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## **EXPLORING THE USE AND CREATION OF A MOOC ENVIRONMENT: A CASE STUDY**

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### **Abstract**

Massive Open Online Courses (MOOC) have a large-scale effect and popularity on educational technology for recent years. The use and design of these courses bring new ideas and perspectives for the development of online learning environment and also for the definition of new online user profiles and their perceptions. The purposes of this study are to provide a detailed perspective for the motives for the use of MOOCs and to explore the design and management process of these environments. The results of this study indicated that MOOCs provide many benefits for learners and the challenges while designing MOOCs provided some information that the problems in online learning environments are still subtle and complicated.

### **Theoretical Framework**

#### ***Reasons to use MOOCs***

In the literature, there are many studies to collect data about the motives to use MOOCs. Based on Belanger and Thornton (2013) study, the purposes to use MOOCs are to have an interest for the subject, lifelong learning, entertainment, curiosity, social experience and intellectual stimulation (cited in Zutshi, O'Hare, & Rodafinos, 2013). Similarly, Hew and Cheung (2014) criticized the motivations to use MOOCs as being interested in a particular topic, increasing own knowledge, finding free resources, curiosity, personal challenge and getting certificate. In addition, Zutshi, O'Hare, and Rodafinos (2013) claims that the students in their study are feeling excited to see other people's ideas and works which help the participants to support their professional development. For some students, getting a certificate/degree has some incentives to use MOOCs (Hew & Cheung, 2014; Kizilcec, Piech & Schneider, 2013) but these certificates won't have the same quality with the degrees on traditional learning environments (Parr, 2013). Also, some studies showed that most users already had an official degree (Yuan & Powell, 2013) and they are adult/lifelong learners. In addition, as indicated above, most users have a tendency to follow the parts they are interested in so the degree/certificate or the completion are not the primary motivations, adult learners may already have the motivation to use MOOCs for their own interest and need.

### ***Experiences/Opinions while taking MOOCs***

Learners have many experiences while taking MOOCs that have both positive and negative sides. Zutshi, O'Hare, and Rodafinos (2013) claims that the students in their study are feeling excited to see other people's ideas and works but not all of them completing or participating the discussion board activities, however, they stated that some students found the postings and interactions as overwhelming. Other challenge from the learner perspective is related with feeling isolated or not being a part of community/feeling anonymous (Zutshi, O'Hare, & Rodafinos, 2013). Some students may feel not being a part of the group because the group is much crowded than the level of knowing each other. In Hew and Cheung (2014) study, they explained the challenges from the learners' perspectives as lack of incentive, lack of focus on discussions, having insufficient previous knowledge, ambiguous assessments and requirements and lack of time.

### ***Challenges while creating and managing a MOOC***

In the literature, there are several ideas about the benefits and the challenges of MOOC practices. Yuan and Powell (2013) summarized the challenges in terms of sustainability, quality, pedagogical problems, completion and motivation. Similarly, Milheim (2013) and Richter and Krishnamurthi (2014) criticized the challenges as the completion rates, financial problems of creating and providing the courses, certification problems and reliability and the validity of the students' performances. Richter and Krishnamurthi (2014) and Spector (2014) explained the assessment problems as the difficulty for evaluating many people and giving appropriate and detailed feedback. Moreover, Hew and Cheung (2014) mentioned the similar issues while designing a MOOC and explained the challenges as absence of student immediate feedback, heavy demands of time and money and lack of student participation.

### ***Significance of the Study***

Learners' experiences and behaviours in online learning environments have significant role to enrich the learner experiences and activities. In addition, designers constitute an important part for understanding the new practices and instructional aspects of MOOCs. Therefore, through this study, learners' and designers' experiences could provide important issues for the development of MOOCs and online learning environments.

### ***Methodology***

The purpose of this research is to gather a detailed understanding of designing and providing a MOOC environment and experiences of the learners and designers in these environments. Behind these purposes, the research study was designed as a case study. As Yin (2009) suggested, through this research, the phenomenon (MOOC environment) was investigated within its real life context (a MOOC course environment) through the specific participants (MOOC design and development group). In addition, this specific case (MOOC course that was provided by a professor in a university) will provide a detailed description of a MOOC practice. Therefore, this research was designed as a single case study through the specific data collection time and data collection methods. Research questions of this study is as follows:

1. What are the experiences and opinions of MOOC users from the designer and learner perspective?
2. What are the challenges that encountered while creating and managing a MOOC?

### **Research Design**

First of all, the researchers observed the MOOC environment in order to investigate the activities, materials, students' behaviours and management issues with head assistant of the course. Secondly, interviews were conducted with the participants. The participants were doctoral/master students group (17 people) that design, manage and utilize the MOOC (Social Media for Active Learning MOOC) environment. Purposeful sampling method was used to select 10 participants based on their contribution and role of the course design to get the sufficient information about their experiences. The interview questions were prepared in order to see the participants' experiences related with the creation, management and utilization of the MOOC environment.

