MOOCs in the Real World: Deconstructing the Impact

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Since 2011 when Stanford introduced the first widely recognized massive open online course, MOOCs have become the dominating trend in higher education. An analysis of this trend reveals some patterns of change in higher education. The actual expression of MOOCs have not really been the subject of the discussion. Instead, MOOCs are discussed in the context of what they are not, what they should be, what they could be, and what they might lead to. This analysis proceeds from a deep understanding and involvement with MOOCs and the open educational movement as it has developed over the past thirteen years. It then describes what MOOCs are not and where the greatest value in MOOCs will come from.

UC Irvine's Experience, Perspective, and Learning from MOOCs

By the time the first widely recognized MOOC happened (July, 2011) the University of California, Irvine (UCI) had over ten years of experience with producing open educational resources (OER) and OpenCourseWare (OCW). Starting in late 2000, UCI received a series of grants from The William and Flora Hewlett Foundation to advance and study the OER and OCW movements. UCI was one of the first institutions to help found the OCW Consortium and remains a charter member. In addition, I served as founding treasurer for two consecutive years. Larry Cooperman, UCI's director of open education currently serves as the Consortium's elected president. In November 2006, UCI started its OCW initiative with the launch of its own OCW website, which to date has received seven major national and international awards. The site contains 90 open courses, over 800 video lectures and 1,600 learning objects. UCI has sought to "publish" its open material widely and thus early on posted material from the UCI site to Merlot, Connexions, YouTube, iTunesU, and other open sites. The UCI YouTube Channel is viewed by up to 60,000 viewers per month at an average of 8.5 minutes per user. So it was a natural that UCI should become one of the first universities to join Coursera to create MOOCs. Starting in September 2012 UCI offered six MOOC courses on Coursera ultimately (by January 2012) producing over 250,000 enrollees. (UCI currently has 6 courses on Coursera with over 100,000 enrollments.) In November 2012 ACE and Coursera announced that two of the first five courses selected for ACE credit were UCI Coursera courses.

In April 2013 UCI announced that it is offering 15 undergraduate chemistry lectures, on YouTube channel and OCW website, for free. This collection of lectures constitutes the entire undergraduate UCI major in chemistry. UCI students and students from other

universities around the world watch our lectures approximately 500,000 minutes per month. This allows UCI students to review their lectures for the class and students of chemistry from other universities gain a new perspective on the subject. The latest "first" for UCI is the development of a MOOC based on the popular AMC TV drama "The Walking Dead." UCI faculty, using scenes from the show, illustrate and teach introductory university level subjects in ten modules, ranging from how mathematics can predict the spread of an epidemic, to the psychological effects of a major catastrophe, to principles of leadership in a time of crisis. This is the first time that a widely watched television show (11 million viewers in the U.S. and 14 million overseas) has been used as a means to engage thousands of people in a university-level MOOC.

Five MOOC "Not's"

Based on UCI's extensive experience with MOOCs and other forms of open education, and online education in general, we may be able to cut through the confusion, speculation, and even hysteria over MOOCs and their potential impact. One way to describe what MOOCs are is by describing what they are not.

First, MOOCs are not online courses. By definition, MOOCs are free, instructor supervision is minimal, and students do not receive traditional, individual attention from teachers. However, MOOCs continue to be considered online courses for several reasons: 1) at the moment, most MOOCs are created from credit bearing courses at the undergraduate level 2) most MOOCs are so well designed that the learning pathway is clear for most students and 3) with the potential to offer credit, MOOCs may serve in place of online courses for some students. Unfortunately, these factors add up to unrealistic expectations for MOOCs as well as misleading predictions about their impact.

MOOCs will not replace teaching. However, MOOCs can improve instruction and provide access to learners around the world, those who desire education the most. MOOCs are created, not instructed, by teachers. Highly motivated students may be able to master the material of MOOCs just as they might learn from books on their own. The majority of MOOC students already have degrees and are avid consumers of higher education. This is not a typical in higher education, as we know most students prefer the guidance of an instructor.

MOOCs are really not "open." MOOCs, in their purest form, are lacking several aspects that define open courses. For instance, a MOOC typically can't be downloaded as a complete course and certainly can't be used by institutions without a separate license. This also applies to individual parts of a course. The learning assets that make up a MOOC generally cannot be reused or modified for specific purposes.

MOOCs won't be "massive" forever. The rapid expansion of MOOCs and MOOC providers, particularly those associated with higher education institutions, will divide the market even as the market grows. MOOCs will move from general education, undergraduate courses to special courses created and delivered for defined, targeted audiences. While some of those audiences will be very large, the range of choice within any particular market will increase and diversify, among subjects, providers, and formats. Higher education administrators should understand that the goal of MOOCs will change from institutional visibility to institutional service.

MOOCs will not disrupt higher education. Although MOOCs will threaten the status quo, they are much more likely to help institutions and faculty improve learning by providing feedback on effective learning objects and practices, student learning outcomes, and teaching methods. MOOCs will accelerate learning innovation and provide new horizons for learning research.

MOOCs are changing the landscape of higher education and are helping educators to find a way to escape the boundaries around the learning process that have inhibited us for so long. Let's understand MOOCs and see them in this context, for what they are, and are not.

What MOOCs Are and What They Can Do for Higher Education

MOOCs endure the same criticism as open education. For some, the act of publishing something, even when that something is free and intended to be for the benefit of anyone who wants to use it, is a self-interested activity, often with political or economic self-interested motivation. For instance, people in developing countries have been both heavy users of OCW and ardent critics who consider U.S.-based OCW as a form of academic colonialism. Current commentators on MOOCs inspect MOOC providers for a business model designed to sustain the enterprise at the expense of some audience or tradition. They look carefully for threats to the status quo and, while acknowledging that protecting the status quo is foolish, nevertheless revert to it to criticize change.

The drivers of change are teaching and learning technology and the public and policy-maker concerns over the increasing cost of higher education. When the two forces are combined with the advances in cognitive and learning science, we have a "perfect storm," an "avalanche," a "revolution" or whatever else you choose to call the changes higher education faces in the near future. Our industry is faced with the age-old problem of how to adapt to the changing needs and demands of society while at the same time preserving our traditional values. From an institutional perspective these values can be summed up in the notion of maintaining institutional autonomy even as we depend on patrons for our funding—government, donors, patients, and private research support. From a faculty perspective, traditional values are summed under the headings "shared

governance" and "academic freedom." The best way to walk the tight rope between these new demands is to refocus on the individual learner and to make the learning we produce the most effective it can be.

Those currently trying to wrest higher education away from universities and colleges through the MOOC phenomenon will not be successful as long as we continue aggressively to fulfill the role we have always played—innovation through research and the production of new knowledge. OpenCourseWare and MOOCs were created and championed by the most prestigious universities in the world. These same universities and others following their lead will carry the movement forward, leading the revolution even as it changes higher education around the world.