

Adopt or Avoid: Faculty Dilemmas and Decisions on Generative AI in Teaching and Research¹

Author: Balazs Szelenyi: Chair, Senate Information Technology Policy Committee.

Draft of report on survey results from Fall 2023 and Spring 2024.

The key findings indicate that Northeastern faculty are using generative AI sparingly in the current academic year. According to the Fall 2023 Academic Senate survey, 32% of faculty reported using generative AI in teaching, while a majority of the surveyed faculty (54%) claimed they did not use it for teaching purposes. The use of generative AI for research purposes was even less common. In the same survey, when asked, "Have you employed generative AI tools in any part of your academic research?", a significant portion (76%) responded negatively, with only 24% affirming their use of such tools. Additionally, 6.25% of the respondents mentioned they are considering the use of generative AI in their research.

Faculty members have mixed feelings about using generative AI in teaching and learning. In the Spring Senate faculty survey, when asked, 'How comfortable are you using generative AI in your academic work?' out of 698 responses, only 13.5% felt comfortable, and 26% felt somewhat comfortable. Conversely, a notable 37.6% felt either somewhat uncomfortable or very uncomfortable. A somewhat concerning finding emerged from the response to Question 44, which asked, 'Have you included a policy regarding the use of generative AI technologies in your course syllabus?' It was revealed that just over 50% of Northeastern faculty do not have a policy in their syllabus addressing the use of generative AI.

In the Spring Academic Senate 2024 Survey, Northeastern faculty members were asked, "Do you promote students developing their prompt-engineering skills using generative AI?" Among the 690 faculty who responded, 34% stated they never promote prompt engineering skills. Meanwhile, 27% indicated they sometimes do, 25% said they rarely do, and only 14% reported they often or always promote it. Interestingly, while the majority of Northeastern faculty do not actively promote prompt engineering skills, there is a strong consensus on the importance of developing digital literacy for students. When asked "How important do you believe developing digital literacy, including the use of generative AI, is for students' future success?" 27.10% (187 responses) considered it extremely important, 31.59% (218 responses) viewed it as very important, and 28.70% (198 responses) deemed it moderately important. Only a minority, 8.99% (62 responses), felt it was slightly important, and a mere 3.62% (25 responses) believed it was not at all important. These responses collectively underscore a general agreement on the significance of cultivating digital literacy, inclusive of generative AI skills, for students' future success.

¹ [Response to Questions 80, regarding additional guidance or support for integrating generative AI in teaching and research.] Fall Survey 2023.

Faculty Perspectives on Integrating Generative AI in Academia

Introduction: The integration of generative AI into academic settings has elicited a diverse range of opinions among faculty members. This report synthesizes these views, underlining both the positive and negative perspectives, and supports these positions with direct quotes from the faculty comments.

Positive Views: A section of the faculty expresses optimism about the potential of AI to enhance teaching and research:

1. **Innovation and Efficiency:** Some educators see AI as an innovative tool that can aid in research and teaching. One faculty member remarks, "I would like the university to subscribe to more platforms that harness generative AI, like an AI video generator."
2. **Educational Enhancement:** Others believe that AI can play a constructive role in education if used correctly. For instance, one comment suggests, "Teaching toward cognitive skills that are outside the purview of AI."
3. **Resource Availability:** The availability of AI resources is seen as a positive development. "The university should reimburse the cost of using ChatGPT or other generative AI in teaching and research," one respondent states.

Negative Views: However, concerns regarding AI's application in academia are predominant:

1. **Academic Integrity:** The most voiced concern is the potential for AI to facilitate cheating. A faculty member notes, "Avoid cheating," highlighting the need for integrity.
2. **Over-Reliance on AI:** Some faculty worry about students becoming overly dependent on AI. "Making sure students do not rely on AIs for their final drafts," comments a respondent.
3. **Ethical and Practical Concerns:** Ethical issues and the practicality of AI integration are also major concerns. One educator states, "Clear and consistent rules about use of AI that violates academic integrity."

Unique Perspectives: Several faculty members offered perspectives that do not neatly fit into the positive or negative categories:

1. **Wait-and-See Approach:** A few are adopting a neutral stance, as one comment reads, "I'm taking a wait-and-see approach for the most part. Pretty neutral about it all."
2. **Need for Comprehensive Understanding:** Some express the desire for more knowledge about AI before integrating it into their work, suggesting a cautious but open-minded approach.
3. **Combining AI with Critical Thinking:** There is an acknowledgment of AI's potential when combined with critical faculty guidance. One respondent suggests, "Education about its purpose, use, ethics, how to manage cheating."

