

Report on Student Survey on use of generative AI Spring 2024 Boston Northeastern University

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In an effort to better understand the impact of generative AI on student learning, the Senate Information and Technology Policy Committee (ITPC) partnered with the University Decision Support in the Provost's office to launch a student survey aimed at evaluating the use of generative AI at Northeastern University. The survey collected responses from 679 students. Out of the 679 students 373 were graduate students, while the remaining 306 were undergraduates.

Key findings

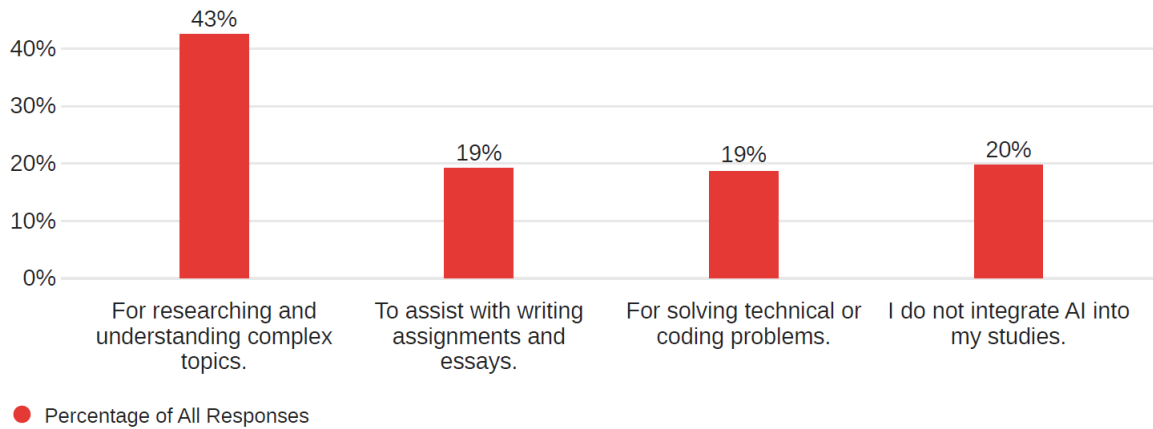
The widespread integration of generative AI into academic practices at Northeastern University is evident, with 80% of students incorporating this technology into their routine. A significant 70% of students report using generative AI to enhance their learning experience, highlighting its role as a facilitator of educational engagement. Furthermore, an overwhelming 78% of respondents are committed to using AI ethically, supplementing rather than replacing their original work. This conscientious application is further supported by 53% of students who view AI as a tool for enhancing critical learning skills, with only a minimal number resorting to its use for completing homework. These findings underscore a thoughtful and responsible integration of AI in academic endeavors, enhancing learning outcomes while maintaining integrity.

Below there is a deeper dive into the student survey and its results:

How are students integrating generative AI it into their learning?

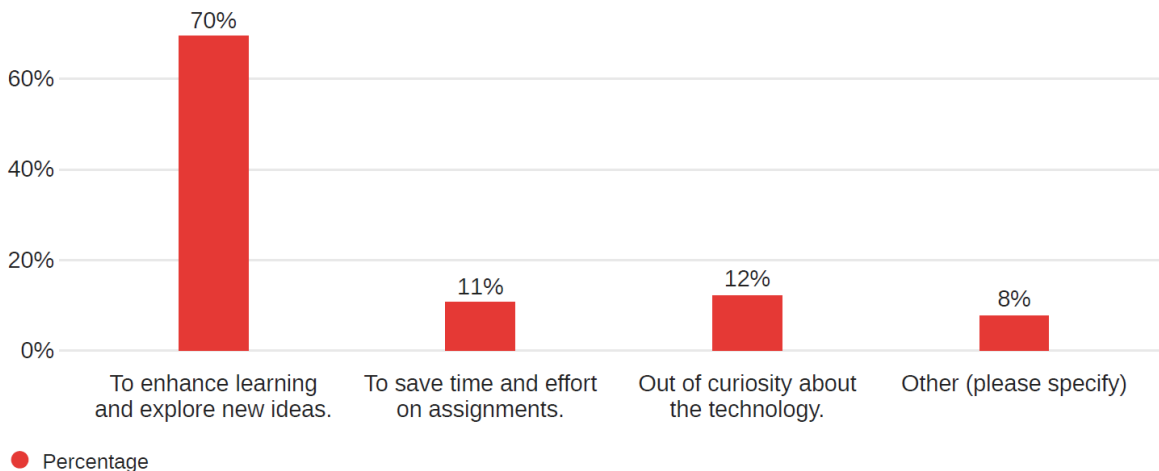
The key findings include that 80% of students are regularly using generative AI. For Question 8, 43% of the total, indicated they use it for research purposes, while 162 respondents mentioned they utilize it to assist with writing assignments, and 151 (representing 19% of responses) stated they use generative AI for solving technical problems. Furthermore, 20% of the students' responses assert that they do not use AI in their studies at all.

