

Exploring ChatGPT: Faculty and Student Perspectives and Experiences

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Introduction

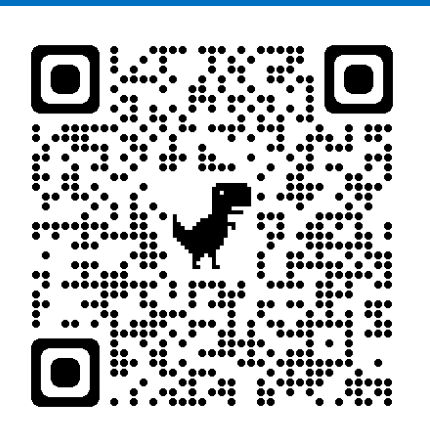
- We investigate the knowledge, use, and perceptions of ChatGPT and similar technologies in higher ed
- ChatGPT gained widespread attention in November 2022, quickly reaching a million users in just 5 days
- It is arguably the most popular example of generative AI technologies, which refer to systems that can generate new content, such as text, images, or even music
- It is a large language model trained on extensive text data able to generate human-like text
- When a user inputs a prompt, ChatGPT converts text into smaller units (tokens), which can be full words, parts of words, or meaningful characters
- Based on patterns found in the training data (including books, articles, Wikipedia and a large part of the open Internet), ChatGPT outputs text which is the most likely match to the user request
- ChatGPT aims to generate coherent and contextually relevant responses, but it doesn't always succeed
- It generates words, not knowledge; its responses appear knowledgeable, but are based on statistical patterns in the training data rather than true comprehension
- It can give inaccurate answers, generate fake sources (a phenomenon known as “hallucinations”), reflect bias existing in the training data, but it can achieve high scores on certain tests
- Its ability to create human-like text presents unique challenges and opportunities in higher ed
- For example, violation of academic integrity is a concern which poses policy dilemmas for universities
- The widespread adoption of ChatGPT is still relatively recent, and little is known about how college faculty and students knowledge, use, and perceptions of ChatGPT
- This study aims to contribute to the ongoing effort to address this gap

Despite extensive discussion and concerns about ChatGPT, classroom experiences show **minimal change**

Cautious optimism hinges on **academic leadership’s** ability to foster **productive use of ChatGPT**

Graduate students are more hesitant and concerned than undergraduates

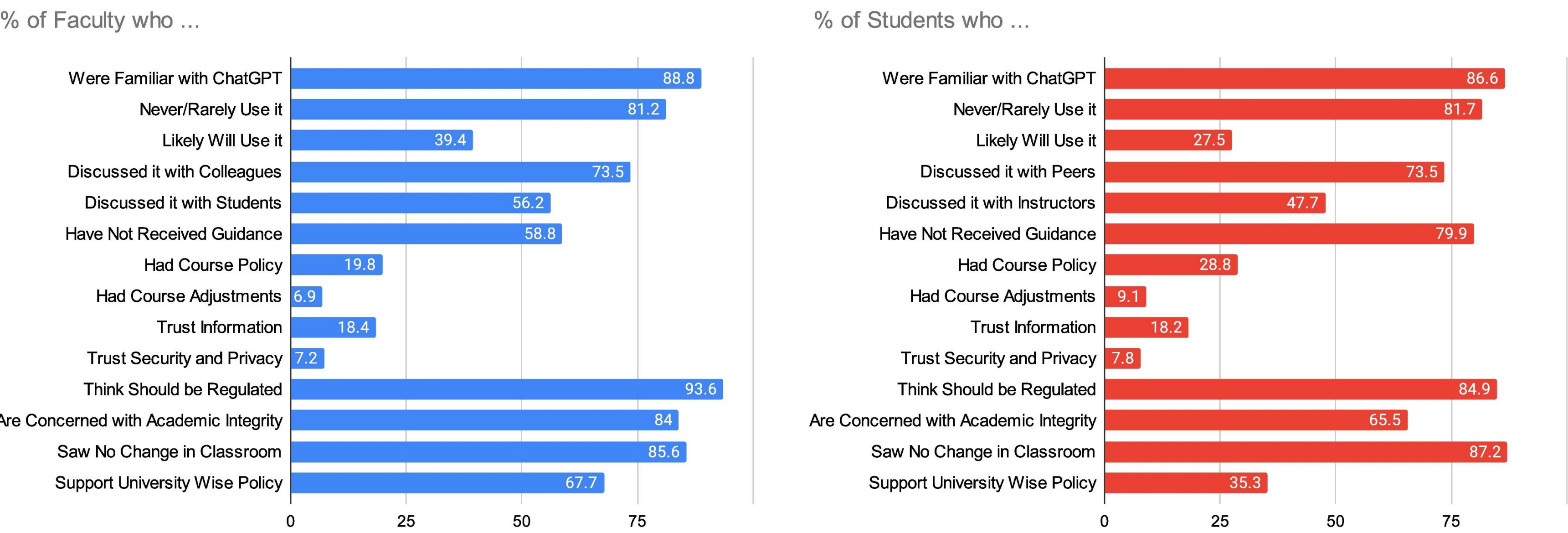
Future use and policy support depend on **concern for academic integrity, information accuracy, and data security**