Conclusion: The faculty's views on the use of generative AI in academia are multifaceted. While there are optimistic perspectives on the potential for AI to enhance academic practices, the predominant sentiment is one of caution, underscored by concerns about academic integrity, over-reliance, and ethical implications. Additionally, some unique views suggest a desire for a balanced approach, combining the use of AI with critical thinking and ethical guidelines. This diverse range of opinions indicates the complexity of AI's integration into the academic realm and underscores the need for ongoing dialogue and policy development.

Suggested Actions for Administration: To address these diverse views, university administration should consider:

1. Developing and disseminating clear, practical guidelines on the ethical use of AI, tailored to various academic disciplines.
2. Organizing regular workshops and training sessions to familiarize faculty with AI tools and their potential applications in teaching and research.
3. Creating platforms for sharing best practices and real-life examples of AI integration in academia.
4. Offering resources and support for AI-related pedagogical innovations and research.
5. Actively addressing concerns about academic integrity and the potential biases of AI tools to ensure equitable and responsible use.

There were 117 responses to Academic Senate Fall survey Question 80, regarding what additional guidance or support would enhance faculty members' integration of generative AI in teaching and research. Here is a sample of the response of what faculty need and their view of generative AI in teaching and research.

1. "Funding for ChatGPT 4.0."
2. "I need to learn more to better understand and integrate the AI into my work to apply the guidelines."
3. "Avoid cheating."
4. "Requiring students to turn in assignments through an AI checker as well as a plagiarism checker."
5. "For most of my core teaching which involves design through iterative processes I don't have strong concerns yet about the use of ai. I would welcome tips or best practices for making weekly written assignments like reading responses more resistant to ai, as I'm sensing a disconnect with some students between what is written in their weekly responses versus what I hear from the same students in class discussions."

6. "Examples of proper use."
7. "I will not be integrating generative AI into my teaching or work."
8. "Teaching toward cognitive skills that are outside the purview of AI."
9. "Clear and consistent rules about use of AI that violates academic integrity."
10. "Students need to understand that using chatGPT to write essays is cheating. They will not learn how to write if they use this. The university seems to support the use of chatGPT which I don't understand. Perhaps it can be used effectively in some disciplines, but in the humanities it should not be used to write essays."
11. "I would like the university to subscribe to more platforms that harness generative AI, like an AI video generator. We can use this to continue improving our course resources, and to stay aligned with the student experience."
12. "I need to know everything about it. My knowledge is only anecdotal at this point."
13. "The university should reimburse the cost of using ChatGPT or other generative AI in teaching and research."
14. "Subscriptions to AI for faculty and students."
15. "None for the time being."
16. "I only want to use it in the context of detecting AI-written student papers."
17. "Intro to AI for Dummies?"
18. "I'd like to see the guidelines again. My department provides support in the form of a course. I have not had free time to take an online course. Need content in more digestible formats."
19. "It would be helpful if there was some indication of what is the appropriate course of action if you think a student has used AI to complete an assignment and how to document it. For example, I call them into my office and ask them to explain the assignment to me and then use my judgment based on what they are able to explain about the assignment."
20. "The academic integrity people and the university need to get on the same page."
21. "Guidelines for grading."
22. "It would be great if there was a bootcamp on this, maybe in the summer. Ways my students are using it, ways I could use it kind of thing."
23. "No additional guidance needed. I have been using generative AI in my work since 2014—well before commercial products existed."
24. "Effective ways to use AI in research (for example- how to use it for literature reviews (and know that the information is valid and from reputable sources))."
25. "Lots of hands on workshops for what has worked for folks and how."

