

Media Advisory:

Can Students Still Prove They Know How to Code? New ACM Report Examines How Educators Are Responding to AI

Global Survey of More Than 750 Higher Educators Reveals Widespread Shift Toward Oral Exams, Code Reviews, Debugging Exercises and Project-Based Assessments

New York, NY, July 21, 2026 — As generative AI becomes increasingly embedded in software development, educators are confronting a question that is reshaping programming higher education: How should students learn and how should instructors assess learning when AI can generate code for them?

A [new report](#) from ACM, the Association for Computing Machinery, highlights growing concern among computing educators in higher education about the impact of generative AI on student learning and assessment, while underscoring the need for new approaches to programming instruction.

Based on responses from more than 750 educators across 49 countries, the report provides one of the broadest snapshots to date of how computer science instructors are responding to the rise of AI coding tools such as ChatGPT and GitHub Copilot.

The findings reveal both the opportunities and challenges educators see as AI becomes a more common part of programming education:

- 69% of educators believe the skills required to create software have changed because of generative AI.
- 87% cited increased dependency on technology as a concern, making it the most commonly identified challenge associated with student AI use.
- 72% expressed concerns about cheating and plagiarism, while 53% cited concerns about misinformation.
- Nearly half of respondents identified a lack of examples of best practices as a major barrier to integrating generative AI into programming education.
- More than two-thirds of respondents reported making changes to assessment approaches as a result of generative AI.

“We know students entering the workforce will likely use AI tools as part of software development,” said Steven Gordon, Professor at The Ohio State University and lead author of the report. “Those tools are now part of the classroom as well. The key is to produce graduates who are competent in programming and who understand both the capabilities and limitations of AI. That’s where many educators are focusing their attention.”

The findings suggest that the conversation within computing education has evolved beyond whether AI tools should be allowed in programming courses and toward how they can be incorporated while preserving core learning outcomes.

Many instructors reported placing greater emphasis on skills such as code comprehension, program design, debugging, testing and critical evaluation of AI-generated outputs. Educators also described increasing their use of oral exams, code reviews, and project-based assessments to better understand how students approach programming challenges and apply what they have learned.

At the same time, respondents pointed to a lack of established best practices as a significant challenge. Many expressed interest in professional development focused on assessment design, classroom implementation, and responsible AI use, highlighting the need for additional resources and guidance as institutions adapt to AI-assisted learning.

The task force concludes that while no single model has emerged, computing educators are actively experimenting with new teaching and assessment approaches as they work to balance student learning, academic integrity, and workforce preparation in an era of AI-assisted software development.

Report Methodology

The [ACM Education Advisory Committee's Task Force on Generative AI and Programming Assessment](#) conducted a global survey between May and October 2025 to better understand how generative AI is affecting programming instruction and assessment.

The survey received 763 responses from educators representing 49 countries, with approximately 500 complete responses included in the primary analysis. Respondents represented a broad range of institution types, course levels and teaching experience.

In addition to the survey, the task force analyzed instructor-submitted examples of teaching and assessment adaptations, reviewed institutional approaches to AI use in programming courses and collected community-contributed practices for integrating generative AI into computing education. The findings informed both the final report and a broader ACM initiative to share emerging approaches and resources with the computing education community.

About ACM

[ACM, the Association for Computing Machinery](#), is the world's largest educational and scientific computing society, uniting computing educators, researchers, and professionals to inspire dialogue, share resources, and address the field's challenges. ACM strengthens the computing profession's collective voice through strong leadership, promotion of the highest standards, and recognition of technical excellence. ACM supports the professional growth of its members by providing opportunities for life-long learning, career development, and professional networking.

Contact: Jim Ormond
212-626-0505
ormond@hq.acm.org