Massive Open Online Courses: Learning From Our Learners

Tan Bee Hoon

Faculty of Modern Languages and Comunication, Universiti Putra Malaysia,
43400 UPM Serdang, Selangor, Malaysia
Faculty of Social Sciences and Liberal Arts, UCSI University,
Taman Connaught, 56000 Kuala Lumpur, Malaysia
tanbh@ucsiuniversity.edu.my

ABSTRACT

A Massive Open Online Course (MOOC) is an emerging model of delivering learning content online via video-recording interspersed with quizzes and interaction through social media to virtually anyone usually for free. Its enrollment is usually massive, and the massiveness can be attributed to the reputation of the course professor and/or the university. A typical MOOC can be scheduled for live webcast or accessed asynchronously, involving activities such as watching lecture videos, participating in discussion forums, and working or commenting on assignments. As the MOOC instructional model was new, this study was conducted to find out how a class of 15 undergraduates of a Malaysian public university responded to learning from a five week MOOC on academic writing in English. The aim was to investigate if they encountered any challenges while learning from their very first MOOC, and also the instructional activities or features that motivated or demotivated them. Such qualitative data were collected from the students' reflection essays. The results highlighted some important issues of the MOOC pedagogy including the feasibility of the key features, course format and evaluation processes. The findings should provide useful feedback to instructors who plan to design or adopt a MOOC for instructional purposes across disciplines.

Keywords: e-learning, cMOOC, MOOC, peer-to-peer learning, xMOOC

INTRODUCTION

Information and Computer Technology (ICT) continues to change the education system in both traditional and e-learning formats as the recent development of Massive Open Online Courses (MOOCs) begins to revolutionize the e-learning context (Guthrie, 2012; Kop, Fournier & Mak, 2011; Mangan, 2012; Pappano, 2012; Wen, Yang & Rose, 2014). Various journal articles and blog posts have discussed the importance of MOOC, considered the most important educational technology in 200 years in the form of a global virtual university (Fini, 2009; Regalado, 2013). Many elite universities have paid attention to MOOC and offer courses through collaboration with MOOC providers. By September 2013, 91 elite universities in the world had joined Coursera, one of the better known MOOC platforms, to offer 463 courses. Coursera is the largest MOOC provider which has more than 5 million users registered for its smorgasbord of courses. Other prominent MOOC providers include edX and Udemy. Instructional researchers have identified potential advantages of MOOC stating that learning on MOOC happens through connections (Chamberlin & Parish, 2011; Cormier, 2010; Marshall, 2013; McAuley, Stewart, Siemens, & Cormier, 2010; Waite, Mackness & Roberts, 2013).

MOOCs aim at large scale participation and open access via the Internet (Cormier, 2010; Kop, Fournier & Mak, 2011). In MOOC environments, learning can proceed at any age, or any time, place or space (Educause, 2012). MOOCs open the doors of a dynamic online education and accommodate massive participation free of cost, as well as offer efficient conversational and collaborative possibilities for learners to come together to work on the instructional content (Bruff, Fisher, Mcewen & Smith, 2013; Educause, 2012; Stewart, 2013). To cope with the huge student enrollment, MOOC instructors rely on using social media tools to initiate participatory and peer-to-peer learning. This approach has the appeal of distributing the instructional responsibility to the whole class rather than resting it solely on the teacher.

Up to now, MOOCs have enticed the enrollment of people of all ages and locations and from all walks of life. A MOOC usually gains from an enriched array of diverse ideas contributed by people from various regions and cultures. At the same time, it enables the hosting college or university to

extend its service to a wider population, extending the institution's aspiration into the local community.

In general, two models of MOOCs are being discussed in the research community: cMOOC and xMOOC (Siemens, 2012). The cMOOC model is different from the xMOOC in several specific features (Kafai & Peppler, 2011). The cMOOC tends to apply connectivism inspired approaches, and the xMOOC reflects the Coursera type offerings (Siemens, 2012) that replicate old-fashioned lectures and exams. In xMOOCs, institutions such as Harvard University, Stanford University, Duke University design courses in a traditional face-to-face manner, whereas the underlying principle in cMOOCs is that each individual is empowered to design a learning experience. Siemens and Downes (2008) describe four important features of the connectivist MOOC that are openness, autonomy, diversity and connectedness. In short, cMOOCs stress on knowledge creation, while xMOOCs focus on knowledge duplication (Kop & Hill, 2008; Siemens, 2012). In a cMOOC, students create videos, develop quizzes or learning activities, whereas in an xMOOC, students watch the videos and do the quizzes. Most of the MOOC providers tend to adopt the xMOOC format that follows a behaviorist pedagogy because it is easier to administer and evaluate learning outcomes. A few studies have shown that cMOOCs and xMOOCs share several similar features but they differ in the pedagogical model and learning theory *(*Kop, 2011; Rodriguez, 2013).