26. "I participate in the Writing Program's ChatGPT working group and have found it very helpful."
27. "Education about its purpose, use, ethics, how to manage cheating."
28. "Webinars describing the usage of these commonly used tools."
29. "Definitely would like to make sure I have the proper guidelines from the university... I wonder if the university should email these out at the start of each semester going forward (if not already doing so... I honestly can't remember). I appreciate the work that CATLR and the Provost's office has done around AI, and I've collected documentation from them. I'm just not sure if this is the 'official' guideline."
30. "The university should provide tools to faculty members for free to detect the use of ChatGPT in students' homework."
31. "I don't want to use generative AI, at least not yet. I want the university to provide more support for faculty who want to ensure students are not using it for coursework. We should be able to decide that this is not what we want our students to do in our field."
32. "Writing and use - and what does academic integrity look like?"
33. "Best practices from other faculty and researchers."
34. "Nothing from the university other than covering the cost of accounts."
35. "Continuation of seminars and working sessions that allow Faculty to experiment with AI capabilities in a mentored environment."
36. "Not sure yet."
37. "Support deep learning rather than defending deep faking. Provide AI detection tools."
38. "I just can't picture how I would use it."
39. "I have just modified my assignments to avoid AI use--this means no secondary research papers. I do all hands-on primary research projects, in class essay tests (hand written) and oral presentations."
40. "Specific online practices that we can put into place quickly and effectively. It's hard to have to figure this out on our own."
41. "Guidance on how to mitigate improper student use of AI in the classroom."
42. "Support of meetings, workshops, and research on utilization of chatGPT and other AI for all aspects of teaching and research, but especially in pedagogy. Regarding research, it is essential that we consider potential inequities that AI might foster, given biases that humans encode into language."
43. "The policy was fairly general, but I liked its advice and actually appreciate that there is room to create my own policy for my course. It's important that the university continues to curate resources and offer workshops and training for faculty who lack familiarity with AI. Perhaps there could be stipend to encourage those reluctant to attend."

44. "It's not always necessary or useful."
45. "Shared workshops and research AI integration approaches in my college (one event in past and one coming up)."
46. "Examples of its usage."
47. "Embracing it."
48. "I tell students they are adults - if they want to cheat by having AI write their papers, then make sure they invite AI to graduation to receive its degree."
49. "I'd like to know what is and is not allowed when using AI in our classrooms."

Faculty Perspectives on Generative AI: Survey Insights from Question 81

Introduction Question 81 asked: "What reservations or concerns, if any, do you harbor regarding the deployment of AI in your teaching or research activities?" The 117 responses provide a window into the faculty's collective mindset regarding the positives and negatives of using generative AI in an academic setting.

Positive Views: A section of faculty members showed enthusiasm towards AI, emphasizing its innovative potential in teaching and research. The positive aspects highlighted include:

1. **Innovation in Pedagogy and Research:** AI is seen as a tool for brainstorming, creating educational content, and streamlining research processes.
2. **Efficiency and Assistance:** The ability of AI to save time and enhance efficiency, especially in administrative and preliminary research tasks, is well-regarded.
3. **Adaptation and Learning Opportunity:** Acknowledging AI's growing presence, some educators advocate for adapting pedagogical methods and using AI as a tool to teach students about its ethical use and the importance of critical thinking in the digital age.

Negative Views: The predominant sentiment, however, skews towards caution and skepticism, with several concerns:

1. **Academic Integrity and Plagiarism:** The most pressing concern is AI's potential role in facilitating plagiarism, undermining original thinking and writing skills in students. This is succinctly encapsulated by one faculty member who simply stated, "Plagiarism."
2. **Dependence and Skill Erosion:** Over-reliance on AI tools is feared to erode crucial academic skills like research, analysis, and writing.
3. **Ethical and Bias Issues:** Ethical use of AI, encompassing data privacy, intellectual property rights, and the risk of perpetuating biases, is a major concern.
4. **Reliability and Authenticity:** Doubts about the reliability and authenticity of AI-generated content are prevalent, with worries about its ability to mislead students or provide inaccurate

information. One faculty member's emphatic response, "Ban it," highlights the extent of these concerns.

Faculty Views and Needs: The survey results from Question 81 indicate a prevailing apprehension about the role of AI in academia. Concerns about academic integrity, skill erosion, and ethical implications significantly outweigh the potential benefits. This cautious stance suggests an urgent need for comprehensive guidelines and strategies for responsible AI integration in academic settings. The demand for clear guidelines and strategies is evident, underscoring the importance of preserving academic integrity and fostering critical thinking skills in the era of AI.