Q8 - How have you integrated generative AI into your studies? (Select all that apply)



When considering only the responses of students who specified their reasons for using generative AI, bypassing those who did not provide an answer, the analysis of Question 9 offers insightful trends. Among these respondents, a dominant 69.54% utilize generative AI primarily "To enhance learning and explore new ideas," highlighting a significant inclination towards using the technology for educational enrichment and intellectual curiosity. Conversely, a smaller segment of 10.55% acknowledges using generative AI "To save time and effort on assignments," indicating that while efficiency is a consideration, it's not the primary motivation. Additionally, 12.23% are motivated "Out of curiosity about the technology." The "Other (please specify)" category, making up 7.67% of the responses, captures a range of unique and diverse motivations for integrating generative AI into academic practices.

Q9 - Please indicate, what has been your primary reason for using generative AI in your academic work? - Selected Choice



Student Perspectives on Generative AI: Enhancing Learning, Research, and Academic Support"

Below, we present a selection of student comments regarding their use of generative AI in their academic endeavors, as collected from responses to question 9.a. These insights reveal students' perspectives on the utility of generative AI in their studies. From the varied responses, three key themes emerge on how students perceive the impact of generative AI:

- 1.) A notable portion of feedback emphasizes the role of generative AI in enhancing students' learning experiences, indicating its value as an educational tool.
- 2.) Many students describe how generative AI assists in their writing and research efforts, effectively serving as a digital tutor that aids in the development of their academic work.
- 3.) Lastly, some responses highlight how generative AI acts as a bridge, filling in gaps in their knowledge and understanding, thereby supplementing traditional educational resources.

Student Voices: Sample Comments:

1. "I am a non-traditional student and have had trouble understanding some of the newer technology being used. I use AI to help bridge the gap."
2. "We were told we were able to use to to write code and help debug."
3. "Just use it as the writing center, if the time allows."
4. "to summarize long research articles"
5. "Teach me when the teacher can't"
6. "To serve as a TA when office hours are not free"
7. "For learning and explaining Dow concepts in the classroom"
8. "can help simply complex passages and concepts which is useful for understanding and learning."
9. "To help me understand complex topics."
10. "Assignments where we are required to ask a LLM (Language Model) questions to better understand a topic."
11. "Vocabulary is weak and AI translator can find better words or phrases than I can."
12. "I used it when it was a novel resource, making learning more interesting."
13. "To quickly summarize information."
14. "To help English writing."
15. "Teacher didn't teach coding techniques required for the course."
16. "Explain and summarize a concept without Googling."
17. "enhance my writing skills."
18. "To rephrase what I have written."
19. "Online search filtering. Sometimes normal search engines give too broad results."
20. "not able to understand how to do something on my own."
21. "All of the above. To make learning/research more efficient and comprehensive."
22. "help me organize my thoughts"

23. "It's a great tool to help you sift through information and get a better understanding of complex topics."

Enhancement of Learning and Comprehension: A significant number of responses point towards the use of generative AI as a tool for enhancing learning and improving comprehension of complex topics. Students are leveraging AI to summarize extensive research, clarify difficult concepts, and provide explanations that are more accessible. This suggests that generative AI is valued not merely as a source of information but as a pedagogical aid that complements traditional learning methods by making educational content more digestible and engaging.

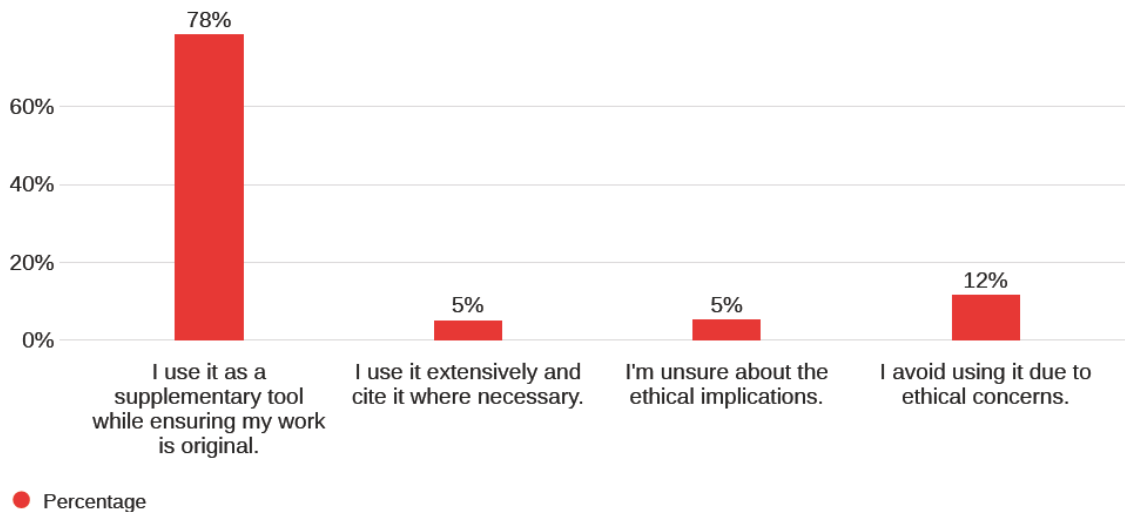
Assistance in Writing and Research: Many respondents indicated that they use generative AI to aid in writing assignments and research activities. This includes help with organizing thoughts, refining language and vocabulary, and generating ideas or content. The ability of AI to assist in these areas reflects its growing importance in supporting academic writing and research processes, where it acts as a digital tutor or collaborator that enhances the quality and efficiency of student work.

