Two of them are more relevant to the initial proposed study of the ethics of GenAI. The third theme of AI literacy sheds light on a bigger challenge with the adoption of GenAI.

1. The need for ethical frameworks and guidance: Participants across the group expressed concern over the responsible use of GenAI. The takeaway from the focus group discussions was that it is important to equip students and educators with the skills to prompt and reference correctly. This could be guided by a framework created within the university by students and teachers working together. To support this finding, research also suggests that while there are many theoretical frameworks investigating the ethics of AI in general, there is no universal consensus on the best ethical theory concerning the field of (higher) education (Nguyen et al., 2022).
2. Ensuring creativity while maintaining integrity: There was concern about the boundaries of using GenAI as a tool. Educators wanted to find a balance between promoting GenAI-driven creativity and preventing cheating. Students need increased critical thinking skills to reflect on using the GenAI tools. Existing research also suggests the need for critical reasoning and thinking skills when learning with ChatGPT (Chiu, 2023). The discussion highlighted the importance of generic skill development and how students should still be trained in certain basic skills before using GenAI to support them in their tasks.
3. AI Literacy and Awareness: The necessity for AI literacy was highlighted across the different groups. The participants emphasized the lack of clear understanding of the implications GenAI has for both students and educators. There was also skepticism regarding the existence of fully unbiased AI models.

5. Conclusion

The study aimed to understand the ethical challenges and concerns with using GenAI in higher education contexts. The participants involved educators, students, and university staff; hence a variety of perspectives was represented. This study helped elucidate some concrete steps for the future to support the ethical use of GenAI in the university. There is an evident need for more AI literacy and more critical conversations around the use of GenAI. A majority of the participants were open to adopting their work/learning to use GenAI but were lacking guidance and support for the same. There was also a consensus that this shift to new technologies can only be productive if educators and students work together and co-create a regulatory framework for its use. Future studies can test more actionable steps and the

impact they will have on curriculum and interactions at the university. There is also scope to create more concrete ethical principles for the use of GenAI in higher education.

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