2013

Have You Been MOOCed?

Ken Ronkowitz

New Jersey Institute of Technology and Passaic County Community College

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Have you entered the land of MOOCs? **A MOOC is a Massive Open Online Course. In these courses, course materials are distributed via the internet, the sessions are "open," and they're free to a large number of participants.**

The term MOOC was coined in 2008 by Dave Cormier and Bryan Alexander in response to an earlier open online course that had been designed and led by George Siemens and Stephen Downes. That early MOOC, "Connectivism and Connective Knowledge," had twenty-five tuition-paying students at the University of Manitoba in addition to 2300 other students from the public who took the online class free of charge for no credit ("Massive open online course").

The course content was available through RSS feeds, and participants used threaded discussions in Moodle (LMS), blog posts, Second Life (a virtual world), and synchronous online meetings.

Today. how large are these courses? Thousands-of-people large. Yes, you may have thought that 101 course you took as an undergrad that had 300 students in a lecture hall was large and impersonal, or perhaps you liked the anonymity that came from such a large class, but if that's your idea of large—think again. **I completed a MOOC on creativity, offered by Stanford University, during the Fall 2012 semester that had 135,000 participants. And that is not even the biggest course out there.**

The recent form of online course development is changing many of the standard format resources, such as Learning Management System (LMS).

Online learning has made deep inroads in higher education, but so far has had less of an impact on K-12 education. However, all teachers—learning technologists and people with a general interest in education—should be interested in understanding what it means to teach and learn in an online, networked setting in the digital age.

Actually, MOOCs are already being used at all levels of education. Teachers are taking free, online courses for their own personal and professional growth. If you teach at the secondary level, it is likely that some of your students have tried courses available online that may not be offered in your school.

Sebastian Thrun, a Google scientist, made the news early in 2012 when he left his teaching position at Stanford University to start a company: Udacity. The company was based on the artificial intelligence course that he was teaching that he had made freely available in 2011. After tens of thousands of students took the course online, he decided to work with two of his Stanford colleagues, who were also trying out MOOCs, to create a company to offer free online courses as part of a for-profit venture. (Kolowich)

A lot of attention was given to MOOCs in 2012 because these courses were being offered by many of America's elite universities, sometimes in partnerships with new companies. Another example of that is Coursera, a for-profit company that also came from Stanford roots, that offers some of its online courses to a large audience. As of November 2012, the company reports that more than 1,900,241 students from 196 countries have enrolled in at least one course. (Coursera) edX is a not-for-profit online education initiative that uses courses provided by MIT, Harvard, and the University of California, Berkeley.

Why would these universities be willing to offer free courses? The concept of Open Education Resources (OER) and open courseware is not as new as MOOCs. MIT OpenCourseWare was initiated as a new way to disseminate knowledge. It was also seen as a way to create a "shared intellectual commons" in academia to foster collaboration across MIT and among other scholars.

Faculties were willing to share their courseware because they knew that the real value to being in an MIT classroom did not come from the course materials.

It was much more difficult for the university to work out the logistical challenges of ownership and intellectual property for items within the course materials, and the technical challenges of converting materials to an online format. Nevertheless, in September 2002, the MIT OpenCourseWare site opened to the public with 32 courses.

MOOCs are founded on the learning theory of connectivism, which holds that knowledge is distributed across a network of connections, and, therefore, learning consists of the ability to construct and traverse those networks.

It is understandable that traditional educators have many questions when they initially encounter these types of courses. How can *one* educator "teach" *thousands* of students? How are these students going to be assessed and graded? How do we, as teachers, know the identity of these students online and how can we know who is really doing the course work?

Of course, all of those questions have passed through the minds of college professors dealing with online courses since the introduction of the Internet. Some aspects of these issues go back to the even earlier correspondence courses using paper and the post office that existed in the late 1800s ("Distance Education").

Like the early online courses, some of the first MOOCs had a "minimalist" structure. Typically, asynchronous presentations/lectures (using audio, video and slides), discussion questions, additional resources, assignments and activities are the norm.

Pedagogically, much of the course activity, interaction and collaboration are expected to come from the participants. **It is expected that this student-to-student interaction is what will drive the curriculum.** In some courses, even the course structure itself emerges from the exchange between participants. Discussions and participants reflecting on the concepts amongst themselves and sharing new resources are a vital part of the learning process in MOOCs.