PURPOSE OF THE STUDY

This case study reports 15 undergraduates' novel experiences and engagement with an xMOOC on academic writing called *Principles of Written English* designed by the University of California at Berkeley and administered through edX over five weeks. According to edX, the MOOC is an introduction to academic writing for English language learners, focusing on essay development, grammatical correctness and self-editing. The study scrutinized some important issues of MOOC and highlighted the feasibility of the key features, course format and evaluation process. By gaining a deeper understanding of the learners' patterns of engagement in the MOOC, the study might contribute useful feedback to how future MOOCs could be better developed to support more effectively the learning needs of students.

METHODOLOGY

This section describes the sampling, data collection and data analysis methods of the study.

Sampling

15 ESL undergraduates from a public university in Malaysia participated in the study. They were from an intact class taking an obligatory course called *Language and ICT*, and the MOOC participation is an assignment of the course. Most of the participants (n=10) were female, and they were all majoring in English language.

Data Collection

To collect data regarding students' experiences and engagement with the MOOC, the students were required to describe and comment on every stage of their learning on the MOOC in a logbook throughout the five weeks, and later use such records from their logbook to write a reflection essay upon the completion of the MOOC. More specifically in the reflection essays, students were asked to discuss the perceived strengths and weaknesses of the MOOC features, tools and course format in the light of the face-to-face university courses they had attended.

Data Analysis

The study analyzed fifteen reflection essays to establish holistically the interpretive framework for each student regarding his/her experience about the MOOC. The study analyzed repeated words, patterns, and positive or negative comments of the MOOC for emerging themes. Then the sub-themes were compiled to form major themes that are presented and discussed in the next section.

RESULTS AND DISCUSSION

As revealed by their reflection essays, the students had benefited from the MOOC especially since it taught them to write better English. Almost all the participants of the study appreciated some of the distinctive features

of MOOC such as video lectures, quizzes and discussion forum. They also felt proud at attending a course offered by an elite university from North America. A participant never thought that he would attend a course from the University of California. He thanked edX for offering such a course and the opportunity to learn from it for free to make his dream come true. Another student stated that, "I enjoyed joining such a big family because we learned together; we shared our ideas unselfishly and helped each other regardless of different nationalities, cultures, job positions and so on. Besides, it is interesting to learn through this special and provoking teaching method. The professor emphasized on participation and asked some questions in each lesson to test our understanding. His body movement and hand gestures in the video lectures made me stay attentive in following the lecture."

Further comments from the participating students are organized in the sub-sections below.

Engagement with Video Lecture

One of the most significant features of the MOOC is its video features which ensure students' engagement with the learning content (Bruff, Fisher, Mcewen & Smith, 2013; Guo, Kim & Robin, 2014; Hanley, 2013). Within the videos, multiple opportunities are created for interactions such as embedded sub-titles and questions. The PDF or PPT version of the video lectures were also available. The video frequently paused to ask a question or a series of questions to test if the students were following the instructional materials. The students often mentioned the benefits of watching the video lecture as it resembled face-to-face teaching. One student (Participant 2) mentioned that it was less difficult for him to understand the lectures because of the embedded subtitles on the video. The video lectures are such an advantage that the student said, "I really did feel like I was in class with some other students, listening and watching." Another student (Participant 5) wrote that "at first I found the questions annoying; they interrupted my listening. In time, I came to realize that they helped me confirm my understanding of the key ideas of the subject."

Despite the advantages of the video lectures, students faced some difficulties while downloading or streaming the videos due to slow Internet speed. According to Participant 4, "Basically, the challenges are the Internet

connection here in the university. Slow Internet connection prevents me from learning the course smoothly as the course videos lagged. ”

Engagement with Quizzes and Assignments

Some students also added their success over the quizzes and assignments. A student (Participant 12) stated, “I had scored well in all the quizzes although the final progress had reduced slightly. I had performed well in the self-test sections for each lesson.” Another student (Participant 4) added, “I have achieved the highest score in Week Two quiz. It was quite difficult but after watching the video lectures again, I was able to score 10 out of 12.”

Furthermore, students’ logbook entries recorded the added benefits of developing their writing skills in English. According to one student (Participant 8), “The MOOC platform helped me improve my writing skills through several ways. There were peer responses, teacher responses, a discussion forum, and course materials. Peer responses gave me general comments about my essay. Also my classmates can look at my essays.” Such comments focused on the perceived benefits of MOOC from the students’ perspective, confirming that instruction and course objectives were being met.

Engagement with Discussion Forum

The students also talked about the discussion forum which allowed them the convenience to discuss various topics. Students asked many questions while participating in the MOOC, and they received numerous responses from their peers. The responses to their questions were found to be thoughtful, supportive and fun to read. Each week of their learning from the MOOC had its set of discussion topics. Some topics were promoted by the video lectures. However, the discussions were prompted by the students’ interests. One student (Participant 15) commented that “the forum part is the best part of the MOOC. We can exchange our opinions and so on. There are topics including the relevant and irrelevant ones.” Some students could not contribute much in the discussion forum; they only introduced themselves. For example, Participant 13 penned that, “I couldn’t contribute anything on the discussion forum because I was busy with other activities

such as doing the quizzes and assignments, evaluating peers' essays, and watching the videos." She added that she read many thoughtful comments posted by other students.