There were 117 responses to question 81 on Faculty Needs and Perspective of generative AI in Teaching and Research. Here is a sample of 68 of them:

1. "Students have been using ChatGPT to cheat. This has been a major problem."
2. "I have serious concerns about the negative impact the use of these tools by students will have on thinking and learning. I see them being used inappropriately and there is little that can be done about it (because often it is impossible to prove how the tools are being used)."
3. "No concerns for me - worry a bit about the students (but not too much)."
4. "Ethical concerns regarding intellectual property, data privacy, humanizing technology, etc."
5. "I am actually considering leaving teaching altogether, in part because the effect of generative AI on students' willingness and capacity to conduct their own research and write their own work in the humanities seems so low. This is compounded by NU's clear disregard for the humanities, meaning that students don't get any message that learning to do these things for themselves will have short-term or lifelong value."
6. "AI uses work without attribution to work. Faculty should not be encouraged if they have professional or ethical qualms with the technology."
7. "I don't fundamentally trust the output."
8. "None. I love AI, I just need to figure out how or if I can use it in teaching."
9. "Plagiarism."
10. "AI plagiarism."
11. "I worry that AI will have a reductionist impact on how we all encode meaning in writing and other forms, further favoring mainstream norms and modes. Further, we need to anticipate unexpected consequences of what is clearly a disruptive new tool."
12. "I have many concerns about students relying too much on AI, and their critical thinking, writing, and other skills becoming underdeveloped as a result. However, its use is inevitable, so my role is to teach students how it should and should not be used. I think many faculty are not sure how to incorporate it into their teaching effectively."

13. "I'm worried about plagiarism."
14. "We're all grappling with what plagiarism is and how assignments need to change. I have not been badly affected so far due to the nature of my assignments--human plagiarism is problem enough, thanks!--but I expect this to change as the technology advances. I would also like to see if it could help me teach more productively. I have used it to brainstorm assignments and create images for presentations, and I teach a session to all my undergrad and some of my grad classes. Despite claims in the outside world, I find it useless for grading. In terms of my research, the tools are helpful but not lifechanging in terms of literature review. That too may change. I am very interested in this topic. Feel free to reach out. Bruce Clark, DMSB."
15. "I am comfortable researching and thinking about AI -- it is my job. I just disagree with the current Northeastern policy."
16. "Mostly, I'm concerned about the outsize concern/freakout about these tools and the culture of fear. I'm also concerned that some faculty are saying things like, "most writing is boring and useless anyway, so why not have the AI do it." Both the fears and the dismissive attitude serve students poorly. Generative AI tools are tools — we need to be teaching with them as such and showing students how they can be used ethically."
17. "We need to embrace to protect your intellectual intelligence or we will be run by computers and decisions about us will be done by computers. That is SCARY - why bother learning if I can have an external brain make all the decisions...no need to continue to populate the world if computers / AI will run it. Scary scary scary..."
18. "Concerns are centered around access and equity to Gen AI tools."
19. "I worry my students will use it to get good grades without considering the impact to their learning."
20. "I worry it might diminish some skills like the ability to create without a prompt as well as some writing skills."
21. (Continuation of the 15th comment) "...not sure how to incorporate it into their teaching effectively, but I would love to learn how to create multiple choice tests - I think that's brilliant."
22. "I am concerned about students believing them as reliable sources and that generative AIs do not accurately cite the sources of their information."
23. "I am concerned that students will use it to complete their work and won't learn valuable life skills that they would otherwise be exposed to if they did the work themselves."
24. "Having students use AI decreases their ability to write for themselves."
25. "I don't use it in my own research. For students, my concerns are 1) that they will see it an easy way to avoid developing good writing and research skills, 2) that they will be satisfied with the very broad and vague answers that AI generates (at least, at the moment) for research questions. I want them to see it (like Wikipedia) as a useful starting point for work, not as a substitute for work."

