

NOVELTIES

Keeping an Eye on Online Test-Takers

By ANNE EISENBERG

Published: March 2, 2013

MILLIONS of students worldwide have signed up in the last year for MOOCs, short for massive open online courses — those free, Web-based classes available to one and all and taught by professors at Harvard, Duke, M.I.T. and other universities.

But when those students take the final exam in calculus or genetics, how will their professors know that the test-takers on their distant laptops are doing their own work, and not asking Mr. Google for help?

The issue of online cheating concerns many educators, particularly as more students take MOOCs for college credit, and not just for personal enrichment. Already, five classes from Coursera, a major MOOC provider, offer the possibility of credit, and many more are expected.

One option is for students to travel to regional testing centers at exam time. But reaching such centers is next to impossible for many students, whether working adults who can't take time off to travel, or others in far-flung places who can't afford the trip.

But now eavesdropping technologies worthy of the C.I.A. can remotely track every mouse click and keystroke of test-taking students. Squads of eagle-eyed humans at computers can monitor faraway students via webcams, screen sharing and high-speed Internet connections, checking out their photo IDs, signatures and even their typing styles to be sure the test-taker is the student who registered for the class.

The developing technology for remote proctoring may end up being as good — or even better — than the live proctoring at bricks-and-mortar universities, said Douglas H. Fisher, a computer science and computer engineering professor at Vanderbilt University who was co-chairman of a recent workshop that included MOOC-related topics. “Having a camera watch you, and software keep track of your mouse clicks, that does smack of Big Brother,” he said. “But it doesn't seem any worse than an instructor at the front constantly looking at you, and it may even be more efficient.”

Employees at ProctorU, a company that offers remote proctoring, watch test-takers by using screen sharing and webcam feeds at offices in Alabama and California. ProctorU

From www.nytimes.com/2013/03/03/technology/new-technologies-aim-to-foil-online-course-cheating.html?partner=rss&emc=rss&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A%20mediaredef%20%28jason%20hirschhorn%27s%20Media%20ReDEFINED%29&_r=1

4 March 2013

recently signed an agreement to proctor new credit-bearing MOOCs from Coursera, including one in genetics and evolution offered at Duke and one in single-variable calculus at the University of Pennsylvania.

MOOC students who want to obtain credit will be charged a remote-proctoring fee of \$60 to \$90, depending on the class, said Dr. Andrew Ng, co-founder of Coursera, based in Mountain View, Calif.

Other remote proctoring services offer different solutions. At Software Secure in Newton, Mass., test-takers are recorded by camera and then, later, three proctors independently watch a faster-speed video of each student.

Compared with services where proctors are monitoring students in real time, this combination of recording first and viewing later “gives greater latitude for the institution to adjust the timing of exams to whenever they want,” said Allison Sands, Software Secure’s director of marketing. The cost is now \$15 per exam.

Employees at ProctorU say they are well-versed in the sometimes ingenious tactics used to dodge testing rules. “We’ve seen it all,” said Matt Jaeh, vice president for operations. “After you’ve sat there a while watching people, the patterns of behavior for normal people versus the people trying to sneak in a cellphone to look up information are very clear.”

Each proctor can monitor up to six students at a time, watching three side-by-side camera feeds on each of two screens. If a student’s eyes start to wander, the proctor gives a warning via videoconferencing software, just as a classroom monitor might tell students to keep their eyes on their own papers. For an overwhelming majority of people, that warning suffices, said Jarrod Morgan, a co-founder.

With the system in place, “cheating usually isn’t a problem,” he said. But if it does occur, ProctorU follows the rules of the institution giving the exam. “Some schools ask us to cut off the exam on the spot if there’s a suspicious incident,” he said; others ask that the exam be continued and the incident reported.

Beyond the issue of proctoring, MOOCs are also addressing the problem of making sure that credit-seeking test-takers are the same students who enrolled in the course. In that effort, Coursera is offering a separate service, called Signature Track and costing \$30 to \$99, that confirms students’ identity by matching webcam photographs as well as pictures of acceptable photo IDs.

Students also type a short phrase, which is analyzed by a software program. It takes note of the typing rhythm and other characteristics, like how long the keys are pressed down. Then, when a student submits homework or takes a test, the algorithm compares a bit of new typing with the original sample. (And if you’ve broken your arm, there’s always your photo ID.)

Online classes are hardly new, but earlier courses typically didn't have to handle exam proctoring on the scale required for vast MOOCs. The University of Florida in Gainesville, for example, has long offered many programs for students studying far from the campus, with some monitoring done by ProctorU, said W. Andrew McCollough, associate provost for teaching and technology.

Now the school has set up its first MOOC, on human nutrition (enrollment 47,000), and is working on four others, all through Coursera. The question of proctoring is being debated, he said, as faculty members worry about academic integrity amid the growth of open, online classes. "They don't want any fooling around," he said. "But as we get more experience and evidence, the faculty are getting familiar with ways technology can replicate a classroom experience."

A version of this article appeared in print on March 3, 2013, on page BU4 of the New York edition with the headline: Keeping an Eye On Online Test-Takers.