

Massive Open Online Course: The Implication to iSchool Education

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Abstract

This paper reviews pedagogical approaches of Massive Open Online Course (MOOC) and its implications to iSchool online courses. Massive enrollment could help instructors and students to use collective wisdom of “crowd-sourcing” to learn from each other and achieve their learning goals. With the development of emerging MOOC packages available at Coursera, Udacity, edX, even Blackboard CourseSites, MOOC may become a useful learning tool to attract non-traditional online students.

Keywords: teaching and learning, massive open online course, open source, instructional design, online education

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1 Introduction

Distance education has achieved tremendous success in many iSchools in America. According to the directory from American Library Association, currently 22 Library and Information Science (LIS) master’s programs are offered completely online and 12 programs allow students to take the majority of classes online (American Library Association, 2013). In order to sustain the growth of distant programs on information sciences, it is crucial to explore innovative pedagogy that will attract and retain students (Aversa and MacCall, 2013).

MOOC, or Massive Open Online Course, is an emerging method of online delivery that has gained much attention from the educational communities. A MOOC is “a model for delivering learning content online to any person who wants to take a course, with no limit on attendance” (EUDCAUSE, 2013). MOOC’s characteristics include massive enrollment with free online access, video-supported lectures with embedded online quizzes, and peer and self-assessment to support learning (Glance, Forsey, and Riley, 2013).

MOOC provides free online courses from institutions that offer face-to-face courses, and some institutions are considering adopting MOOC as a course management system and offering for-credit-courses to support independent learning (Moore, 2013). Assuming the same level of knowledge is offered, free online courses seem more favorable to potential students. While it is too early to predict whether free courses will endanger the existence of LIS programs, it is valuable to find the pedagogical innovations from MOOC, contribute to the development of such technologies, and apply them to iSchool education in term of course redesign.

This study addresses the following research questions:

1. What are innovative pedagogical approaches in Massive Open Online Course, particularly courses offered through Coursera, Udacity, and edX?
2. What pedagogical approaches can be beneficial to the redesign of iSchool online courses?

This poster session intends to analyze the literature related to pedagogical approaches in MOOC and help the redesign of current LIS online courses. Because this study is a comprehensive review in nature, the results are preliminary and need to be studied further using experimental research.

2 Methodology

A narrative analysis of recent publication related to MOOC was conducted. The databases were Academic Search Complete, ERIC, and Library & Information Science Source from EBSCOhost. In addition, websites of three major MOOC providers (Coursera, 2013; Udacity, 2013; and edX, 2013) were selected to study the pedagogy. Additional sources from EDUCAUSE conference (www.educause.edu) were also considered.

3 Data Analysis

As of July 15, 2013, there were 344 total publications from all three databases, among them 279 are from Academic Search Complete (33 journal articles in this category), 37 publications from ERIC database (17 journal articles), and 27 from Library and Information Science Source (3 magazine articles). It is noteworthy that three publications in library and information science are all informational in nature with less than three pages. After a preliminary analysis of current courses offered from different MOOC platforms, a comparison of pedagogies from three MOOC platforms is listed in Table 1. Blackboard CourseSites, a MOOC platform, shares the same design with Blackboard 9 and was not included in this study.

Name	Pedagogy	Activities
Coursera	Interactive video	short class videos with embedded quizzes
	Mastery learning	students can re-study and re-attempt homework
	Peer assessments	students grading peer papers and projects
	Active learning	Interactive engagement between faculty, students, and between students and their peers
Udacity	Interactive video	YouTube videos with embedded quizzes
	Mastery learning	Students can re-study the videos and re-attempt the quizzes
	Online activities	Students can answer questions for each other Live Q/A sessions from the professor
edX	Interactive video	Live class videos followed by quizzes and discussions
	Mastery learning	Students can re-study and re-attempt the homework
	Online discussion	Students can answer questions from each other

Table 1: Pedagogies of Major MOOC Models

It is obvious the best MOOC courses are those with good-quality videos and interactive quizzes (see Figure 1). Designers of those courses and their host institution might have invested heavily on the production of these high quality videos.

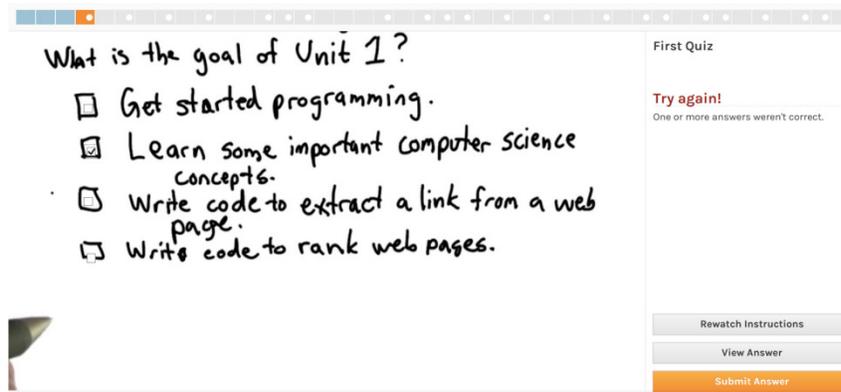


Figure 1: Video-based Quiz from Udacity

Almost all MOOC courses use discussion boards, but the interaction between students and professors varies (see Figure 2). Some courses tried to utilize students to answer questions, while in other courses professors host question-and-answer sessions regularly. If there is a huge enrollment in a class, the philosophy of “crowd-sourcing” may allow students to help each other, without the need of instructors moderating the classes intensively, or using the help of a teaching assistant. However, without data from real courses, this author does not know how much time a MOOC professor invests his or her time with the course each week. The copyright status of MOOC course materials is still a vague area. Copyright restrictions forbid instructors to use materials otherwise available to registered students in a regular accredited higher institution.