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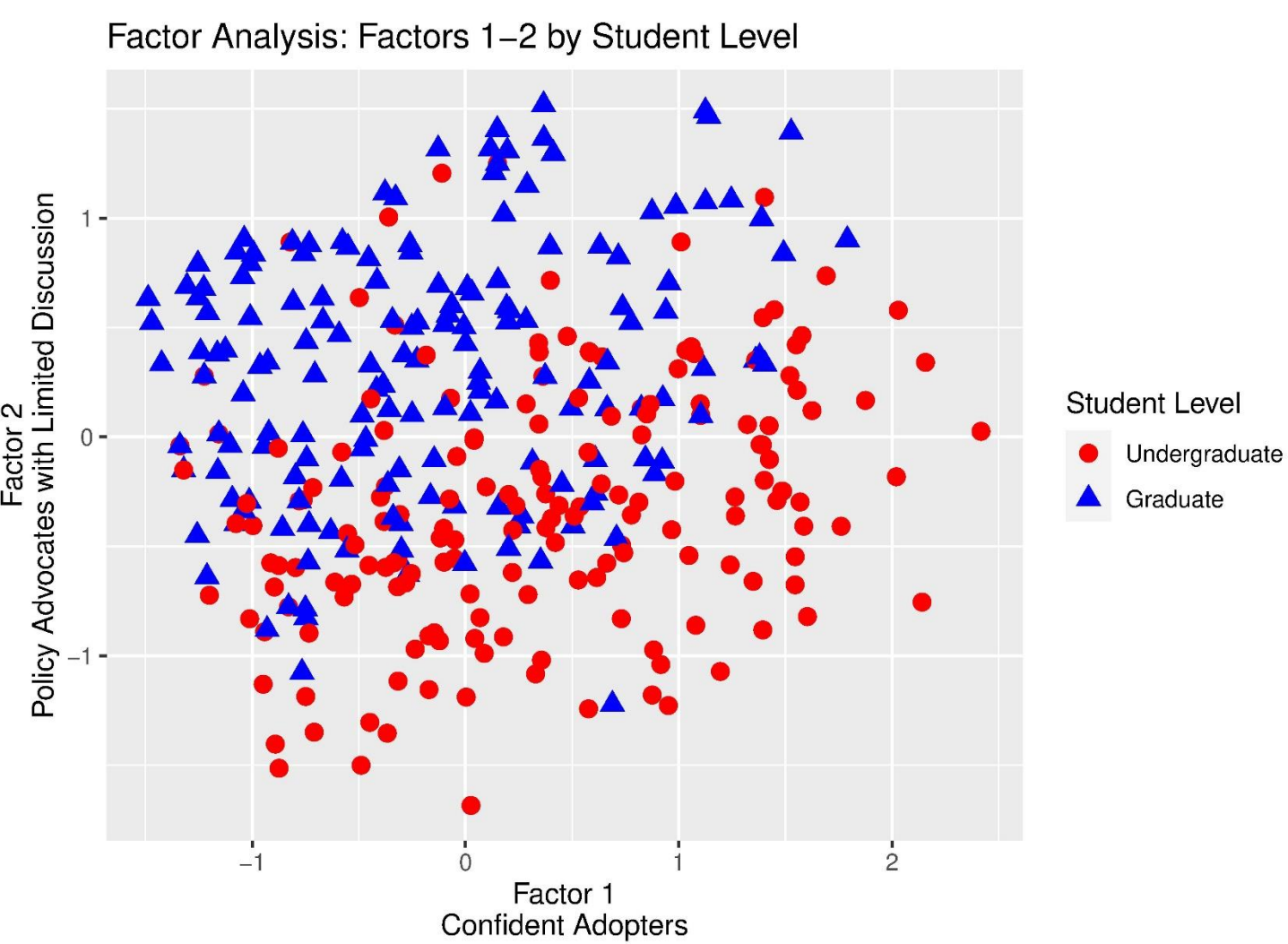
Data and Methods

- We conducted a survey of faculty members (n = 144, response rate: 11.6%) and students (n = 616, response rate: 18.8%) in a small, private Northeastern university
- We explored topics including experiences with AI tools, knowledge of ChatGPT features, usage, discussion, course policies, ethical considerations, and opinions on university regulation of ChatGPT
- We analyzed data with descriptive statistics, group comparisons, factor analysis, and regression analysis
- The graphs below report respondents’ distribution on several key metrics:



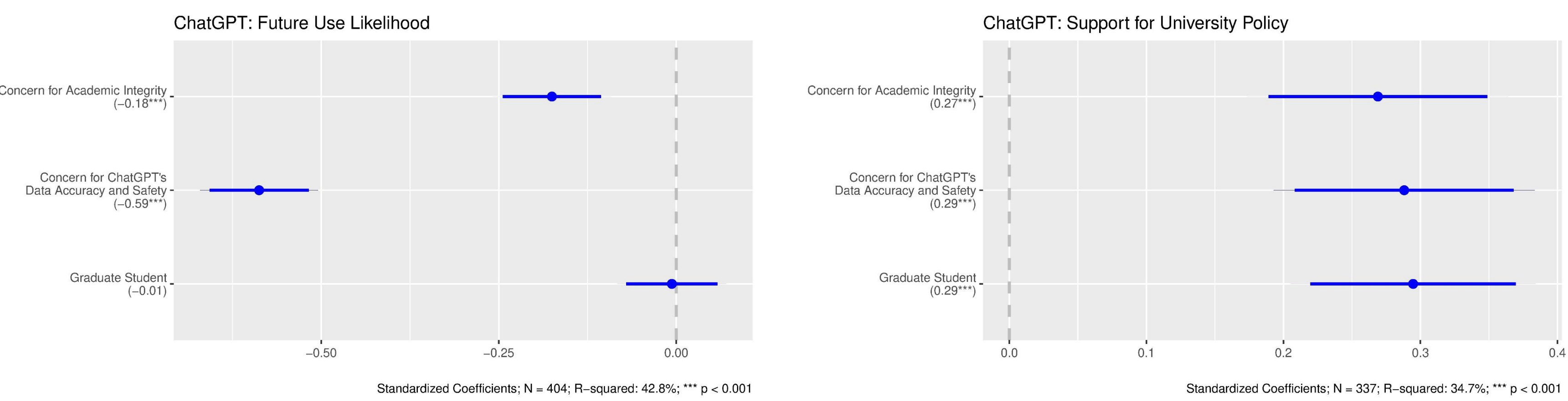
Much Discussion and Concern, Little Change

- The data show high levels of discussion and concern among academics regarding ChatGPT and similar technologies, including low trust in information accuracy and data security. Usage remains low, and there is minimal impact on the college experience. While there is widespread support for some form of regulation, a university-wide policy is more popular among faculty than students.
- Small differences exist between adjunct and regular faculty, in part due to low adjunct response rate
- Graduate students approach ChatGPT more cautiously than undergraduates, as shown in factor analysis (see plot below). Factor 1 represents confidence in using ChatGPT, while Factor 2 indicates support for a university-wide policy, despite less ChatGPT discussion.
- We assessed participants’ understanding of ChatGPT characteristics using an index based on four items: whether ChatGPT can generate biased results, provide inaccurate answers, form and share its own opinions, and create fake sources.
- The index ranges from 0 to 4. Among faculty, the average score was **3** (with a median of 3), while among students, the average score was **2.8** (with a median of 3).



Factors Predicting Future Use and Policy Support

- We used regression models to predict future use and policy support (see plots below).
- Concern for academic integrity, information accuracy, and data security are crucial predictors; they decrease the likelihood of future use of generative AI technologies but boost support for university policy on the matter.
- As such concerns are valid, these findings highlight actionable policy opportunities. For example, universities can implement campus-wide training programs to educate the academic community on key aspects of generative AI, specifically: 1) how it may compromise academic integrity; 2) how the information produced may be invalid; 3) how privacy and security issues may arise with its use. This can enhance support for policies and guide responsible use of such technologies.



Final Insights: Fostering Responsible and Ethical Usage

- We also asked respondents open-ended questions to provide us with any additional thoughts. Faculty emphasize the importance of promoting responsible usage: “*Students should be taught to understand what it is, how it works, and what can be done with it responsibly.*” They also advocate for tailored policies recognizing the differing relevance of ChatGPT across fields: “*The use of ChatGPT is radically different across disciplines and any policy that the university adopts needs to allow for variation in use across disciplines. There needs to be nuance, not just a knee-jerk reaction to ban it.*” A prevalent sentiment among faculty is the desire for guidance and training: “*It would be helpful to offer faculty/adjunct training on what ChatGPT is, how it may present in our classrooms and assignments, and how we can best support students who now live in a world with AI whether we like it or not.*”
- Similar topics emerge among students, who express concerns about academic integrity and critical thinking. As several students noted, “*My biggest concern about ChatGPT and similar technologies is plagiarism*”; “*If I don’t control myself, I will overuse ChatGPT that make [sic] me reduce the critical thinking ability*”; “*I find ChatGPT helpful only for personal reflection and non-academic assignments... I firmly believe ChatGPT hinders the use and development of critical thinking and writing skills.*” Students believe faculty and universities must adapt: “*It will require that faculty really think through their assignments if they do not want students to use technologies like ChatGPT... Ask questions that cannot be answered by ChatGPT*”; “*Not addressing these technologies won’t prevent students from using them; it will just result in students using them in academically dishonest ways*”.
- Scan the QR code above to see more quotes, download the poster, and access additional information.