



ILLUSTRATION: THE PROJECT TWINS

# STUDENTS FIND NEW USES FOR CHATBOTS

The use of generative AI tools has gone beyond simple summarization and grammar – students are now learning from AI professors. **By Amanda Heidt**

**B**y the time her comprehensive exams rolled around in August 2024, Adriana Ivich had done nearly everything she could to prepare herself. To officially become a PhD student in biomedical informatics at the University of Colorado Anschutz Medical Campus in Aurora, Ivich needed to present her proposed research project and then meet with her committee for a closed-door grilling.

“It’s definitely one of the hardest times to be a PhD student,” Ivich says. “I spent months – years really – preparing, but you still don’t know what they’re going to ask you.”

She could make an informed guess, however. Months before, she’d poured the biographies and publications of her five committee members into ChatGPT, a generative AI chatbot developed by OpenAI in San Francisco, California, and used it to create digital simulacra of each person. She then fed the mimics her research proposal and asked the program to respond as her committee might, asking detailed questions and identifying gaps in her knowledge. The actual meeting “went pretty much like ChatGPT said it would,” says Ivich, who passed with flying colours.

Her experience highlights just one of the

many imaginative ways in which students are using generative AI. Unlike the ‘early days’ of two years ago, when using AI meant summarizing a paper or outlining an essay, students are now leaning into the tools’ ability to emulate human connection, turning chatbots into podcast hosts, language tutors, professors and even personal trainers.

“I want professors to work with students assuming they’ll be using these models,” says Lily Lee, who is studying manufacturing and design engineering and music at Northwestern University in Evanston, Illinois, and is co-creator of the newsletter AI × Education.

## Work / Technology & tools

Although some educators worry about the erosion of critical-thinking skills, she says, “another way to look at it is that AI can help students learn more creatively, which helps them build their critical thinking as well.”

### A back-and-forth conversation

When ChatGPT first appeared in November 2022, many educators and academic institutions responded with blanket bans, unsure whether these tools were more likely to spark innovation or cheating. The jury is still out on that, but administrators have started to relax some policies and give teachers greater freedom to direct when they can be used. How these tools are used, however, is often driven by students.

“I’m pleasantly surprised at some of their creative uses,” says Victor Lee, a learning-sciences researcher at Stanford University in California who focuses on the intersections between AI and education.

Like Ivich, many students seem drawn to applications that showcase the ‘human’ side of programs such as ChatGPT and NotebookLM, an AI-powered interface from Google in Mountain View, California, for interpreting documents. Although early iterations of these tools required users to key in queries, newer versions allow people to speak into a microphone, enabling more-natural, organic conversations.

Sami Melhem, who is studying computer science at Texas A&M University in College Station, created his own chatbot, Class Primer, to tutor him. Built atop ChatGPT-4, the program begins by asking for details about a class, including a course description, learning outcomes, required textbooks and a syllabus. Then, it breaks down the course into ‘priming sessions’ spread out over the semester.

Melhem now spends his Sunday afternoons familiarizing himself with a few weeks’ worth of material before the concepts are introduced in class. The bot lets Melhem engage with his lectures in different ways, such as by creating playful analogies or visual maps that link concepts and show how they connect over the semester. As a visual learner, Melhem says that the diagrams especially “help with understanding the subject as a whole”.

Other students, such as Jan Bartkowiak, who is studying economics at Minerva University in San Francisco, California, have made chatbots that emulate famous historical figures to interrogate their thinking. In 2024, Bartkowiak wrote an essay on the Vietnam War and used this exercise to probe how historians or contemporary political figures, such as Henry Kissinger, who served as the United States national security adviser and secretary of state during the conflict, might have framed certain events.

“You might want to quickly identify which book or philosopher supports your point, so

instead of starting your research by digging deeply into those books, you can start with ChatGPT,” he says. “You can have back-and-forth conversations and ask clarifying questions, and that’s been very useful.”

This ability to speak to chatbots has proven particularly helpful for students taking courses outside their main specialism – for instance, to attain skills that they need or want.

Elda Bengu is a psychology student at Arizona State University in Tempe, an institution that has embraced AI tools through an AI Innovation Challenge in partnership with OpenAI. As part of that effort, Bengu’s lecturer Christiane Reves created a chatbot called Language Buddy that Bengu has used to practise speaking German. Research shows

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that engaging in conversation is among the quickest ways to improve language skills, but students aren’t always able to say things in the clearest way or ramp up the complexity of their speaking. Language Buddy can.

Initially sceptical, Bengu says that after testing how the app handled her first language, Turkish, she was pleasantly surprised with its performance. “I was able to have a conversation and even ask it to speak in a certain dialect or accent, which would be especially useful if you’re learning to live somewhere new.”

### Mastering the calendar

Another space in which students have successfully channelled the usefulness of generative AI is in streamlining their workflows. By using AI as a type of personal assistant, tools can quickly pull together information, prepare schedules and free up precious time.

Shivali Verma, who studies brain and mind science, and is splitting her time between University College London and Sorbonne University in Paris, uses chatbots as her go-to source for debugging data-analysis code. She doesn’t use them to write the code itself, but such tools have supplanted websites such as YouTube, Stack Overflow and GitHub, which she would previously have used to troubleshoot. “You can sit for hours looking through forums for a very specific question, or you can ask ChatGPT,” Verma says, noting how much time the practice has saved her. “Of course you need to be sceptical, but I would say most of the time the information is correct.”

Several students, including Ivich, have also used NotebookLM to create AI-powered podcasts on a topic – a sort of modern literature

review in which the chatbot synthesizes a handful of user-supplied papers to create a fictional conversation between two hosts. “It can get cringey, but it’s a fun way to engage with the material,” Ivich says, adding that it has helped her squeeze studying into other parts of her day. “If I’m about to take my dog on a walk, I’ll listen while I’m out.”

Jackson Frazier, who is studying aerospace engineering at Embry–Riddle Aeronautical University in Florida, has integrated ChatGPT into his Google calendars, and now asks the bot to make him a cohesive weekly schedule or to help with divvying up roles in a group project on the basis of each person’s strengths. “It has helped me become much more organized as a person, which is something I’ve always struggled with,” Frazier says.

### Navigating life away from home

With chatbots integrating into so many facets of academic life, it hasn’t taken long for them to break into personal lives as well, says Leo Wu, who is studying economics and systems design at Minerva University and is president of a student-run group there called AI Consensus, which advocates for the ethical use of AI in education.

Although some experts warn that over-reliance on AI risks dampening social skills, students say that these tools, when they are used thoughtfully, have actually deepened their personal connections and helped them to lead healthier lives. Indeed, students have shared experiences of using chatbots to plan travel itineraries, create art, navigate painful relationship break-ups or difficult conversations with friends, or bridge the distance with home when they leave for the first time.

Frazier, for example, doesn’t just use ChatGPT to organize his class schedule but also to build in time for extracurricular activities and enforce some work–life balance. “I tell ChatGPT about myself, my hobbies and a list of goals I want to achieve,” such as exercising four days a week or learning a song on the piano, “and it will give me a layout of a plan to help me get there.”

And, because Verma attends university in France, she now schedules regular calls with friends back home in the United Kingdom. Sometimes they use ChatGPT to generate silly drawing prompts, one of which has become the design for a tattoo of the London skyline for Verma and her friend. Verma says that she once tried to cut the chatbot out of her life for both financial and environmental reasons, but found that it was simply too useful.

“I’ve come to depend on it,” Verma says. “I try to be mindful of how much I use them, and to make sure I’m using them responsibly, but I no longer see a future where I don’t use them.”

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