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Contents

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OVERVIEW OF MASSIVE OPEN ONLINE COURSES*

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Abstract

Massive Open Online Courses are one of the most popular trends in education in the last decade. The term Massive Open Online Courses, or abbreviated MOOC, is set of open access and free teaching content, videos, presentations, simulations, video webinars, uploaded to an online platform for a large group of participants to be educated or pass certain tests. Although rapidly expanding as an educational form, MOOC still lacks research and precise papers examining its implementation worldwide. This paper presents the MOOC from a technological as well as a pedagogical focus on its development and implementation in the education system.

INTRODUCTION

Distance learning as an educational method already has a long history. Through a series of technological changes in the world from simple delivery of learning materials to students, to the use of everyday communication technology to home computers and the Internet. The Internet and mobile Internet are increasingly embracing existing trends in higher education as a way of securing and supporting the emergence of a new model called Massive Courses over the Internet or Massive Open Online Courses.

Massive Open Online Courses are a relatively new phenomenon affecting higher education. The European Commission defines MOOC as "an online course open to everyone without limitations, usually structured around a set of learning objectives in a field of study, which often lasts for a defined period of time (with a start and end date) on a network platform that provides interactive opportunities (between peers or between students and instructors) that facilitate the creation of a learning community. As is the case of any online course, it provides some course materials and self-assessment tools" (Ellis, 2007). They are of open type, which has more obvious meanings in this research. While research is growing on this topic, the literature is still limited. Researchers are following the implementation of the MOOC in all its forms from conceptual to technical. Conference and journal journaling procedures make up the bulk of MOOC literature (Liyanagunawardena, Adams, & Williams, 2013). Informed educators will be better equipped to make evidence-based decisions, to foster the positive growth of this technology, and to adapt it to their contexts.

The accelerated development of MOOC in recent years has led to millions of registered users on hundreds of courses around the world. MOOCs are often published by third parties through online platforms and are developed independently of the academic environment. The

* Specialized paper

history of MOOCs is not that distant. The term first appeared in 2008 by Steven Downes and George Siemens and was based on the "distributed peer-to-peer learning" model. After that, in 2011, several other educational videos were developed by professors at Stanford University and published through open network platforms supported by free web resources. This is the year MOOC exploded all over the world and is still expanding every day. Later, they established the Coursera (https://www.coursera.org) as an independent non-profit technology in early 2012. In the same year, other independent nonprofit initiatives such as Udacity and Udemy were established. After that, MIT and Harvard incorporated their own platforms.

Another wave of users followed the Futurelearn and Iversity platforms, which are European platforms. They maintain their courses throughout Europe. Futurelearn is owned by the Open University in the UK which is a well-known name in the field of distance education with extensive pedagogical expertise and experience. Iversity is a German initiative that is using the European Credit Transfer System. They state that their partner institutions have the opportunity to offer exams that grant ECTS credits. As the only MOOC platform has courses offering ECTS credits, they are working to further expand this opportunity.

In this sense of generational development, Siemens (2012) identifies two types of MOOCs:

- cMOOCs - the first generation started in 2008, focusing on creating long-lasting knowledge. Participants' creativity, autonomy, and networking are encouraged. At the same time, participants are expected to enrich the course content.

- xMOOCs - the second generation launched in 2012, is based on a more traditional format, with fixed structured content, centralized discussion forum support, and automatic or peer review.

With this division xMOOC are likely to have a greater impact on higher education as a result of their main advantages: high quality content provided by leading partner universities, availability of deadlines and grades, the attribute of unnecessary costs and ongoing financial support for development. The newest generation of xMOOC brings undeniable positive outcomes for students. But there is always the financial question, how to survive if not charged for education.

