

Student Perceptions of ChatGPT and New AI Tools

Sheri Grotrian, Lisa Parriott, Brad Griffin,
Brady Woerth, and Wyatt Rowell

Peru State College USA

Abstract: *This paper is a review of student perceptions and usage of ChatGPT and other Artificial Intelligence (AI) tools. Technology has made significant changes in education, and in the last 30 years, none may be as impactful as what we refer to as ChatGPT as this was the first tool to make inroads into a chat-based artificial intelligence available to nearly all. Rather than viewing such a technological disruptive change in a negative light, we sought insight from students at a local higher education institution on their usage and beliefs to explore positive implications. Further investigation will lead toward how to implement and use, rather than reject, this form of technology to develop innovative teaching methods.*

Keywords: artificial intelligence, student research, ChatGPT

BRIEF BACKGROUND

Artificial Intelligence tools are changing the landscape in education. We need to learn more about how students view and use these technologies. Furthermore, we need to gain understanding of faculty perceptions and to aid them with the integration of these innovations. At this point, most have heard of ChatGPT, but does everyone fully understand the role of the Generative Pre-trained Transformer (Atlas, 2023)? ChatGPT defines itself in the following way: “ChatGPT is a cutting-edge chatbot technology that uses natural language processing and machine learning to enable users to have conversational interactions with a virtual assistant” (King and ChatGPT, 2023, p. 1). In understanding how students view and use AI tools, such as ChatGPT, we strive to understand how to utilize these powerful tools to become better educators.

PURPOSE OF STUDY

AI tools are changing the landscape of how things are done. In fact, we have been experiencing AI all around us for several years: Google Maps, Alexa, Siri, Grammarly, etc. But now, society is seeing a new wave of AI that reached a million users within five days, a record for fastest-growing user base: ChatGPT (Hu, 2023). The purpose of this study is to understand how students are using these AI tools and what their perceptions are regarding such technology.

REVIEW OF RELEVANT LITERATURE

Innovations in technology, such as ChatGPT, have the potential to change the way that we learn, think, and work (Rudolph, Tan, & Tan, 2023). It has been recognized that ChatGPT could

be misused in higher education, specifically with regard to academic integrity issues. Conversely, this type of technology has the potential to have a significant positive impact on educators and students alike (King & ChatGPT, 2023).

The advantages of AI tools are many and multifaceted: contexts could be explored with regard to teacher-facing, student-facing, and system-facing aspects. For educators, it can aid with the development of educational innovations, lesson planning, and idea generation. For students, the technology can serve as an “intelligent tutoring system (ITS)” to provide guidance, reassurance, and confirmation of accuracy. For the system, it can provide institutions with insight into university patterns and other data analytics (Rudolph et al., 2023). In most contexts, AI can be a useful tool with human-like conversational capabilities that are easy to navigate (Rampton, 2023).

While there are many advantages of ChatGPT, there are also a multitude of disadvantages. The biggest of these in the eyes of educators is the threat to academic integrity through plagiarism. Furthermore, these technologies can generate inaccurate information that is biased without the recognition of recent events due to limited ability to pull from current information (Rampton, 2023). This disadvantage is compounded by the fact that ChatGPT may be overly confident in its own responses, even if they are incorrect. In addition, asking the same question in diverse ways has the potential to lead to different results (Azaria, 2022). And, what is even more concerning, if AI is unsure of a response, it can hallucinate and create information that users then take as fact.

The website, <https://gpte.ai/>, lists and summarizes the latest tools and trends in AI. Currently, 2,264 tools are featured, and the list grows daily (GPTE, 2023). Researchers are testing various AI tools and discovering potential teaching strategies. Knowing the continued growth, the advantages and disadvantages are likely to grow as well.

RESEARCH METHODOLOGY

A short survey of 13 questions was developed by the researchers with support from colleagues to ensure content and criterion validity and administered online to all students enrolled at the small state college. An email invitation was initially sent out discussing the purpose and use of data collected later followed up with a reminder email. All results were collected anonymously via PsychData, and open-ended responses were coded for themes. The study received Institutional Review Board approval (IRB#EX_2324_001), 137 responses were received, and the resulting response rate was approximately eight percent. Unfortunately, it has been noted by several students that email communication, specifically via the institution-provided email address, is not the preferred method of communication at the college. This is a limitation that would be addressed in future research to gain an improved response rate.