### **Course Environment**

MOOC was created to provide an online learning environment for educators who will use social media to support the students' learning functions. This project was held on 4 weeks through Blackboard course site. Each week was designed to teach different components of social media (Week 1/Curation, Week 2/Social Media Lessons, Week 3/Personal Learning Networks, Week 4/Privacy & Ethics) (Figure 1). In total, 600 people were participated this course from different locations within the different time of 4-week period.

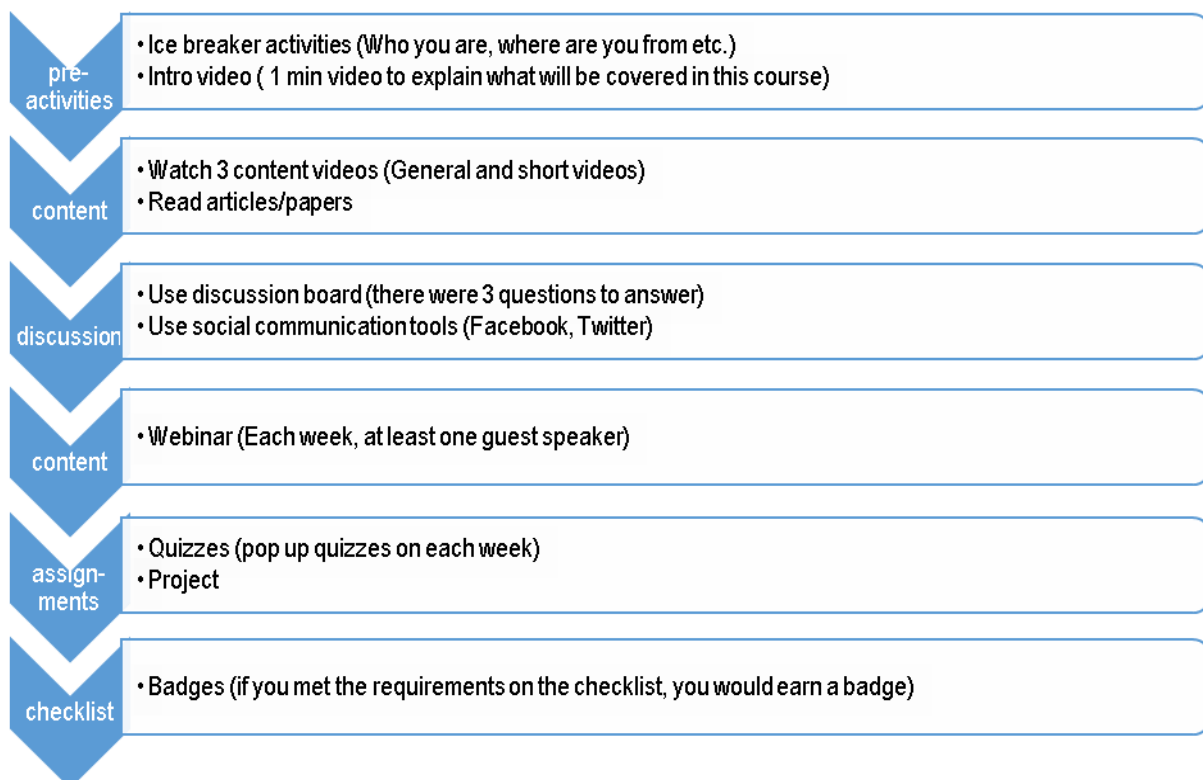


Figure 1. The activities on each week in MOOC environment

## **Results**

Result of the interview created some themes and subthemes after the analysis (Table 1). In the interview, participants were asked to explain their experiences related with MOOCs (if there were) as a designer or learner before this MOOC project and their opinions about these experiences. 10 participants had an experience of MOOCs (two of them had designer experience and 8 of them had learner experience in advance). The platforms they mostly used were Coursera and edX. The reasons to use MOOCs were diverse in terms of curiosity, finding topics that are interested, finding supplementary material, using free courses/resources, improving professional development, and individual learning. Most of the participants indicated that they began to use MOOCs to see what is going on there and to explore the environment. In addition, they used these platforms, to find some supplementary materials for their own courses, to get some different teaching ideas for improving their own teaching profession, and to find information about the topics they are interested.

The participants mentioned the advantages in MOOCs that derived from their experiences; the most common themes were being free of charges and ability to find free resources within easy access. Three of our participants emphasized the importance of communication between different learners through MOOC platforms by enhancing their community of practice and personal learning networks. Some participants described the cons of MOOC environment as not providing an official degree/certificate. And two of them emphasized the problem related with limited interaction between peers and instructors and plagiarism.

The opinions of the participants about MOOC were positive that they were happy to participate this project because it helped them to facilitate their online learning experience and profession as a designer/developer. Also, they were eager to participate another online learning project if they have a chance. Most participants saw MOOC initiative as a facilitator that brings new ideas and arguments on online learning environment. In addition, they were happy to use MOOCs to develop their profession and to support their individual learning.

