AI is changing how students learn—or avoid learning

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A USC study reveals most students use tools like ChatGPT to shortcut assignments, unless professors actively guide them toward deeper, more thoughtful usage. The findings are available on the *EdArXiv* preprint

server.

Most college students use artificial intelligence tools like ChatGPT to get quick answers—not to learn concepts, unless professors direct them toward deeper engagement, a new report from USC reveals.

On Wednesday, researchers at the USC Center for Generative AI and Society released a report on how students and teachers worldwide are adapting to AI. Together, this research provides the most up-to-date picture of how generative AI is already shaping higher education classrooms and learning practices.

The research team conducted two new surveys and one new study: a national survey of U.S. college students, an experimental study of a new AI writing tool and a global survey of teachers across five countries.

"Generative AI is here and already having an impact," said Stephen J. Aguilar, associate professor at the USC Rossier School of Education. "What matters now is whether we use it to deepen learning or to avoid it. Our research helps us understand how students and teachers alike are integrating AI into their work and studies."

Led by Aguilar and William Swartout, chief science officer at the USC Viterbi School of Engineering's Institute for Creative Technologies and co-director of the Center for Generative AI and Society, the report shows that generative AI is reshaping education and identifies practices for students and teachers to effectively use these technologies. With intentional design, clear guidance and equitable access, these reports suggest that generative AI can deepen learning rather than replace it.

Students use generative AI for two key forms of support, while teachers worldwide show cautious

optimism

College students are increasingly turning to artificial intelligence tools like ChatGPT to get quick answers rather than deepen their understanding, a new national survey finds. To understand how college students are using AI tools like ChatGPT, the researchers surveyed 1,000 U.S. college students and found that most use AI for what researchers call "executive help"—seeking fast solutions with minimal effort. In contrast, "instrumental help" involves using AI to clarify concepts, build skills and support independent learning.

However, the study found that students who receive encouragement from professors to use AI thoughtfully are significantly more likely to engage with the technology in learning-oriented ways. This suggests that faculty guidance plays a critical role in shaping how students approach AI—not just as a tool for convenience, but as a resource for intellectual growth.

"The growth of AI has created both optimism and anxiety," Aguilar said. "What matters most is ensuring that AI use is guided by those who have deep expertise in their content areas, and that students aren't left to figure things out on their own."

A companion survey of 1,505 teachers from the United States, India, Qatar, Colombia and the Philippines revealed widespread concerns about plagiarism, diminished creativity and inconsistent institutional support. Despite these concerns, the majority of educators see promise in AI's classroom applications. Seventy-two percent said AI helps streamline routine tasks, 73% believe it can improve student outcomes and 69% said it enables more personalized learning.

New AI writing tool helps cultivate writing skills

Researchers also tested a new writing tool called ABE—short for AI for Brainstorming and Editing—which is designed to promote reflection and revision rather than shortcutting the writing process. Students reported using ABE as a companion to improve their writing and broaden their perspectives, rather than relying on it to generate complete drafts. The tool guides users through structured activities such as strengthening arguments, clarifying claims and exploring counterarguments.

"We are seeing that if used appropriately, tools like ABE can use generative AI to enhance students' critical thinking skills, rather than having them delegate thought to the machine," said Swartout, who also serves as a research professor of computer science at USC Viterbi.

Based on the findings, researchers offered several recommendations to help educators and policymakers integrate AI effectively into learning environments. They suggest encouraging "instrumental" use of AI—where students use it to deepen understanding—rather than executive use that bypasses effort. They also advocate for designing AI tools with built-in scaffolds to support reflection and critical thinking.

In addition, the report calls for expanded professional development to help teachers move from hesitancy to confident, ethical adoption of AI. Finally, researchers emphasize the need to address equity issues, noting that students and teachers with less institutional support may rely on AI differently and require tailored policies to ensure fair access and use.

More information: Stephen J Aguilar et al, How Studentsand Teachers WorldwideAre Adapting to AI, *EdArXiv* (2025). DOI: 10.35542/osf.io/wr6n3_v2

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