Another student (Participant 9) inscribed that, "Apart from the advantages of the course features and tools, I made a lot of friends from other countries with different job positions, cultures, races, and of different age range. I truly appreciate it. The discussion forum used in the course allows all the people on this course to share their knowledge as we know sharing is caring. It is useful and the way they shared different opinions on different topics allowed me to gain widely and learn more through this course."

Certification

The MOOC participants could use tokens given for task completion to earn a certificate after they completed the course successfully. The certificate may be useful for learning or career advancement. In the case of Coursera, participants who attain an average score of 70% and above receive Statements of Accomplishment, and those who achieve more than 85% receive Statements of Accomplishment with Distinction (Course Logistics, 2012). Udacity provides four types of certificates: Completion, Accomplishment, Accomplishment with High Distinction, and Accomplishment with Highest Distinction, while edX provides only Certificates of Completion (Murray, 2013).

Students were excited after they received the Certification of Accomplishment. Only three students could manage course completion certificates. However, a realistic question is that if a student completes a MOOC successfully and receives an accomplishment certificate or verified certificate, will the certificate be of any value for him to apply for a job or further studies? Acknowledging this concern, Coursera is working with the American Council of Education (ACE) to ensure that credits that come from Signature Track courses will be considered by many of the ACE member schools such as Amherst University, Boston University, and Carnegie Mellon University. Nevertheless, whether or not a completion certificate has any value, we cannot ignore the fact that learning from a MOOC certainly has some inherent value such as meeting up with friends online from all over the world, and learning some useful content.

Peer Evaluation

Evaluating peers' assignments is often a significant challenge to students in a MOOC. The usual methods of assessment on MOOC include machine graded multiple choice quizzes or tests, and peer assessed written assignments. The machine grading of written assignments is still under development. Peer assessment is usually guided by model answers and rubrics, which help the student grader on how many marks to give to different answers. The MOOC students are required to learn the skill of grading and responding to having peer-review. One student (Participant 10) commented, "In my opinion, the weakness of this course is that it lets the students give marks to other students' assignments. The evaluation marks from peers contribute to the overall marks. " Some students found the evaluation procedures more difficult than doing the assignment. In this respect, Participant 3 stated that "evaluating a peer assignment is time consuming. As a student myself, it is difficult for me to complete the assignment as well as to evaluate a peer's paper."

Many MOOC providers such as edX and Coursera have implemented peer assessment whereby students grade one another's work independently (Coursera, 2013). Multiple peer assessments can also be administered for any single assignment. However, experts such as Ragan (2012) are skeptical about peer assessment and feedback. Thus, there are arguments for and against peer assessment. The peer assessment is simply a part of the learning process, and certainly not the only way to evaluate learning attainment (Sharples et al., 2012). Evaluating higher level writing and thoughts requires human experts and formal examinations for the evaluation to be valid.

In addition to the challenges from peer evaluation, plagiarism is yet an important issue not being given much attention by the current MOOC providers. Plagiarism among students, if left unchecked, may impact on the trustworthiness of the instructional evaluation and the university reputation. As an effort in discouraging plagiarism, Coursera has initiated an honour code after a frequent occurrence of plagiarism (Young, 2012). In the same vein, Subramanian (2012) believes that it is possible to solve plagiarism by changing the assessment system. Both formative and summative assessments are often automated in MOOCs to serve the huge student enrollment. However, automation is only applicable to objective assessments such as

quizzes, while higher level thoughts cannot be evaluated by using technology alone (George, 2012). George (2012) used the analogy of a driving test to explain this. In his words, "Driving test is an example of a blended online assessment course where some of the information [like the Highway Code] is perfectly acceptable for testing online ... Driving a car is something you can't do online" (George, 2012).

Other Challenges

The MOOC, being a course on written English, was taught in English naturally. Some students who had lower English proficiency had difficulties in understanding the lectures. A few students commented that they had difficulties understanding American English. In this respect, Participant 11 responded, "The MOOC lecturer is an American and he is using American English while I am using British English. Therefore, I have a doubt in my heart. When I write my assignments in British English, will the assignments be marked down?"

On a different note, Participant 5 said that the significant challenge for him is to manage his time for the course, as he had to watch videos of approximately 10 to 15 minutes each (sometimes around 20 minutes), do the quizzes and assignments, and evaluate the peers' papers. Another student (Participant 9) added, "Challenges that I have to face while attending this course is to really put my time in very tight consideration due to my preparation for my final year project while doing this MOOC. Another challenge is that I have to complete watching two sets of video lecture, quizzes, a mini project and peer evaluation for this course, and it is really time consuming."

CONCLUSION

The results presented above indicate that students had appreciated most of the features and tools for learning afforded by the MOOC. However, most of them faced some form of difficulties such as low English proficiency and time constraints while completing a MOOC. Students appreciated watching the lecture videos, doing the quizzes, contributing on the discussion forum as well as the MOOC certification. However, in addition to the challenges,

problems that hampered their learning included slow streaming of the videos, meeting the assignment deadlines, and evaluating the peers' assignments. Although the study has some limitation, as there were relatively low numbers of participants involved in the case study, some valuable findings have been attained with regards to peer evaluation and certification in the MOOC environment that deserve further research.

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