Online Courses, Still Lacking That Third Dimension

By RANDALL STROSS

WHEN colleges and universities finally decide to make full use of the Internet, most professors will lose their jobs.

That includes me. I’m not worried, though, at least for the moment. Amid acute budget crises, state universities like mine can’t afford to take that very big step — adopting the technology that renders human instructors obsolete.

I began teaching classes online 10 years ago, but the term “online” is misleading. What I really mean is that I teach a hybrid course: part software, part hovering human. A genuine online course would be nothing but the software and would handle all the grading, too. No living, breathing instructor would be needed for oversight.

“We should focus on having at least one great course online for each subject rather than lots of mediocre courses,” Bill Gates suggested in his 2010 annual letter for the Bill & Melinda Gates Foundation.

Developing that best-in-the-world online course — in which students would learn as much, or more, than in an ordinary classroom or a hybrid online class — requires significant investment. The Open Learning Initiative at Carnegie Mellon University, which has developed about 15 sophisticated online courses, mostly in the sciences, spent $500,000 to $1 million to write software for each. But neither Carnegie Mellon nor other institutions, which are invited to use its online courses, dares to use them without having a human instructor, too.

For at least 50 years, the computer has been experimentally employed as the unflaggingly patient, attentive teaching assistant. In 1960, the University of Illinois created Plato, pioneering courseware whose offerings would eventually span the elementary-school through college levels. It and its software successors have supplied individualized pacing, frequent quizzing and help that is tailored to each student’s needs. Computer-aided instruction, however, has lacked a human touch.
Separately, many universities have put free videos online featuring their best lecturers. And Academic Earth, an aggregator Web site founded in 2009, makes the lectures easy to navigate. It says it offers 150 full university courses.

But even when lectures are accompanied with syllabuses, handouts, sample problem sets and other aids that Academic Earth has for some of its courses, is the experience really complete? The Massachusetts Institute of Technology also shares the raw materials of courses in its OpenCourseWare program. For the benefit of autodidacts who aren’t M.I.T. students, it strives to publish materials online for every M.I.T. course. But students cannot interact and do not receive vital feedback about their own progress that an instructor or software provides.

“Unlocking the Gates,” by Taylor Walsh (Princeton University Press) is a recently published history of M.I.T.‘s online venture, as well as those of Columbia, Harvard, Yale, the University of California, Berkeley, and others. Comparing the book’s case studies, I found that Carnegie Mellon seems to have made the most progress in developing fully self-contained online courses. Anyone can use them free, with the proviso that Carnegie Mellon doesn’t offer credit.

But course credit can be earned at other institutions if instructors send their students to the site. Students pay nominal course registration fees, generally $15 to $60, and Carnegie Mellon sends data about each student’s progress to the instructor at the student’s home institution.

Carnegie Mellon, however, does not use these online courses as replacements for its own humanoid instructors. “Any tuition-driven, private university would have a hard time being the first one to make a change as drastic as offering an entirely automated course,” Ms. Walsh told me recently.

Candace Thille, the director of Carnegie Mellon’s program, put it this way: “There is something motivating about the student’s relationship with the instructor — and with the student’s relationship with other students in the class — that would be absent if each took the course in a software-only environment.”

Those relationships — with humans in the flesh — help students to persevere. Online courses are notorious for high dropout rates.

Much, of course, depends on the subject being taught. An introductory statistics class taught to 600 students in a lecture hall won’t offer much of a relationship with the professor. Moving it into a self-contained, adaptive software package -- Carnegie Mellon’s online

program offers two statistics classes — would arguably offer a superior learning experience. But in this case, the subject matter is distillable into a handful of concepts, and the exams use questions with only a single correct answer. That’s not an option for just about all of the humanities and vast swaths of the social sciences.

LAST year, the Regents of the University of California approved a proposal to test the viability of offering a bachelor’s degree that could be earned entirely online.

Wendy Brown, the Heller professor of political science at the Berkeley campus, spoke witheringly of the idea at a campus forum in October: “What is sacrificed when classrooms disappear, the place where good teachers do not merely ‘deliver content’ to students but wake them up, throw them on their feet and pull the chair away? Where ideas can become intoxicating, where an instructor’s ardor for a subject or a dimension of the world can be contagious? Where scientific, literary, ethical or political passions are ignited?”

If administrators at many state universities ever secure the funds to make capital investments again, they may be ready to look anew at the shelf where those wholly self-contained courses now sit. My job is safe, I think. Carnegie Mellon hasn’t yet developed software for the courses I teach — thank goodness.

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