Mitchell's Musings 12-1-14: Common Sense on Online Education

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You would have to travel to the MOON to get away from talk about how MOOCs (*massive open online courses*) are going to revolutionize higher education. There are commercial firms such as Coursera which promote such courses and have an obvious interest in keeping the talk going. In California, Governor Jerry Brown is a big fan of online higher education and is convinced, despite evidence to the contrary, that vast savings are available through MOOCs and online ed in general. The result has been a confrontation between the governor and the University of California that we will discuss in a future musing.

The problem is that MOOCs seem not to be producing the hoped-for results. You can put them on the web and get large "enrollments" but few completions. Enrollees seem to regard them as forms of entertainment – more like YouTube videos – than actual educational experiences that lead to degrees or credits. If you see MOOCs as lectures which you passively watch, there are precedents for them and, in principle, they can be cheaply produced. I found reference to an early version when radio was in its infancy offered by Tufts University in the 1920s. When TV came along, the idea was revived; you could see lectures early in the morning on *Sunrise Semester* in the 1950s and, if you bought the textbook and took the exam somewhere, you could get college credit.[1] Many more watched than ever got credit.

♫ *Sunrise, TV Set, Sunrise, TV Set, How quickly technology puts you in a daze...[2]* ♫

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[1] https://www.youtube.com/watch?v=5_Q-Mw6qH9k and https://www.youtube.com/watch?v=FfsmxK0viLQ

[2] Apologies to *Fiddler on the Roof*.

MOOCs, if they are not passively watched TV-style entertainments/lectures, need to provide feedback, discussions, and exams (that can be verified as taken properly and by the person purportedly enrolled in the course) All of that interaction is costly to provide and the expenses go up as the number of enrollees increases. Just putting a camera in the back of a lecture hall, in contrast, is cheap, but the immediate interaction is lost. Telling those enrollees who want credit to report to a physical exam room somewhere on the *Sunrise Semester* model means that enrollment around the world model won't work unless there are exam rooms everywhere with proctors. These requirements are all problems that have yet to be overcome.

However, despite the problems of MOOCs, there is much use being made of the Internet in higher ed today in other ways. Much of it is improvised. Email exchanges now substitute for office hours for many students. Videos are assigned along with readings. Courses have their own websites with reading materials and other information for students.

An interesting experiment is being conducted at Harvey Mudd College in southern California to see if video lectures can be substituted for classroom lectures while the freed-up classroom is used for question and answer sections with the instructor.[3] Students are divided between those in a conventional course with classroom lectures (controls) and another section in which lessons are online and discussions are in class (the treated group). The latter gives the student the convenience of being able to watch lectures at any time and repeat those lectures at will. But the ability to ask questions *during* the lecture is lost.

So far, despite the differences between the controls and the treated group, the results seem to be that student performance is the same across the two models, conventional and lecture/videos. Whether there is cost saving from the lecture/videos approach presumably will depend on whether the lecture-online model allows larger enrollments. The larger lesson so far, however, is that a revolution in higher education – particularly with regard to vast cost savings – has yet to arrive, despite all the trendy talk about technological "disruption."

Fashionable buzzwords are fine but don't save money. Abstract ideas about the impact of technology don't necessarily translate into useful innovations. Radio was the latest technology in the 1920s, but college-by-radio didn't pan out. TV was the latest technology in the 1950s, but today *Sunrise Semester* survives only on a few grainy YouTube videos. Despite the TV option, baby boomers got their college degrees in classrooms rather than on television.

The impact on higher ed today of the Internet seems to be falling more on the library (online documents and sources) and on the registrar (student record keeping) than on the classroom. Technology will obviously affect the classroom; it already has. But, the Harvey Mudd College approach – trying out innovations against controls – seems the best way to advance. Meanwhile, don't expect miracles.

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[3]http://www.latimes.com/local/education/la-me-harvey-mudd-flipped-20141117-story.html