Changing library Operations--MOOCs: Some Thoughts from Library Experience

Allen Mckiel  
*Western Oregon University, mckiela@wou.edu*

Jim Dooley  
*University of California, Merced, jdooley@ucmerced.edu*

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Some insight to the evolving MOOC phenomenon can be gained from the experience of the transition of libraries to electronic distribution of information resources. I offer as an example the distribution of journal articles. From the first offerings by EBSCO of journal titles on CDs, which was initially less than two hundred if I remember correctly, they were a good deal, particularly for small academic libraries. They also had the additional benefit of vastly improved access to articles when compared to the laborious process of using print indexes and searching for articles in the stacks. They held the promise of immediate access to everything.

MOOCs will likely follow a pattern of development similar to that of e-journals — first, the euphoric promise afforded by the new technology; second, the realization of the limitations of the technology and the need to maintain the current infrastructure for some undetermined period of time; third, the slow process of restructuring or replacing the current infrastructure through refinement of technology and the concurrent adjustment of the new infrastructure to the exigencies of the marketplace.

The euphoric stage of e-journals arose from the thought that it could be done for all journals and would dramatically reduce the costs and increase the volume of access. Limitations took the shape of increased costs for computer stations, network, and printing, limited availability of titles, delayed access to current issues, and very limited access to back issues. E-journals were also an additional cost. The “must-have” print titles that were not part of databases still had to be purchased.

MOOC limitations include the following. There are limited testing methods because assignments and tests must be machine graded. The methodology and pedagogy of peer grading has a long way to go before it can be broadly used reliably in the context of tens or hundreds of thousands of students. There needs to be reliable systems for ID authentication and mechanisms to prevent cheating. Online education also must address the motivation problems that arise from social structures that are purely online. Drop-out rates are high for those not ready to be self directed.

Cost

MOOCs are turning into MOCs — massive online courses. The pricing of MOCs face the same problem publishers had with e-journals. They had to avoid dropping the cost of e-title access below the cost of print as long as they still offered print. In order to navigate the transition of revenue streams from print to e-distribution, the revenue from e-journals had to supplant print without prematurely disrupting print revenue. This has been accomplished by pricing e-publications higher than print, which is considerably higher than e-production and distribution costs would by themselves require. It has also been done by providing access to electronic versions in a way that did not, on balance, negatively impact print revenue — i.e. the subscription database and pay-per-view. Artificial limitations to e-publications like delayed access helped to slow the rush to online and therefore the transition of the publishing organizational infrastructure to the new production and distribution marketplace.

The parallel for MOOCs will be in the transition to credit bearing courses. The institutions of academe will need to navigate a pricing scheme that does not disrupt the stability of the current model of traditionally taught courses. For academe it is more than revenue streams, it is also the system of research and peer review that provide their marketable reputations.

It has thus far taken over twenty years to restructure the distribution of and access to journals. The process is ongoing. Over the years, article access for libraries has continued to expand in the methods and volume of availability. The cancellation of print titles paid for the expanded e-access. Back issues have continued to be scanned, slowly opening the past to access. The separate revenue streams from the databases and pay-per-view have permitted gradual increases in access without prematurely disrupting publisher revenue from individual title access in print and electronic form.

Through a combination of large databases and pay-per-view access, the Hamersly Library at Western Oregon University has increased its journal access to over 95,000 unique titles for less money than it spent on the 1,400 titles it collected in print. Most usage to journal articles is online. Less than 1% is print usage. The publishers still receive nearly the same amount of Hamersly’s resource budget. The technology, the marketplace, the publishers, vendors, and the library processes have evolved to bring the initial vision for massively expanded journal access close to fulfillment. However, the transition is not finished. The status of the current vision includes open access to everything.

Implications for MOOCs

The evolving vision of expectations for journal access has implications for MOOCs. The publishers have their place at the table because they hold copyright to the publications generated by academe. Their place at the table of electronic distribution of the product of education is vulnerable to replacement by the evolving open access methodologies and technologies. This vulnerability causes a vested-interest drag on the ongoing dialog over the optimal utilization of technology in the peer review and distribution of research.

The mechanism for establishing massive distribution of course credit and the degrees of higher education is considerably more straightforward than it has been so far for publishers to distribute the publications of higher education. The content of the curriculum belongs by tradition to the faculty. The tradition is supported by accrediting agencies and in some cases by contract. The reputations of the research institutions rest on the “product” of the faculty primarily for accomplishments in research but also in teaching. Universities will need to restructure agreements with faculty collectively and individually to provide massive access to their instruction efforts in support of their research efforts.