QUALITY OF COURSES

With the appearance and implementation of MOOC, it has been noted that the target group of participants are already interested and motivated individuals who wish to learn through online platforms. MOOCs also require a certain level of digital literacy from participants. These have raised concerns about the inclusiveness and equality of access. Usually, there is a lack of formal quality assurance for MOOCs. Courses are often evaluated by participants in tables that rank them according to the perceived quality of the offer (Yuan & Powell, 2013). As such, courses disappear due to lack of demand or in response to poor performance. Other ways of evaluating courses include informal feedback of social media participants.

Successful completion criteria for MOOC were also a point of controversy. Meyer (2012) reported that the dropout rates at courses offered by Stanford, MIT and Berkeley were 80-95%. For example, only 7% of the 50,000 students who enrolled in the Coursera course in software engineering have completed the course. However, whether these rates are important

or not depends on the purpose of the MOOC in the first place. If the goal was to provide free and high-quality courses from elite universities and professors, then the results of the final tests do not have to be relevant. However, it would still be useful to improve MOOC participant retention rates. Still considered a modern occurrence, studies are underway to discover why and at what stage students are most likely to drop out of courses.

PEDAGOGICAL ASPECT OF MOOC

To implement MOOC, minimal academic support is sufficient. Pedagogues who are informed about MOOC often work in the field of distance education or IT technology, but now these courses are being implemented to meet the expectations of many people to study and take for free. Previous implementation, cMOOC, was based on peer models and social learning; however, the successor model, xMOOC, has delivered online learning management courses, including video lectures, assessments and feedback. Courses usually last about a week, and students can access relevant sources of materials as they wish. Some of these activities include automated multiple-choice quizzes, short videos, document sharing and forum conversation. The courses are based on a model of peer learning from other users, although there is an expert who is conducting the course. There are also online synchronized learning opportunities such as Live Seminars. When examining the course structure, it can be seen that the first MOOC courses included enrolled lectures, notes and assignments that were once published through the campus management learning system. Over time, the format of video lectures has improved, and today, with more professional videos, including animations and simulations with their interactive features, they are released as MOOCs.

Most of the courses are in the form of adult learning and professional development, vocational education and recruitment courses. Some MOOCs target workers who work rarely and professionally, and often in locations where they do not have access to higher education institutions to further expertise in their field.

In essence, MOOC courses are based on these areas when interacting with students (Acosta & all, 2014):

- Video lectures: Video lectures at MOOC have different presentation styles, from talk heads to lecturers. Lectures are mostly in English, and translations are provided if necessary. The duration of the lecture videos is usually 5-10 minutes, with built-in quizzes to check on what has been learned.

- Assessment: Tasks are primarily assessed through the use of: (a) automatically generated multiple-choice questions, or (b) peer-review when students themselves check and evaluate assignments

- Forums: Forums are a place where students post questions and other students answer, and are a major method of interaction between students and course lecturers. Forums typically consist of general discussion, topic-specific discussions, course feedback, and technical feedback topics.

- Readings: Most MOOCs do not require students to purchase books, and most materials are available online or provided by course educators; however, Coursera for example, earns money through an affiliate program with Amazon.com.

- Video sessions: In addition to weekly lectures, there are live video lectures with the course instructor.

- Additional Activities: A series of teaching activities are offered to enable students to further test their knowledge acquired in the course.

- Additional resources: These are frequently scripted videos to further understand the learning material

- Social Media: Students are encouraged to continue discussions on dedicated pages on other social media platforms, such as Facebook and Google+.

One of the problems that MOOCs have, from a pedagogical point of view, is how to evaluate learning, especially as it involves a large group of participants. Automated grading systems are used in general. Yuan and Powell (2013) found that most of the assessments in MOOC are conducted through multiple choice questions with automatic responses and peer feedback. Hardesty (2012) stated that new techniques have been proposed to develop more sophisticated automatic grading systems and trends are emerging to try to incorporate feedback from a variety of sources such as machine algorithms, teachers, experts and peers.