The New York Times said that 2012 was "the year of the MOOC" and many educators seemed to agree (Pappano). Although new providers, platforms, tools and even pedagogies have already emerged from the four years of the MOOC movement, one aspect has remained the same. The dropout rate is very high.

Many registrants do not do the coursework or complete the course. Without a financial commitment and without grades and credits, some of the "motivators" of education are gone. Fortunately, the desire to learn is the motivation for many of those students who *do* complete courses. In addition, non-profit and for-profit MOOC providers are currently piloting ways to assess and certify learning through alternatives to the familiar credits and degrees we pursue.

As with other free, open source products, like the Moodle LMS, companies are formed to provide services for colleges to use those "free" tools. This is happening with MOOC providers who are hoping to make their courses and their "graduates" more credible to employers and traditional schools. This has forged partnerships, such as edX with Pearson VUE's testing centers in order to administer proctored exams for edX's online courses. Students who pass these proctored exams may find it easier to get credit from their own degree-granting institution. They will not get credit from edX's partner universities, but that is probably something that edX will want to pursue ("Making MOOCs More Credible").

One valid criticism of these courses is that we do not know if they *actually work*. While there is a lot of anecdotal information, much of the buzz around MOOCs has been because people are impressed by the caliber of schools doing them and the numbers of students they attract. The data from schools or providers has offered little insight.

Data from enrollment and assessments gives us some idea of the demographics of participants. For example, in edX's first course (a virtual lab-based electrical engineering course called "Circuits & Electronics") there were 155,000 students registered for the course when it opened. Only 23,000 earned credit on the first problem set. 9300 students passed the midterm and 8200 students took the final exam. Slightly more than 7000 completed the course work,

passed the exams, and so earned a passing grade. Those students were given the option of receiving an informal certificate from edX.

So, who are these people who took the course? Of the students who completed a survey, 30% said they did not have a Bachelor's degree (5% self-reported as being in high school) and 6% claimed a Doctorate, 28% a Master's degree, and 37% a bachelor's degree. Of those who completed the course, half were 26+ years old and 45% were traditional college-aged students. The age range as reported was 14-74.

English teachers might be interested in a MOOC in modern American poetry offered by the University of Pennsylvania. In her essay, "One Class, 36,000 Students," author Elliott Holt says she became interested in taking the course because she had heard rave reviews of the professor and because of all the attention MOOCs were getting from the press. It intrigued her that *The Washington Post* called MOOCs "elite education for the masses."

Her experience was typical of many first-time online students:

> My inbox began to fill with notifications from Modern Poetry, but, distracted by other writing assignments, I paid little attention. It is easy to ignore a class when you do not have to face the professor in person. When I finally logged in to the site, two weeks after the course began, I realized how much I'd already missed. I had flashbacks to my college days, when I was often playing catch-up in a caffeinated panic. Gnawed by stress, I was tempted to bag the whole thing. (Holt)

She did not finish the work for the course during the semester, but she was relieved when she received an email that said the course materials would be available online until next September. "I'll have a full year to catch up on the video discussions I missed and to reread the poems closely…. When I missed a class in college, there was no way to catch up on the lectures or discussion."

Her conclusion: "I'm not sure MOOCs can replace traditional university education, but they can certainly complement it."

If you think that poetry is not the right subject for a MOOC, consider that literature and writing courses using the correspondence model have been around for at least fifty years, and there are a good number of online and low-residency writing programs for undergraduates, as well as entirely-online MFA writing programs.

Will massive open online courses become the standard in education? That is unlikely. There will always be a need and a desire to learn in live, face-to-face settings. University degrees still have importance in obtaining jobs, and students are still willing to pay for those credits. However, it *is* likely that the use of these MOOCs will change how online education evolves and how we validate student learning beyond degrees. **It is also reasonable to predict that this type of learning will become more common at the grade levels before college.**

Making knowledge freely available is not the equivalent of an education. If it was, all you would need is a massive online open library. We already have that. It is called the Internet. Perhaps, when we get the delivery of MOOCs settled, we can focus on improving the pedagogy.

Ken Ronkowitz has been an NJ secondary teacher, the Manager of Instructional Technology at NJIT, the Director of the Writing Initiative at Passaic County Community College and a professor in the Humanities at both colleges. Though he has been known to write computer code, he would rather write poetry.