Among the three platforms, Udacity classes have open enrollment without deadlines while others have starting and ending dates (Round, 2013).

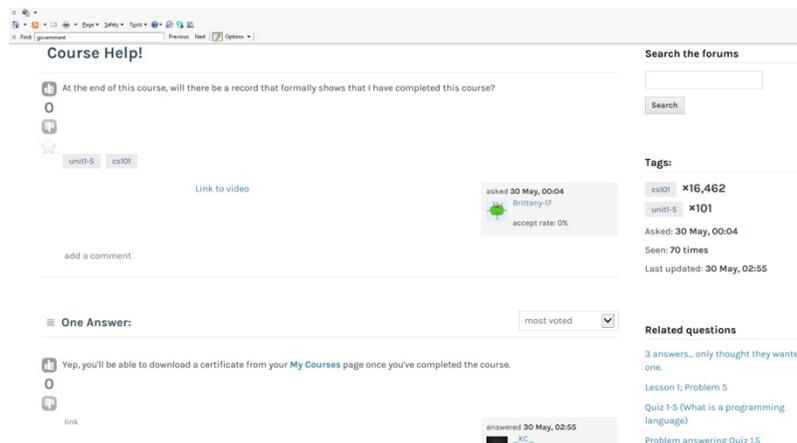


Figure 2: Discussion forums in an Udacity course

4 Open Source MOOC Movement

Although MOOC courses are free, the course management systems themselves are largely not. A more recent development in MOOC is the platform is gradually moving to open source territory, for example, EdX is moving to open-source direction and has published part of its code for freely download (Inside Higher Ed, 2013). ELMS initiative, or e-Learning Management System, is a Drupal-based open source project based created by Pennsylvania State University (<https://drupal.org/project/elms>). The project released its latest version for Drupal 7 as of September 16, 2013. The software provides a platform to build either close-enrolled courses that are integrated with campus management systems, or completely open as open

education resources. The next step of this current paper is to install Drupal-based ELMS and experiment the use of such learning management system to graduate students. The usability and functionalities of open source MOOC environments will be reported.

5 Conclusion

MOOC adopts some innovative teaching methods and seems attractive to certain non-traditional distant learners. The crowd-source type of learning model potentially can allow instructors to design courses that can be contributed by everyone who has domain knowledge in a certain subject, without the restriction of a certain faculty member and/or teaching assistants. Inside the classroom, the interactive videos allow students to learn on their own pace and can be watched repeatedly for the sake of mastery learning, which is less cost-effective than synchronous online courses taught by faculty. The grading rubrics reduced the workload and help instructors use computers to grade assignments automatically.

For students whose learning goal is to acquire knowledge from experts, rather than to obtain a diploma, MOOC seems to be a promising venue to meet their goal. MOOC can be a public relation tools for prestigious universities to attract potential students, audience, and funding support. If integrated with academic services such as admission, advising, quality control, library services, and technical support, MOOC could be a substantial competitor in the current higher education enterprise. Cusumano (2013) cautioned that while elite institutions offer free online courses which are heavily subsidized by tuition from on-campus students, private endowments, and government support, those for-profit, second and third-tier universities and colleges may be in danger to close.

At this point, there is no indication MOOC will threaten the existence of online programs currently taught in iSchools. The for-credit online courses taught by regular faculty in these schools are rigorous in design and management in order to meet their parent institutions' accreditation or educational standards. However, facing the challenge of economic downtown, student recruitment, enrollment, and increased cost of course management and support, online programs may lose students to MOOC and become obsolete in future. iSchool faculty should pay attention to this emergent competitor and redesign their courses to face against such challenges, or at least they can borrow the ideas of crowd-sourcing, interactive videos, mastery learning, peer-assessment, and live online activities in course redesign and improve the peer-interaction in their classes, and retain attract more students in their fields.

6 References

- American Library Association (2013). Searchable database of ALA-Accredited programs. Available at: <http://www.ala.org/accreditedprograms/directory/search>
- Aversa, E., & MacCall, S. (2013). Profiles in retention part 1: Design characteristics of a graduate synchronous online program. *Journal of Education for Library and Information Science*, 54(2), 147-161.
- Coursera (2013). Pedagogy foundations. Available at <https://www.coursera.org/about/pedagogy>
- Cusumano, M. A. (April, 2013). Are the costs of 'free' too high in online education? *Communications of the ACM*, 56(4), 26-29.
- EDUCAUSE (2013). Massive Open Online Course (MOOC). Available at: <http://www.educause.edu/library/massive-open-online-course-mooc>
- edX (2013). Available at: <https://www.edx.org/>
- edX makes key code open source (2013). Available at: <http://www.insidehighered.com/quicktakes/2013/03/15/edx-makes-key-code-open-source>
- Glance, D. G., Forsey, M., & Riley, M. (2013). The Pedagogical foundations of Massive Open Online Courses. *First Monday*, 18(5/6). Available at: <http://firstmonday.org/ojs/index.php/fm/article/view/4350/3673>

Moore, M. G. (2013). Independent learning, MOOCs, and the open badges infrastructure. *American Journal of Distance Education*, 27(2), 75-76.

Udacity (2013). Available at: <https://www.udacity.com/>

Round, R. (2013). The best MOOC provider: A review of Coursera, Udacity and Edx. Available at: <http://www.skilledup.com/blog/the-best-mooc-provider-a-review-of-coursera-udacity-and-edx/>

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