Bridging Educational Gaps: Some responses highlight the use of generative AI to fill gaps in formal education, such as explaining topics not well covered by instructors, providing additional teaching assistance, or compensating for a lack of resources. This indicates that students are turning to AI as an educational resource to supplement their learning experience, especially in areas where traditional educational structures may fall short. This includes using AI for tasks ranging from coding assistance to language translation, showcasing its role as a versatile educational tool.

Most students use generative AI to enhance learning not short cut their education!

Students overwhelmingly indicate that they do not use generative AI to cheat or commit plagiarism. The majority emphasize their use of it as a supplemental tool, with 78.43% (320 out of 408 respondents) ensuring their work remains original while integrating AI into their studies. This significant percentage highlights a strong ethical commitment among students to maintain academic integrity. Additionally, 11.52% of respondents (47 individuals) actively avoid using generative AI due to ethical concerns, demonstrating a cautious approach towards its potential for misuse. Meanwhile, approximately 5.15% (21 students) express uncertainty about the ethical implications of using generative AI, suggesting a need for further guidance or educational resources on its ethical application. Furthermore, nearly 4.9% (20 respondents) acknowledge using generative AI extensively but make it a point to cite it where necessary, aiming for transparency in their academic endeavors.

Q10 - How do you navigate the ethical considerations when using generative AI in your coursework?

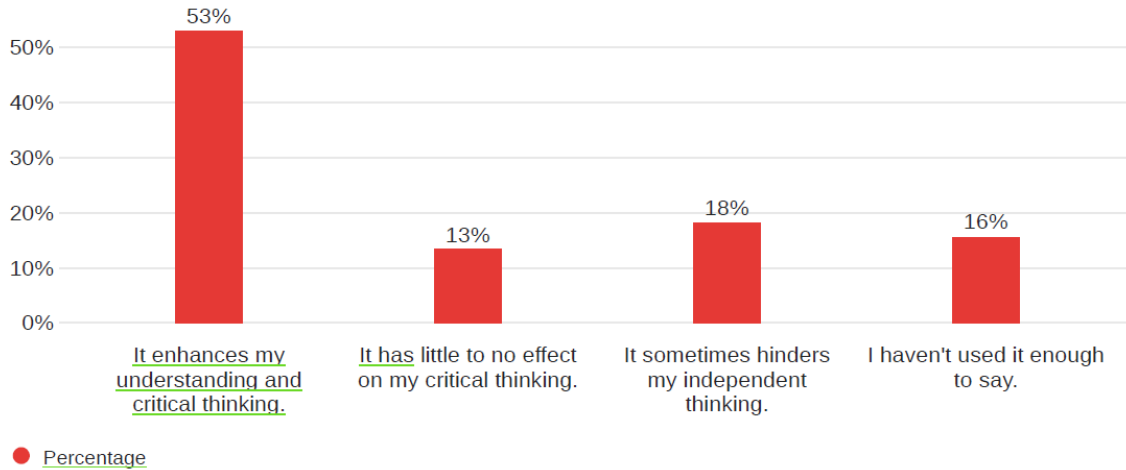


These insights reveal a nuanced understanding of generative AI's role in academia, where students are largely focused on leveraging technology ethically as a means of supplementing their learning and research efforts, rather than exploiting it for unfair advantages.

