MOOCs – International Information and Education Phenomenon?
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EDITOR’S SUMMARY
Since the 1990s massive open online courses (MOOCs) have offered web-based learning on a large scale and with open access. The leading MOOC providers in 2014 – Udemy, Coursera and edX – vary in detail but share the goal of facilitating learning for unlimited audiences at no cost or minimal charge, overcoming socioeconomic hurdles and opening education to all. The potential is strong, and data shows promising registration figures from India and economically developing countries. Yet MOOCs fall short of their goal of widespread and readily accessed education, impeded by technology challenges, lack of basic education and predominance of English as the language of instruction. Maintaining a high standard of educational quality is challenging, and attrition rates are very high. Those in library and information science can facilitate learning through MOOCs and also benefit by using the platform to build awareness of the professional field.

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MOOC (massive open online course) is a large scale, open-access re-imagining of the more traditional forms of e-learning that came into their own during the mid-1990s. Rather than catering to the needs of a few hundred tuition-paying students, each MOOC is designed to be taken simultaneously by thousands of distance learners at little or no cost. To better understand the MOOC landscape, we will briefly review the top three most visited MOOC providers (based on the Alexa Internet Global Ranking): Udemy, Coursera and edX. For a more detailed review of MOOCs and their business models, see [1], [2].

Udemy (www.udemy.com) functions as a marketplace for educators who may wish to monetize their skills through MOOCs. It was launched in 2010 by founders Eren Bali, Oktay Caglar and Gagan Biyani and has raised $16 million (USD) in funding from venture capitalists [3]. Since it is a for-profit venture, many of the MOOCs promoted on the website have a price ranging from $29 to $99 (USD) for potential students. All of the MOOC courses are created independently on Udemy’s free-to-use platform by instructors who then receive a percentage of the revenue [4]. There is a lot of freedom in terms of course design, but content creators must satisfy a set of minimum requirements [5]. Udemy also provides a course-building MOOC for potential instructors. It does not have an integrated learning analytics tool, but it does allow instructors to download student data for use in other analytic tools.

Coursera (www.coursera.org) partners with 85 institutions of higher learning worldwide and offers university-level learning material free of charge [6]. It also boasts the most users of all MOOC providers, which means that Coursera can offer content creators a high degree of exposure. While potential instructors must be a representative of a partner university and have permission to host a MOOC using their university brand, Coursera
does provide detailed information about the robust set of features available to instructors [7]. This includes integrated learning analytics features. Official quizzes and short answer assignments are auto-graded, while longer assignments are peer-graded (see for example [8], [9]). Peer evaluation enables individual feedback in the large-scale MOOC environment and also gives students the chance to learn by taking on the role of a teacher. To encourage consistency, Coursera suggests that instructors provide a clear grading rubric for assignments and also perform a “ground truth” assessment that acts as a benchmark grade to measure the accuracy of peer grading [7].

edX (edx.org) is a small MOOC provider with powerful parents. It is a non-profit created by Harvard and MIT that offers courses from a variety of institutions. edX Edge is a separate site that functions like a testing ground for prototype MOOCs. This encourages developers to become familiar with Studio, edX’s course building tool. Like Coursera, access to Studio is restricted to instructors from a university that is part of the xConsortium or “selected guests” [10]. However, anyone who has signed up for a free edX Edge account can take part in a MOOC building course that showcases the features available in Studio. edX lessons are grouped into tight, multimedia packages that allow instructors to transition seamlessly from video lecture, slides, quizzes and discussions. For example, a question posed in a video can be answered by the learner, who sees a breakdown of how other learners answered the question, and is then invited to take part in an asynchronous, in-lesson discussion about the response. Such integration helps to simulate the immersive experience of a physical classroom. Another unique feature of edX is the ability to auto-grade long essay questions. While this process remains highly controversial [11], it may be beneficial to instructors teaching social science and humanities courses that tend to favor long writing assignments over short-answer quizzes.

Issues of Accessibility, Scalability and Quality

On the surface, many MOOCs share similarities with traditional, online university courses. They are generally hosted on centralized platforms that include standard features like video playback, discussion boards, practice quizzes and course reading materials. Courses are instructor-led and usually conform to a linear, week-by-week learning model. What makes MOOCs such a big deal is that they are both big and a deal. MOOCs enroll thousands of students and are offered for free or at a significant discount compared to other online university counterparts. Thus, MOOCs are distinguished from traditional e-learning university courses by virtue of accessibility and scalability. A large part of the initial excitement surrounding MOOCs stemmed from this idea of accessible, quality education that would be made available across socioeconomic and cultural backgrounds [12].

As MOOCs have matured and more information pertaining to their user base has become available, it is uncertain whether these open education initiatives have been able to live up to the high expectations. One study suggests that “MOOCs seem to be reinforcing the advantages of the 'haves' rather than educating the 'have-nots'” and that “[b]etter access to technology and improved basic education are needed worldwide before MOOCs can genuinely live up to their promise” [13, p. 342]. Conversely, others argue that North American-made MOOCs are on the rise in economically developing countries where the current infrastructure of higher education is inadequate to meet the demands of their burgeoning university-aged populations [14].