RESULTS/CONCLUSIONS

Ofgang (2022) suggested that it isn't a question of *if* students will utilize ChatGPT in higher education, but *when*. It appears that *when* is already here. Survey data from our research can support this to some degree. The majority of respondents were undergraduate students at the small rural college.

Of the respondents, 58% indicated they were familiar with ChatGPT or other AI tools (such as Snapchat AI, Grammarly, Dall-E or Midjourney). Responses also indicated their intended purpose(s) with ChatGPT or other AI tools: 31% for schoolwork guidance or tutoring; 13% for

use of homework completion; 62% for personal use beyond academics. An additional insightful result was in relation to encouraged or discouraged use by faculty members in the classroom; 15% indicate they have received encouragement to use AI, and 54% have specifically been discouraged to use AI in the classroom.

Positive perceptions from the students indicated they appreciate the time-saving aspect, usefulness of idea generation, helpfulness with explanation of content, and a resource to use as a template. One student quoted, “ChatGPT is a good tool to be used for a more generalized understanding of different topics.” Another stated, “ChatGPT has helped me be able to articulate things in a better way, as well as defining terms that are often used in business and computers.”

Contrary beliefs prompted the themes of general fears (lack of trust, restrictions, and incorrect/biased information), the notion of regulation being needed, and ethical concerns, specifically regarding cheating and plagiarism. A student noted, “The negative perception is related to laziness. The use of AI is affecting the way we live, think, and process information. AI makes us too dependent and can cause us to lack the skills and knowledge that we need for our jobs to do them successful. We do not have to think for ourselves because AI does it for us.”

EDUCATIONAL IMPORTANCE OF THE STUDY

Marche (2022, p. 12) had the following prediction about ChatGPT, “it will take 10 years for academia to face this new reality: two years for the students to figure out the tech, three more years for the professors to recognize that students are using the tech, and then five years for the university administrators to decide what, if anything, to do about it.” No matter the timeline, this means that educators need to find ways to embrace AI technology as it is likely here to stay in some form or fashion.

REFERENCES

- Atlas, S. (2023). ChatGPT for higher education and professional development: A guide to conversational AI. http://digitalcommons.uri.edu/cgi/viewcontent.cgi?article=1547&context=cba_facpubs
- Azaria, A. (2022). ChatGPT Usage and Limitations. *Preprint*. DOI: 10.13140/RG.2.2.26616.11526
- Hu, K. (2023, February 2). *ChatGPT sets record for fastest-growing user base - analyst note*. Reuters. <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growing-user-base-analyst-note-2023-02-01/>
- GPTE. (2023, June 30). Discover the Latest Tools and Trends in AI. Retrieved May 10, 2023, from <https://gpte.ai/>.
- King, M. R., & ChatGPT. (2023). A conversation on artificial intelligence, chatbots, and plagiarism in higher education. *Cel. Mol. Bioeng.* 16, 1-2. <https://doi.org/10.1007/s12195-022-00754-8>
- Marche, S. (2022, December 7). The college essay is dead. Nobody is prepared for how AI will transform academia. *The Atlantic*. <https://www.theatlantic.com/technology/archive/2022/12/chatgpt-ai-writing-college-student-essays/672371/>
- Ofgang, E. (2022, December 14). What is CHATGPT and how can you teach with it? Tips & Tricks. *TechLearningMagazine*. <https://www.techlearning.com/how-to/what-is-chatgpt-and-how-to-teach-with-it-tips-and-tricks>

- Rampton, J. (2023, April 24). The advantages and disadvantages of chatgpt. Entrepreneur. <https://www.entrepreneur.com/growth-strategies/the-advantages-and-disadvantages-of-chatgpt/450268>
- Rudolph, J., Tan, S., & Tan, S. (2023). ChatGPT: Bullshit spewer or the end of traditional assessments in higher education? *Journal of Applied Learning and Teaching*, 6(1), <https://doi.org/10.37074/jalt.2023.6.1.9>