ADVANTAGES OF MOOC

Improving access to higher education

MOOCs are seen as an important tool for expanding access to higher education, including those in the developing world, and ultimately enhancing their quality of life. The MOOC can be seen as contributing to democratization not only locally or regionally, but also globally. MOOCs can help democratize content and make knowledge available to everyone. Students can access complete courses offered by universities around the world, something previously unattainable. With the availability of affordable technologies, MOOCs are expanding access to the extraordinary number of courses offered by world-renowned institutions and teachers. (Heller, 2014)

Providing affordable education

The costs of higher education continue to rise as institutions tend to provide too many services. With MOOC, some of these services can be transferred to other appropriate institutions in the public or private sector. MOOCs are for a large number of participants, can be accessed by anyone with or without prior entry qualifications and are offered in full or in part for free.

Sustainable Development Goals

The original philosophy of MOOC is to open quality higher education to a wider audience that will be accessible for a long time.

Offers a flexible learning schedule

Certain lectures, videos and tests via MOOC can be accessed at any time compared to the scheduled hour time. This allows students to complete their assignments in a timely manner, and allows participants flexibility based on their personal schedules. (Teixeira & Mota, 2014)

Online Collaboration

MOOC learning environments make it easier for students around the world to work together for common goals. Instead of physically meeting each other, online collaboration creates student partnerships. While time zones can influence students' communication hours, projects, assignments and more can be completed to incorporate the skills and resources that different students offer, wherever they are.

DISADVANTAGES OF MOOC

Several MOOC vulnerabilities have been identified. For example, a new study by the research group Ingiger Liger Ed and the Babson Survey (Allen & Seaman , 2016) shows that two-thirds of engaged professors do not want to attend such classes. Factors in their rejection of MOOC are lack of personal communication, lack of frequent teacher feedback or irreplaceable classroom experiences.

It was also mentioned earlier that student assessment is a result of the difficulty of checking who is completing tasks correctly and in a timely manner. The humanities, social sciences, and business, which require written work online, using critical thinking skills, are difficult to assess online. Hill (2012a) summarized the major interrelated barriers: developing revenue models to make the concept self-sustainable, delivering valuable endpoints such as credentials, badges or acceptance in accreditation and authenticating students in a way that satisfies institutions for accreditation or hiring companies that student identification is actually known. He also declared a low completion rate (below 10%) as a barrier, but we believe it is due to the early phase of the MOOC life cycle and will improve faster. Important steps have already been taken to overcome some of these obstacles.

CONCLUSION

Despite being a fairly recent phenomenon, the massive open online courses, or MOOCs, have attracted widespread interest from people around the world. Although they provide opportunities for education in courses offered by prestigious universities, lack of recognition and proper accreditation are still a problem. MOOCs have attracted thousands of people from all over the world; however, closer inspection of student demographics indicates that the majority of those who have served these courses have already completed university education. As such, at present, they seem to be only increasing access to higher education rather than expanding access. Some of the likely reasons for such remarks may be: people with higher education have better "access" to MOOC; they are better prepared for the self-learning required in these courses and they are less concerned about recognizing them than students without higher education qualifications who have to 'prove' their skills to employers. With changes in funding for the higher education sector and austerity measures, the MOCS meets the needs of "knowledge workers" to update their skills and continuous professional development.

Therefore, at present MOOC seems to serve the sector of continuous professional development better. MOOC can also provide value for leisure time students. MOOCs are a new and reinforcing phenomenon in the context of budget cuts and increased education costs. The xMOOC type, encompassing the advanced Coursera, edX and Udacity free online

platforms with the best quality free content, have the potential to generate major changes in overall higher education and specifically entrepreneurial education around the world. Universities will need to adapt their education strategies online and on campus. The most affected will be low-ranking universities, located mainly in developing countries and regional universities, which tend to combine with other universities in state systems, for example.

Both cMOOC and xMOOC are a valuable and rapidly expanding opportunity for additional entrepreneurship education, reaching a large and diverse audience who can enjoy the freedom of self-taught social support through the learning network and through peers. Further research is needed to identify the amplitude of this phenomenon and to assess the appropriate timeframe for the changes needed, as well as the effect of MOOC on the overall learning environment.

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