Available data about web traffic trends for the major MOOC providers has shown that while interest in these MOOCs is predominantly from the United States, there is evidence that economically developing countries are also seeking to benefit from this accessible education. According to Alexa.com (see Figure 1), most visitors to the top three MOOCs are from the United States, followed by visitors from India. Further, Coursera and edX both have a number of economically developing countries within their top five visitor-groups by country. This suggests that while there is a tangible international interest in MOOCs, they might not yet be accessible to those who are incapable of receiving traditional higher education. As suggested by Emanuel [13], this under-representation is likely a product of a complex host of issues that includes a lack of basic education and access to technology in general.
Another potential barrier to the internationalization of MOOCs is the prevalence of courses taught in English. Although many of the major MOOC providers do offer courses in a variety of languages, the majority are only available in English. An examination of the distribution of languages in Coursera and Udemy MOOCs shows that only 12% are offered in a language other than English. While an increase of MOOC offerings in a variety of languages will likely incite a larger international appeal, another response would be for countries to develop their own MOOCs. To this end, a number of MOOC providers have emerged outside of North America [18]. Some popular examples include Schoo (Japan), Open2Study (Australia), Veduca (Brazil), FutureLearn (Britain) andiversity (Germany). As these initiatives are still developing, it remains to be seen whether this approach can help to spread the influence of MOOCs outside of countries where access to post-secondary education is not already widely available.

In addition to the problem of accessibility, MOOCs also offer unique pedagogical challenges arising from their inherently massive structure. Coursera reports a median of 33,000 registrants per MOOC [19]. Scalability has given rise to a number of pressing issues, including extremely high rates of attrition [20]. While the contributing factors are still not fully understood, non-completion has been associated with an absence of a social environment that is conducive to learning, a lack of traditional university support structures, a low barrier to entry and little to no financial stake or drop-out penalties (2013). In a 2013 partner’s report, Coursera argues that attrition rates for MOOCs should not carry the same weight as in traditional university settings because the structure is essentially different [19]. Unlike tuition-fueled university courses, MOOC students are not tethered to their course choices. Rather, the no-cost education offers the freedom to browse and sample a variety of courses before finding one that aligns with academic interests or educational goals. While this line of reasoning has much common-sense value, it does not whitewash the litany of pedagogical challenges arising from such massive course sizes.

Another chief concern surrounding MOOCs is how to maintain a high standard of quality for education when interacting with such a large student base. A series of case studies undertaken by the Society for Learning Analytics Research (SoLAR) suggests that “[t]he inherent challenge is to meld what has often been seen to be the mutually exclusive variables of either quality or scale” [21], p. 3). The report goes on to posit that MOOC quality will rely on extending both the use and the sophistication of online
technologies like learning analytics (LAs). Essentially, LAs are concerned with “the measurement, collection, analysis and reporting of data about learners and their contexts, for the purpose of understanding and optimizing learning and the environments in which it occurs” [22, p. 34]. Many of the major MOOC providers already offer instructors integrated LAs that can help measure student progress on a massive scale. As opposed to more traditional forms of evaluation, LAs examine patterns of student behavior in aggregate for the purposes of identifying areas of concern before they evolve into significant problems [23]. In this way, LAs seek to provide a more active and targeted form of instructor feedback. The development of such technologies will be integral to achieving consistent and high quality educational standards in MOOC environments. However, in [3] Siemens, Dawson and Lynch also warn that the challenges posed by MOOCs cannot be overcome solely through the mere adoption of new technologies. They argue that a thorough re-examination of the “historical pedagogical, sociocultural and economic assumptions that can stifle education practice” (p. 5) must occur.

MOOCs and Information Professionals

Recently MOOCs have been the focus of a growing number of studies primarily in the educational field [24]. However, the relevance of MOOCs as teaching and learning platforms goes beyond the educational arena. In particular, we argue that the library and information science (LIS) field should begin to consider how MOOCs will affect the profession as well as how they might be used to augment public awareness and perception of the ever-changing LIS field. In a recent study, Wright and Reuters [25] address the need for librarians to consider their role in facilitating learning and information discovery within a MOOC context. They identify how MOOCs differ from traditional online learning and how the current model requires that instructors provide all relevant learning materials since many MOOCs enroll students who do not have access to the university’s library resources. Finding a way to integrate university library services within MOOCs at this early stage would cement the role of librarians in the massive, distance education courses of the future. Additionally, MOOCs can serve as promotional tools within an evolving field that is sometimes misunderstood. Often, LIS programs remain perceptually intertwined with the more antiquated designation of “library school.” The development of MOOCs related specifically to the LIS field will allow for a much wider audience to gain a sense of how the field has changed to incorporate a wide variety of information science topics beyond the walls of public and academic libraries, including big data, cloud computing, computer-supported collaborative work, data security and privacy, information visualization, social computing, web mining, just to name a few. In turn, this could serve to attract students who would not otherwise have considered a career as an information professional.

Conclusion

MOOCs enjoyed a sudden rise to prominence and were heralded as the vehicles that would usher in a new age in education wherein anyone, anywhere (so long as they have a stable Internet connection) would have access to free, high quality education. However, it is still unclear whether MOOCs are singularly capable of revolutionizing academia and enabling open education on a truly massive scale. Like it or not, Pandora’s box has been opened and MOOCs are proving to be more substantial than a mere passing fad. It is therefore essential that an effort be made to understand the unique challenges posed by these emerging educational platforms, particularly in the realm of learning analytics, as such tools can help measure student achievement on a massive scale and in real time. While MOOCs present a number of challenges, the potential that fueled the excitement surrounding their introduction remains. Finally, MOOCs offer a unique opportunity for the LIS field to attract a wider and more diverse student base to this ever-changing and interdisciplinary field. ■
Resources Mentioned in the Article


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Resources Mentioned in the Article, cont.


http://dlib.org/dlib/march13/wright/03wright.html