All change is potentially threatening, particularly when it involves a person’s profession and livelihood. The change implicit in massively online courses appears radical. However, the potential for the dramatic improvement in the productivity of faculty, their academic institutions, and the generality of humankind converge to make the probability of success high.

One well-designed massive online course that attracts 33,000 students could pay for a faculty member’s research efforts for a lifetime and magnify their professional stature in the balance. That same course pays for a considerable portion of the resources required for the maintenance of the institutions of higher education. The economies of scale of a massive online course mean that the price per student should drop considerably. All stakeholders potentially gain in this endeavor by margins that should make negotiation over who gets what aspect of the gain fairly easy. There is also a threat for both faculty and their institutions for dragging their feet. Others may figure this out first and gain initial territory in the new marketplace which could disadvantage their efforts.

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Not All Online

Some learning requires physical presence and corporeal interaction, for example, lab sciences, dance, theater, welding. There are also aspects of physical presence that are integral to human learning that are less apparent. Learning is social; and the extent and limitations of online social relationships is just beginning to be explored. In particular, the extent of the need for individuals to have learning experiences integrated into their physical, social lives. Online may free us from the limitations of physical presence for much of what we do in the context of our social interactions. It will still be necessary to integrate what we learn and do into the interactions that our physical relationships require.

Learning is an integrated operation of the mind and body in the context of social relationships. Our identities evolve in the context of responses and commitments to people in the context of the material world. Motivation for learning is significantly sustained through the physical exigencies of those relationships. The online portion of learning that will increasingly be employed in the processes of higher education will need to be integrated into the personal physical and temporal experiences of the participants. Completely online formats will seamlessly integrate into the contexts of some situations, and others will need more tangible integration.

For example, the limits to totally online education with respect to automated assessment and with respect to motivating students to persist in their efforts are integral to each other. It is the relationships of students to mentors, guides, and teachers as well as peers and significant others that fulfill the assessment need as well as the motivation to persist. Personal interactions and commitments create and sustain the network of social experiences that formulate and nurture goal fulfillment. A physical community provides an integrated experience of commitment and fulfillment for the entire person.

A reflection of the need for physical social interaction can be seen in library usage at Western Oregon University. Access to Hamersly Library information resources is primarily online. All of the physical resources that circulate including books, journals, magazines, DVDs, tapes, microforms, equipment, etc., account for less than 20% of usage. E-journal articles, streaming video, and eBooks account for over 80% of usage, and the majority of resource usage by students is from the open Web — i.e., Google and Wikipedia. The students do not need to come to the library for most of today’s assignment-related resources, yet our library usage patterns have remained nearly constant over the past ten years. Bodies, minds, and spirits need a place to be and to do. They need a place to be with others who have common aspirations in tangible as well as virtual environments. They have a physical community of personal relationships in which they belong and have a purpose. It is unlikely in my view that online learning communities by themselves will afford the development of cohesive learner identities without avenues for integration into the exigencies of their individual physical communities as well.

Higher education will likely evolve as a hybrid with both online and physical dimensions. The efficiencies of online technologies will likely extend education to a historically unprecedented percentage and range of individuals. Those individuals will need to integrate their learning into the fabric of the physical and social world within the exigencies of their lives. The nature of that integration with respect to the physical institutions of higher education will necessitate adaptive change that will need to accommodate an expanding and increasingly diverse population of participants.

The End Game

Some predict the emergence of higher education dominated by the most prestigious research institutions with the demise of less notable institutions, particularly the teaching institutions. In this vision, students take completely automated courses for credit at the high-end institutions at dramatically reduced prices because of the economies of scale — the Walmartization of higher education. The growing number of people that will be participating in higher education on a global scale will fund the development of ever more responsive online learning platforms that will eventually obviate or pay for the needed physical infrastructure of higher education.

The experience of the automated library does not provide insight for the end game of MOOCs. Libraries are still en route to their own nirvana or apocalypse of online distribution. The global information network is still in its infancy. I expect academic libraries, colleges and universities below the top fifty to persist; however, the centrality of their current missions will likely shift. Trains still exist, but the airlines have center stage. In whatever manner libraries and institutions of higher education evolve, it is likely, as history has demonstrated, that they will continue the trend toward participation by greater percentages of the population.

The present contest between differing visions cannot obscure the general pattern of progress. The integral necessity of the fluidity and openness of information exchange to the functioning of global community makes it imperative that the institutions of higher education thrive. They will likely have both physical and virtual dimensions. And the physical aspects, though centralized in some aspects of their administration, are likely to be distributed rather than centralized in their implementation since they will need to include larger percentages of an expanding global population through increasingly complex and diverse processes integral to the functioning of the physical environs of global society.