Table 1: Themes, Sub-themes, and Codes

Themes	Sub-themes	Codes
Usage	The reason to use MOOC	Curiosity Topic that are interested Supplementary material Free courses/resources Professional development Individual learning
Advantages of MOOC		Free/open course Diverse materials Easy access Personal learning network Community of practice Learn new ideas/teaching styles
Disadvantages of MOOC		Free of charges (pressure, failure, consequences) Flexibility Certificate /degree Limited interaction Time consuming Unknown people Plagiarism
Challenges	Design process	Time consuming Decide the topic Find free resources Providing clear guidance Getting permission
	Management process	Technical problems Too many people to control Absence of students Language Management Cost Dropout rates
	Assessment	Peer review Automated grading systems Qualitative evaluation Feedback Discussion board Quality of the assessment
	To take MOOC	Select a course Self-motivation Overwhelming Technology literacy Feeling isolated
Opinions	SMOOC experience	Instructional experience Interaction Career/professional development Group work
	MOOC	Social network Popular topic Applicability/feasibility Aware of open education
Concerns		Success of students Workforce/labour Transform educational system

All participants mentioned different challenges while they are designing the course as a developer and taking the course as a learner. Challenges while designing the course have three components in terms of design, management, and assessment. In the design process, participants defined the challenges as time consuming, hard to decide the topic that fits need from too broad contents through a limited time, finding free resources to share with students, providing clear guidance, and getting permission from the institution that you are part of. In the management process, participants indicated that it was hard to find quick solutions to the technical problems, there were too many people to control (over 600 students on MOOC), invisible background information of participants and language diversity made interaction difficult, it was hard to engage the students into course process/to sustain students' interest, finding budget and drop off rates. However, in MOOC, the dropout rate was high as expected (Less than ten percent of the participants only complete the courses (Alraimi, Zo, & Ciganek, 2015; Cordero et al., 2015) but the participants were not much stressful about that situation because they were familiar with the students' habits in online learning environments because of their learner experiences in MOOCs. In the assessment part, all participants had some time problems to evaluate qualitative essays/assignments and students' posts on discussion board. But they were not much overwhelmed because they had just 25-30 students to complete every assignment in each week. If they had more people than that they had a plan to use peer grading between students to lessen their works for assessment. In addition, they had some concerns about the quality and the effectiveness of the assessment in that course. Related with the challenges from the learner perspective, two of the participants stated that it is tricky to decide a MOOC before take the course whether it is worth for your time or not. In addition, one participant explained the challenge for keeping alive his/her self-motivation to complete the course. Two participants did not feel comfortable when they were taking a MOOC for their own interest that the community was too big to feel a part of it.

## **Discussion and Conclusion**

According to the results, most of the participants prefer to use MOOCs to find out supplementary material, to develop their individual and professional skills and also to find free courses/resources. In addition, the free feature of MOOC environment brings some conformity to both designers and learners. The students feel much free to attend the courses without failure/success concerns. In our study, we found that the learners have positive opinions to have free and accessible materials and to expand their personal learning network and community of practice.

The findings also revealed that there are some concerns both from the learner and designer side for MOOC environments. While some students find the social media and other communication platforms (like discussion board) as a way of interaction and engagement for the course, some students indicated to feel distracted because of the number of participants, excessive number of discussions, and lot of assignments.

Based on the results, the most common challenge while creating the course is related with providing clear guidance and framework to the students. In MOOC environment, the enrolments and the requirements are not restricted as in traditional learning (DeBoer et al., 2014) so this brings the concerns about unclear learner characteristics and styles. The diversity on the students' characteristics, learning styles, background and language makes the instruction more problematic and uneasy but with the clear objectives and requirements, online courses could be more successful and satisfied (Toven-Lindsey, Rhoads, & Lozano, 2015). The second common challenge while designing a MOOC are the lack of student participation and time consuming activities. Design and the creation process of MOOCs requires extra effort, time and support. Another common challenge, dropout rates, less than ten percent of the participants complete the courses (Cordero et al., 2015; Parr, 2013). In some studies, students were defined as lurkers (Breslow et al., 2013) or "following the pulse of the event" (Kop, 2011). Therefore, some students might need a particular part of the course (Fini, 2009; Siemens, 2013) rather than following the whole course.

Another challenge from the designer perspective is related with assessment. In most MOOCs, automated graded quizzes are used. The major problem on assessment part is regarding the quality of the evaluation and time requirement for evaluating open-ended essays/assignments. Some automated grading systems for essays are valid but their performance and quality are still vague (Hew & Cheung, 2014). Spector (2014) examined summative and formative assessment on MOOCs and argued that in most MOOCs, assessments applied on very basic level rather than requiring an application of the knowledge. Similarly, the instructors evaluated the assignments based on the completion, not for the quality of the content. This problem comes from both the lack of time and excessive number of students.

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