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# Students' Experiences and Perspectives on Massive Open Online Courses (MOOCs)

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## ABSTRACT

The goal of this paper is to explore student's experiences and perspectives of MOOCs in terms of what motivates or limit the use of MOOCs, the extent to which they are used, and the benefits and challenges of using them by reviewing related previous studies. Previous studies found that MOOCs' use requires technical skills that some people lack. Lack of time and background knowledge is the main problems that students have when using MOOCs. The finding of this study will help providers such as universities, institutions, and schools learn how to implement and improve MOOCs based on students' perspectives and experiences.

**Keywords:** *MOOCs, students' experiences and perspectives, online courses.*

## 1. INTRODUCTION

Millions of learners have enrolled in massive open online courses (MOOCs) in the past few years (Haber, 2014). It seems that MOOCs are becoming a major higher education innovation. Many universities and institutions around the world are starting to integrate MOOCs into their curriculums. MOOCs' use has continued to grow at a rapid pace. Few years ago, Stanford University started its own MOOCs by providing high-quality instruction from elite institutions and professors at no cost to the students. Later, many universities started launching their own MOOCs or partnered with a MOOCs provider such as Coursera or EdX. Harvard, Massachusetts Institute of Technology (MIT), and Stanford have adopted and integrated MOOCs during their early stage in the United States. In the United Kingdom, Edinburgh University launched its MOOCs in early 2013.

Bruff, Fisher, McEwen and Smith (2013) examined the students' perceptions of blended learning by integrating a MOOC into a graduate course about machine learning at Vanderbilt University during the fall 2012 semester. The blended design of the course, which supported a MOOC course and a platform for lecturing, grading, and discussion, enabled the instructor to lead an overloaded course on a topic much desired by the students. The finding of this study showed that researchers noticed enthusiastic responses toward MOOCs on the part of the students. They described the courses as designed effectively, presented clearly, and made informatively; they also described the MOOCs as useful for self-paced learning.

## 2. GENERAL IDEA OF MOOCs: DEFINITION, HISTORY, AND KINDS OF MOOCs

According to Rodriguez (2012), the term MOOC is an abbreviation for Massive Open Online Course.

George Siemens and Stephen Downes coined the term in 2008 after successfully performing the online

course CCK08. The success of CCK08 came after a series of other OOCs done previously. MOOCs represent a methodology of online learning currently emerging and gaining a lot of recognition at a very high rate. Rodriguez (2012) used the term "massive" to refer to the large of participants that can take part in the learning process simultaneously. The word "open" referred to the open nature of the resources used in the learning process. First, the software used was open-source and as such, was open to everyone. Information sources and assessment process were both open in addition to a wide spectrum of open learning environments. According to Kop et al. (2011), MOOCs engage networked learning methods outside the typical structure of a traditional course. They invite open online participation on a certain topic of interest and schedule. The learning process is facilitated by individuals with expertise in the topic of discussion and relies on the formation of learning networks to help learners.

According to Rodriguez (2012), CCK08 was offered formally and informally through the University of Manitoba and enrollment was open to everybody worldwide at no cost. Those who enrolled formally obtained credits from the University, while those who were not interested in credits enrolled informally.

Rodriguez (2012) stated that CCK08 was not the first instance of open online courses because previously, in the academic year 2007–2008, Alec Couros and David Willey had offered courses in the same manner.

Additionally, Liyanagunawardena, Adams, and Williams (2013) found that MIT launched pioneering Open Course Ware (OCW) permanently to publish materials from all its sources on the Web. Later, licenses were produced to allow for access, modification, and redistribution of the same material. Still later, several other institutions of higher learning joined in publishing their learning materials on the Web and allowing for its access. Carnegie Mellon University's Open Learning Initiative was one such program. The materials availed were meant to allow for access by learners and educators. As this practice became common among learning

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institutions, MOOCs were born (Liyanagunawardena et al., 2013).