26. "Making sure I understand it well enough to determine how it can be used (ethically) and when it should not (or be used with attribution)."
27. "It can produce biased results with made-up sources - so an analog to humans I guess."
28. "Inaccuracies in aggregate data."
29. "This term I was worried about student plagiarism and encouraging a robot to do the work for them."
30. "Confusing students on proper protocols with respect to employers in job search."
31. "I am concerned about plagiarism. Also, how does AI enhance students' learning?"
32. "I only worry about the suppression of these tools and the lack of direct discussion and guidelines with faculty and students from the university."
33. "Elimination of jobs."
34. "Discerning violations of academic integrity."
35. "My lack of enough knowledge."
36. "Needing to ensure equitable and sustained access to the service for all. Concerns regarding biases in material AI is trained on."
37. "Plagiarism."
38. "I fear that it becomes very hard to teach the old way, and faculty need to change the way they create assignments and how they assess students. In terms of research, I fear my published works and original ideas might be stolen and refurbished and published under someone else's name! I fear the book publishing industry might collapse."
39. "I do not trust ChatGPT."
40. "Not having good enough reason to make it worthwhile."
41. "I'm worried, like a lot of faculty, about how much students are offloading their thinking and writing onto AI. I worry that deploying it on purpose while teaching may be taken as an 'okay' to use it however they like. However, I do understand that the right set of guidelines will help them to understand what AI can and can't do for them."
42. "None at present."
43. "When students use AI to generate assignments they hand in there is a discrepancy in their understanding of the material which is evident in their other interactions such as class discussion or presentations."
44. "Confidentiality, intellectual property."
45. "Ban it."
46. "Efficient use assisting with faster learning focus."

47. "1. Intellectual Honesty: Lack of attribution when used by students - and faculty for that matter.
2. Missed opportunity: Reduction of critical thinking and systems thinking despite the reality that genAI could be used to develop those very competencies."
48. "It's a terrifying journey into uncharted territory."
49. "Loss of creativity or thinking on one's own; risk of losing the willingness to exert or have one's own voice."
50. "I'm concerned that if we don't bring it into the classroom we are doing our students a terrible disservice. These tools will be in our lives now so we need to put them front and center and work with them constructively but also with deeply critical awareness and forethought to what they portend for human creativity, agency, etc."
51. "Not sure how actually useful it will prove to be."
52. "Deteriorating models."
53. "No concerns. Not an issue."
54. "My primary reservation centers around ensuring ethical use and understanding the broader implications of AI in education. There's a need for clear guidelines and policies that address privacy, data security, and potential biases in AI algorithms. Another concern is the risk of over-reliance on AI tools, which might overshadow critical thinking and problem-solving skills in students. In research, the challenge lies in maintaining the integrity and originality of work amidst the ease of generating content through AI. It's crucial that we provide adequate training and resources to faculty and students to navigate these complexities effectively, ensuring that AI serves as an aid to learning and research, not a substitute for fundamental academic skills."
55. "I'm taking a wait-and-see approach for the most part. Pretty neutral about it all. Happy to let others think it through first and then I'll pay more attention. I'm rather tired of it sucking up so much oxygen."
56. "Making sure students do not rely on AIs for their final drafts."
57. "I think generative AI is not as promising or revolutionary as anticipated. It may be more useful in background-oriented processes, such as with spell-check and generative text prompts like we've had in Gmail."
58. "The potential for misuse and replacement of critical thinking."
59. "While I do not have any personal reservations or concerns regarding the deployment of Artificial Intelligence (AI) in my teaching or research activities, I do believe it is crucial for students to have clear guidelines on how to appropriately use these tools. The integration of AI in academic settings offers numerous advantages, such as enhanced learning experiences, access to a wealth of information, and more efficient research processes. However, to fully harness these benefits, students must be properly trained. This training should focus on ethical usage, understanding the limitations of AI, and the importance of critical thinking in conjunction with AI outputs. Ensuring students are well-equipped to use AI responsibly and effectively is key to maximizing its positive impact in an educational context."

60. "Accusing students of AI text is a dangerous and time-expensive game."
61. "No consistent policies across the university."
62. "My only reservation is understanding that my use of AI will inform my students' use of AI but they do not have the maturity or context that I have as someone who's been in a professional working environment for years."
63. "Just having the time to learn how it works and use it effectively. I think it will be really important for students to learn, so I will need to as well."
64. "Trust in the output."
65. "People not being super aware of black box data etc."
66. "If students want to use it I want them to use it for refinement and not to entirely do an assignment for them."
67. "It's such a complex subject... I'm honestly still wrapping my head around it. My biggest fear (as with many professors) is that students use it for writing papers and discussion posts, etc."
68. "I am concerned about the students relying on these tools for research and analysis instead of their own critical thinking skills."