

Examining Responsible Application and Considerations of Generative AI Usage in the Classroom

Abstract:

Background/Context: With the rise of Generative AI, particularly in educational institutions, it's incumbent upon us as instructors to determine whether we are teaching students not only to be knowledgeable about the technology but also to be critical thinkers regarding its usage. Currently, numerous external factors influence the usage and adoption of Generative AI. At the state level in Montana, the governor and legislature are seeking increased adoption of Generative AI to create and augment jobs through the Department of Labor and Industry with an initiative called 406 Jobs (1). In addition, the University of Montana has been a leader in the higher education space in creating clarity around intentional and sustainable usage in the state by releasing resources, conducting surveys, and establishing a localized server farm, as well as providing course materials, faculty resources, and student clarity through the Future Project (2). Finally, there are many instructors in various disciplines looking to integrate Generative AI into the classroom responsibly and ethically, including those in the School of Visual and Media Arts, Journalism, Management Information Systems, Computer Science, and Biology. However, with this push for adoption, it's critical that we consider that students are prepared not just as consumers and operators of the technology, but also leaders in responsible usage.

Objective/Research Question: By delivering a course that discusses how multi-disciplinary industries are affected by Generative AI and asking students to reflect on the potential and the challenges of this technology, they will become more ethically and morally minded when approaching problems. Currently, there is limited research on the experiences of college students during this period. The goal is to determine whether these students will not just incorporate Generative AI into their field of study but also examine the moral and ethical implications of using it and its impact on society.

Methods/Approach: I administered an anonymous survey at the beginning of the course and will administer a follow-up anonymous post-survey at the end of the course. By analyzing the results, the goal is to determine whether there has been a shift in perception and approach toward Generative AI in their creative and educational careers.

Results/Findings: In my initial findings, I found that most students (73%) were at least moderately familiar with Generative AI tools. When asked about the tools they had used, the majority reported using ChatGPT, while some mentioned using Gemini. Their primary use was for homework, writing,

and debugging code. A few had indicated they had used it for experimentation, but not a significant amount. Finally, when asked how many felt confident that they could evaluate when it is appropriate or ethical to use Generative AI, less than 40% answered that they felt confident. I look forward to examining whether any of the results change over time.

Conclusions/Implications: This research will help further the efficacy and relevance of this course material in future classes. It will help shape how we teach our students in the most effective way, both ethically and morally.

This study could result in students who are leaders in their respective fields and are able to mindfully and thoughtfully navigate this complex new technology. It is possible that students may find new positions in their field because they can see more clearly the benefits and challenges that Generative AI poses in various scenarios.

Keywords:

Generative AI, Higher Education, Critical Thinking, Moral and Ethical Leadership.