Jordan (2014) stated that the MOOCs found their way into the mainstream in the last two years, following the establishment of several high-profile MOOC platforms, especially Udacity and EdX. The platforms offered several free courses from elite universities and attracted a lot of attention from the media. Jordan (2014) stated that 2012 became known as “the year of the MOOC.” Some people have thus envisioned MOOCs as the future for higher education where full degrees will be offered through them to all people worldwide (Jordan, 2014). Rodriguez (2013a) states that although all MOOCs are the same in terms of free access and scale, they have bifurcated into two types of courses in terms of underpinning format, structure, and theory: x-MOOCs and c-MOOCs. Rodriguez (2013a) continues that the two formats of MOOCs differ in their concept of openness, with studies conducted previously indicating that although c-MOOCs and x-MOOCs have certain features in common, their learning theory and pedagogical model vary in many aspects.

Zutshi, O’Hare, and Rodafinos (2013) made a distinction between c-MOOCs and x-MOOCs. They state that c-MOOCs are based strongly on connectivist ideals, often having a weak structure and influenced by ideals like those of Illich (1971) concerning the empowerment of learners by allowing all learners who wish to learn access to learning material. On the other hand, x-MOOCs are Ivy League-type (Zutshi et al., 2013). They are run by universities, venture capital-funded and have a comparatively fixed curriculum that is very prescriptive (Rodriguez, 2013b). Mackness et al. (2013) stated that x-MOOCs are an online version of traditional instructive correspondence courses, something that contrasts them from c-MOOCs that focus more on “creativity, autonomy, creation, and social networked learning.” Examples of x-MOOCs include Coursera, edX, and Udacity while examples of c-MOOCs include edu MOOC, Mobi MOOC, and PLENK2010 (Mackness et al., 2013; Rodriguez, 2012). Besides the two well-known formats of MOOCs, Zutshi et al. (2013) found a third subfamily of MOOC platform, entirely outside the university system. This subfamily of MOOC offers calendar-based courses and other courses that the learner can complete at their own time. The best examples are Khan Academy, Future Learn, Peer-to-Peer University, and Udemy.

### 3. STUDENTS’ EXPERIENCE WITH MOOCs

Although MOOCs have experienced tremendous success over the last two years (Jordan, 2014), they have not done so without posing challenges for students.

Students have had different experiences and challenges with the platforms, something that has resulted in different effects. Liu et al. (2013) found that the challenges are not limited to learners alone, but also affect educational institutions and instructors. Questions about

the future of teaching and the value of a degree have been asked. Evidence-based research is being conducted to determine advantages and constraints associated with using MOOC as a tool for learning. According to Liu et al. (2013), one of the most important factors of MOOC effectiveness is to determine students’ perspective in the courses they enroll in.

Few studies examined students’ experience with massive open online courses. Zutshi et al. (2013) conducted a qualitative study to examine the experience of MOOC students as reflected in public blogs. The authors mentioned common concerns regarding MOOCs such as pedagogical approaches, employed, and the high drop rate. The research questions focused on how students described their experience in terms of positive or negative. The second question guided this study was about the common issues and discussion themes that students post in blogs. The researchers collected that data through 21 posts by students who at least take one MOOC. A content analysis approach analyzed the blog post data. Zutshi et al. (2013) found that students expressed a mixed experience and identified positive and negative aspects. In terms of the second research question, Zutshi et al. (2013) found that assessment is the most common issue discussed by students who participated in MOOCs. Zutshi et al. (2013) stated that conventional methods of assessment are simply not feasible, and clarity of assessment instructions is needed. The second issue was related to communication. As stated by Zutshi et al. (2013), the lack of interaction and feeling of anonymity were a very common issue that participants reported on blogs. Zutshi et al. (2013) concluded their study by suggesting a similar study using in-depth qualitative interviews and case studies approach because it will offer rich insights into behavior and experiences of students who have taken MOOCs.

Liu, Kang, Cao and Lim (2013) conducted another relevant mixed method study to examine participants’ learning experiences in the context of a six-week MOOC in journalism. Liu et al. (2013) stated that the rapid growth of MOOCs has raised questions about the future of teaching and learning, the degree of importance, and how technology affect the education system at universities. The research questions guiding this study focused on examining students’ experience in taking a MOOC in journalism and aspects of this MOOC that students find beneficial to their learning. The data was collected through surveys and interview. Liu et al.