Generative AI Promotes Critical Thinking Among Students

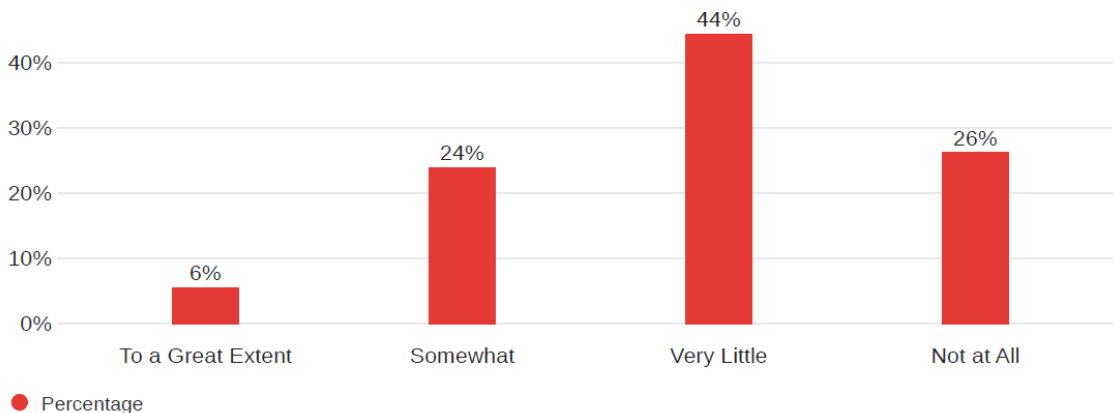
The majority of students surveyed believe that generative AI enhances their critical thinking and learning processes, with 53.02% affirming that it positively impacts their understanding and analytical skills. In contrast, a minority of respondents, constituting 18.09%, believe that reliance on generative AI sometimes hinders their independent thinking, highlighting concerns about potential overdependence on technology for cognitive tasks. Additionally, 15.58% of students indicate they haven't used generative AI enough to determine its impact, suggesting a portion of the student body remains undecided due to limited experience with the technology. Meanwhile, 13.32% perceive that generative AI has little to no effect on their critical thinking abilities, indicating a belief that their analytical skills remain unaffected by AI assistance. These insights reveal a broad consensus on the value of generative AI as a tool for educational enhancement, while also acknowledging the necessity for balanced use to preserve independent cognitive development.

Q11 - How do you think generative AI influences your learning process and critical thinking skills?



The survey on the use of generative AI in academic settings reveals a compelling narrative about student engagement with technology, particularly emphasizing the ethical use of AI in enhancing learning without resorting to academic dishonesty. Significantly, a combined 53% of students report either "Not at All" or "Very Little" use of generative AI for tasks directly tied to homework, discussion boards, or exams. This includes 26.20% of students who categorically do not use generative AI for such purposes and another 44.33% who minimally engage with it in their academic contributions.

Q13 - To what extent have you utilized generative AI to contribute to a discussion board, assignment, or exam?



This data underscores a discerning use of generative AI among students, who predominantly seek to utilize the technology for enriching their understanding and critical thinking capabilities rather

than as a means for completing assignments. The statistics further reveal that 23.93% of students use generative AI "Somewhat" in their studies, indicating a moderate level of integration where AI likely serves as a supplementary resource for learning and exploration. Conversely, only a small fraction, 5.54%, report using generative AI "To a Great Extent" for academic tasks, suggesting that extensive reliance on AI for completing academic work is relatively uncommon among students.

These findings highlight a key trend: students are keen on leveraging generative AI as an educational tool that supports their learning journey, particularly in developing critical thinking skills, rather than exploiting it to bypass academic challenges. The careful and considered approach Northeastern University students in Boston to using generative AI reflects a broader understanding of its potential to aid in the educational process without undermining the integrity of their academic efforts.

Based on the analyses of the survey data, here are the insights:

1. Distribution of Comfort Levels Using Generative AI:

- **Somewhat comfortable:** 25.9%
- **Neutral:** 22.9%
- **Somewhat uncomfortable:** 20.3%
- **Very uncomfortable:** 17.3%
- **Very comfortable:** 13.4%

This distribution shows a wide range of comfort levels with using generative AI among respondents, with the majority leaning towards moderate comfort (somewhat comfortable) and neutrality.

2. Policies on Generative AI in Syllabi:

- **No:** 50.5%
- **Yes:** 49.4%

The responses are nearly split, indicating that about half of the respondents have included a policy regarding the use of generative AI technologies in their course syllabi, while the other half have not.

3. Common Challenges Using Generative AI:

- A total of **133 respondents** provided text responses regarding the main challenges they face when using generative AI. This indicates a significant number of participants have encountered challenges, though specific details would require text analysis of the responses.

4. Use of AI in Research:

- **I do not use it in research:** 69.5%
- **Literature review and research:** 11.7%
- **Writing and publication preparation:** 11.3%
- **Data collection and analysis:** 5.8%
- **Hypothesis generation and testing:** 1.6%

The majority of respondents (69.5%) reported not using generative AI in their research. For those who do, literature review and research, followed by writing and publication preparation, are the most common aspects where AI is utilized.

These insights can help understand the current stance of academic professionals on generative AI usage, including their comfort levels, policy inclusion in syllabi, challenges faced, and areas of research application.