

Massive open online courses haven't lived up to the hopes and the hype, professors say

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Credit: AI-generated image ([disclaimer](#))

Three years after a groundswell of online learning swept through higher education, Stanford researchers who were at the forefront of the movement have concluded that online learning has not been the cure-all that many educators had hoped for. Nonetheless, the techniques developed for online learning may lead to great advances in how students

learn, both online and in conventional classrooms.

The vision was of unlimited online courses, available to virtually anyone with an Internet connection, that would dramatically reshape the standard classroom while also changing the life paths of students in developing countries, at little or no cost.

But it hasn't worked out that way, say Stanford professors John Mitchell, Candace Thille and Mitchell Stevens, who have been deeply involved in the effort.

Completion rates remain low. Even offering high-level online classes from major universities doesn't necessarily work; without a solid academic background, the classes may be too difficult for many students to follow.

As a result, most MOOC (massive open online course) students have been college-educated men from industrialized countries.

The researchers say it is frustrating that MOOCs can provide educators the technical ability to watch as online learners fail. "We see people struggling and there really isn't any mechanism to help them," said Mitchell, Stanford's vice provost for teaching and learning.

Helping people around the world learn is not a simple thing, he said, and getting there "is going to be much harder than simply putting these courses online."

Thille, an assistant professor of education, agreed. "MOOCs weren't the solution," she said. Nonetheless, she added, MOOCs have prompted a widespread interest into research about how people learn.

This valuable new side effect of MOOCs has provided researchers an

ocean of data about how students learn or fail to learn, and that data can be useful in the classroom as well as online.

While protecting the privacy of participants, researchers can monitor the activities of students online, seeing what approaches work, where students stumble, what grabs students' attention and what style of videos work best in various situations.

However, the insights into student learning that can be gleaned from MOOC data have been limited by the type of interaction that is observable. Most of the student activities in MOOCs are either too passive (watching a lecture) or too simple (multiple choice questions) to be useful to the science of learning, Thille said.

But as MOOCs mature, she said, they will present the complex tasks that are instrumental in collecting fine-grained data on the learner's intermediate learning process.

The data can be used to reveal the thought processes of the student. Along those lines, Thille is interested in adapting a successful intervention technique for students, one developed in collaboration with Stanford psychology Professor Carol Dweck's research group, PERTS (Project for Education Research That Scales).

The idea is to embed interventions into [online learning](#) environments. The interventions would re-engage disengaged students and encourage them to adopt a growth mindset toward learning. The student becomes a participant in a carefully designed psychological intervention, encouraged to persevere, reassured that he or she belongs in the class and can do well. Similar interventions with students in other situations have had remarkable success.

The action in the MOOC world now, the researchers said, is learning

about [learning](#). "I think that's what the technology is really valuable for," Thille said.

Despite their limited success, "I'm not disappointed at all with MOOCs," said Stevens, associate professor of education. "We're still in the horse-and-buggy stage. The boundaries are blurring between online and face-to-face."

Some schools, for example, allow [students](#) to complete part of their studies online and part on campus.

There are questions about MOOCs that need to be answered, Stevens said, such as "who owns the data?" For now it's an open question.

Stevens suggested that the economics of MOOCs might make them attractive to California's financially struggling college system.

Despite the disappointments of MOOCs, Stevens remains optimistic: "We're looking at a future of lifelong education online. Much of that will come at little or no cost to learners. How can that be a bad thing?"

Provided by Stanford University

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