(2013) found several factors affected students and led to mixed experiences. Students who failed to finish the course quoted time as the main factor while those who responded to the survey highlighted sources of negative experience to be poor quality and lack of feedback. Besides the two major factors that led to the negative experience, other reasons cited were too much work, lack of organization, familiar topics, and lack of participation. Overall, 86% of students said they found the MOOC beneficial while 13.7% did not and cited the

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reasons above. Surprisingly, 75.31% of the interviewees had a better experience with the MOOC than with face-to-face learning, 6.48% indicated no difference, and 18.21% chose face-to-face tutoring over MOOC. The positive experience was attributed to several features such as flexibility, self-pace, peer learning, useful and quality course material, worldwide participation, and expertise of the tutor.

Another mixed methods study was conducted by Kop (2011) to find out challenges to connectivist learning on Open Online Network learner autonomy, presence, and critical literacies. The authors highlighted the learners' experience and perceptions to those challenges. The author mentioned some challenges that might prevent learners from having a quality learning experience. Two research questions guiding this study were whether the four activities highlighted as being crucial to learning (aggregating, relating, creating, and sharing) were actually as important as envisaged by the course planners and whether the challenges identified from the literature (critical literacies, presence, and self-directed learning) were actually perceived as being as problematic as identified in the literature. The author collected the data through survey, observation and focus group on the Moodle forums, wiki, participants' blogs, and Twitter posts. A connectivist course (cMOOC) named PLENK enrolled 1616 participants. Kop (2011) found that the majority of participants did not achieve the following activities, aggregation, relation, creation, and sharing.

However, Kop (2011) found that self-directed learning is an important aspect for participants to gain the benefits from MOOCs. In addition to that, participants need to have a level of critical literacy that will help them to participate, engage and get involved with learning activities (Kop, 2011). The result showed that participants' online courses such MOOCs need to be confident and skilled to use the different tools in order to engage in meaningful interaction. According to Kop (2011), the social presence of participants and facilitators would involve learners in a connective learning environment and build confidence and stimulate active participation.

In 2014, Jordan conducted a quantitative study in order to explore factors that affect enrollment and completion of MOOCs. Jordan (2014) mentioned a gap between the characteristics of MOOCs and their effect upon enrollment and completion. The research question was to study how MOOCs were developing in terms of enrollment and completion rates and what factors might affect the enrollment and completion of these courses.

Data about enrollment numbers and completion rates were collected through the public available data on the Internet including news stories, university reports, conference presentations, and MOOC student bloggers.

The author used linear regression to analyze collected data with Minitab statistical software. According

to Jordan (2014), MOOCs leave behind students not conversant with technology as indicated by the high number of elites who enroll for courses. Daphne Koller from Coursera states that most students enrolling for courses are usually educated already, mostly holding undergraduate degrees. Out of all students, 42.8% hold a bachelor's degree, 36.7% hold master's degrees and 5.4% hold doctoral degrees. Another survey by the University of Pennsylvania showed the same trend, with 83.0% of all students being graduates and 44.2% being educated at postgraduate level. As such, the study concludes that MOOCs are not achieving their primary goal of reaching disadvantaged students. Additionally, a high literacy level is required coupled with a high-speed Internet; this prevents the goal of eliminating geographical boundaries (Jordan, 2014).

Fini (2009) conducted another quantitative study to investigate learners' views about tools used in the CCK08 course and provide suggestions for multi-tool course environments. The author mentioned a need to understand the effectiveness of multi-tool environments in supporting education and students to improve their effectiveness for learning. The author did not include the research question clearly in the study, but from the purpose of the statement, it is clear that the research guiding this study was to what extent multi-tool environments are effective in supporting education and learning. The data was collected via an online survey that included three sections: personal information, general opinions about the toolset used in the course, and detailed questions on each tool used in the course. The survey determined major sources of negative experience to be language barriers, time constraints, and the necessity of ICT skills. Fini (2009) found that lack of ICT skills made most participants favor passive, timesaving mailing list instead of time-consuming discussion forums. Fini (2009) suggested that in the future, participants should choose their preferred tools for use in the courses. Fini (2009) found that besides MOOC requiring participants to have some basic to medium skills in ICT; it also requires participants to master the English language. Fini (2009) names English as the global lingua franca and suggests that it be made a necessary requirement by universities.

Milligan, Littlejohn and Margaryan (2013), conducted a qualitative study to address the lack of empirical data about how learning experience afforded by cMOOCs is suited to learners with different motivation, skills, and disposition. The study was guided by two research questions that focused on patterns of engagement and factors affecting engagement in the cMOOCs. Three types of engagement were recognized: active participation, passive participation, and lurking. The study was aimed to provide insight in how to design effective cMOOCs to better support learning needs and learners' expectations. The authors employed semi-structured interviews to collect the data. Twenty-nine participants were interviewed for one hour via Skype. Milligan et al.

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(2013) found that the ideal cMOOC one of active participation, not just consuming content but connecting with other participants and sharing new resources to others that created by them. Such cMOOCs would fail without a critical mass of active participants (Milligan et al., 2013). However, lurkers can gain many benefits but without contributing in return. Regarding passive participants, Milligan et al. (2013) found that most of them had dropped out of the course because their needs were clearly not being met. They stated that cMOOCs were not suitable for everyone. Regarding the second research question, the authors stated that confidence, prior experience, and motivation are key factors affecting cMOOCs.

Saadatmand and Kumpulainen (2014) stated that there was a growing but immature research base about the phenomenon of MOOCs. The learning experience MOOCs provide is a paramount importance to researchers. Saadatmand and Kumpulainen (2014) conducted a qualitative study to examine participants' experience and perceptions of learning in cMOOCs in terms of dealing with an abundance of resources and tools, learning activities, and network engagement. This study employed an online ethnography design to gain a deeper understanding of participation and learning in cMOOCs. The research questions guiding this study focused on how tools were used by participants in cMOOCs, networking activities in cMOOCs, and the nature of participation and learning in cMOOCs. The data of the study were collected through an online questionnaire, online semi-structured interviews and auto-ethnographic insight. The data were interpreted using an ethnographic research design based on a framework of analytic induction and comparative analysis. The result of the study showed that 87.5% of the participants said they moderately used Rich Site Summary (RSS) feeds of the course that were used by the course facilitators to aggregate blog posts and tweets from the participants. In addition, blogging was one of their main activities. Finally, the study showed that the nature of cMOOCs requires students to assume active and open roles to shape activities and collaborate in goal achievement.

In Saudi Arabia, Jawharah and Zamil (2014) employed a quasi-experimental study with pre and post-test to investigate the effectiveness of a Massive Open Online Course (MOOC) on developing listening skill among Saudi EFL university students. The authors stated that their study was an attempt to determine how the awareness of EFL teacher's integration of MOOCs is hindered by misconceptions on the part of instructors. The research question of the study was "Are there statistically significant differences in the students' achievement in listening between the experimental group (who have been taught by employing a MOOC) and the control group (who have been taught conventionally) that can be attributed to using MOOCs?" (Jawharah and Zamil, 2014, p. 129). Clearly, the research question matches the hypothesis of the research that once MOOCs are

integrated into English language courses for EFL Saudi students, their listening achievement will be improved.

Data was collected from an experimental and a control group of listening course students through the result of the pre and post-test listening. Jawharah and Zamil (2014) found statistically significant differences between the experimental group and the control group, with the distribution in favor of the experimental group.

This result indicates the effectiveness of the MOOCs in developing listening skills. Jawharah and Zamil (2014) suggested that the result of this study should be implemented in English courses for EFL learners to improve their listening comprehension.

#### 4. CONCLUSION

Based on the reviewed studies above, it is clear that as much as MOOCs are helpful in disseminating information and educating large masses of people, they are most suited for already educated people. They also require technical skills some people lack in addition to the stable Internet connection required. Learners have several other problems that limit their learning such as lack of time and background knowledge. It is inevitable that universities, online institutions and MOOCs designers should pay attention to the factors that might interfere with the course objectives such as number of tasks, participants background and required technical skills.

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