Using MOOCs in High Education of Egypt

Hanan Khalil
Instructional Technology Department , Faculty of Education
Mansoura University
e-Mail:drhanan.khalil@gmail.com

Martin Ebner
Social Learning, Information Technology Services
Graz University of Technology, Steyrergasse 30, A-8010 Graz
e-Mail: martin.ebner@tugraz.at

Technology is paving a new way for many learners to connect with some of the best instructors and teachers on the world. From Stanford and MIT to Harvard and beyond, there are Massive Open Online Courses (MOOCs) sprouting up everywhere (Lepi, 2012). The term MOOC was first coined by Dave Cormier, Manager of Web Communication and Innovations, at the University of Prince Edward Island in 2008 for a large online class taught by George Siemens and Stephen Downes (Mcauley, Stewart, Siemens & Cormier, 2010). Since then a considerable debate has been reported over the definition of MOOCs. Littlefi (2012) defined MOOC as a massively open online class, a class that is free, has a huge following, and includes all of the components you need to learn away from the traditional classroom. Moreover, Waarad (2011) pointed out that MOOC is a Massive Open Online Course that is a gathering for participants, of people willing to jointly exchange information and collaboratively enhance their knowledge. McAuley, Stewart, Siemens and Cormier (2010) argued that MOOCs are generally online massive courses that carry no prerequisites other than Internet access and interest, no predefined expectations for participation, and no formal accreditation. MOOCs provide an online version of complete courses, with video instruction, online quizzes, forums to encourage student engagement, and graded to evaluate if students learn from the course (Markoff, 2013).

Butler (2012) pointed out that these virtual courses are taught by accredited professors from around the world to disseminate content, inspire collaboration, and assess students' work. MOOCs cover not only a very broad range of technical subjects such as math, statistics, computer science, natural sciences, and engineering, but, increasingly, also courses in social sciences and humanities (Beker and Posner, 2012). Unlike a one-way series of YouTube tutorials, MOOCs have start and end dates just like a traditional physical course, and students can be evaluated and in some cases certified for their work (Smith, 2012). Thompson (2011) indicated

that MOOCs participants include degree-seeking students, vocational learners, and people of all ages and locations, as well as that the course benefits from a rich diversity of ideas arising from many regions, cultures, and perspectives. At the same time, Zhu (2012) argued that MOOCs allow the hosting college or university to open its curriculum to a wider audience, extending the institution's voice into the community at large as it removes barriers to learning.

According to Waard (2011) there are many benefits for adopting MOOCs as a source for knowledge augmentation. The learning process takes place in an informal setting in comparison to a classroom setting. In addition, Chamberlin and Parish (2011) pointed out that thoughts and instruction in MOOCs can be shared, viewed, and critiqued by all the participants of the course. Fisher (2012) added that MOOCs are free courses; students don't have to enroll in the institutions which host the MOOCs. Furthermore these kinds of courses provide students with flexibility to perform the course work based on their time availability. Learners don't need a degree to follow the course, only the willingness to learn. Moreover, language barriers are less of a concern to students because of the availability of website translation services; instructors can organize it in any language you like (Waard, 2011). Due to their interactive nature, MOOCs allow for direct immersion and engagement within the topic at hand and allow for digital skill development.

Stanford and MIT recently started offering free online courses, and both universities enrolled thousands of users (Carson and Schmidt, 2012). Sebastian Thrun, one of the pioneers at Stanford, created the artificial intelligence course that attracted over 160.000 users. Inspired by this success he formed acompany called **Udacity**(*), a for-profit start-up that will use a similar model for online instruction, with the goal of making an entire computer science course available at no cost. Thrun's Stanford colleagues Daphne Koller and Andrew Ng also participated in the first round of Stanford MOOCs and subsequently spun off **Coursera**(*), another for-profit start-up. It was founded January 2012 and has reached more than 1.7 million learners so far. It aims to provide a platform for other universities to host similar online courses. Afterwards MIT and Harvard University produced the not-for-profit company **edx**(*) to offer free online courses on a variety of topics. It has 370.000 students in fall 2012 among its first official courses. Many of the initial offerings focused on science

(*) Udacity available at http://www.udacity.com/
(*) Coursera available at https://www.coursera.org/
(*) edx available at https://www.edx.org/

and technology topics. All courses in common are that they are presented by experienced professionals, scientists, and scholars in their respective fields. Learners that prove their competency through edX courses will receive a certificate from HarvardX. **Khan Academy**[(*)], also a non-profit organization founded by MIT and Harvard, graduate Salman Khan. This organization does not provide content from universities, but it does offer automated practice exercises; it recently debuted a curriculum of computer science courses. Much of the content is geared toward secondary-education students. Finally, **Udemy**[(*)] a for-profit platform that lets anyone set up a course was established. The company encourages its instructors to charge a small fee, with the revenue split between instructor and company. Authors themselves, more than a few of them with no academic affiliation, teach many of the courses**.**

Using MOOCs in High Education of Egypt

Higher education in Egypt is mainly government sponsored and regulated. There is a noted growth in the number of student's population in higher education institutions who directly enroll after finishing basic education (Baraka, 2005). In order to provide the growing population of Egypt with quality, accessible, and abundant educational opportunities, both the government and the private sector do their best to develop alternative programs and delivery methods. The delivery of e-learning programs has been recognized as one of the essential alternative delivery methods for education and training available around the world (Abdelwahab, 2008). Brooks (2009) identifies many reasons why institutions of higher education should adapt e-learning. It provides more opportunities to create active learning environments, address the learning styles of today's technology connected students, foster a greater variety of experiences outside the classroom, teach students how to do independent research, and make college more accessible to students.

The report by Beckstrom (Beckstrom et. al. 2004) presented a summary of two significant Egyptian government initiatives that should positively affect the realization of e-learning in Egypt; the Internet and Personal Computer Initiatives. Concerning the Internet initiative, the Ministry of Communications and Information Technology has been maintaining a free Internet access nationwide since 2002, where more than 15.000 ports have been set-up. Regarding the Personal Computer

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(*) Khan Academy available at http://www.khanacademy.org/
(*) Udemy available at http://www.udemy.com/

Initiatives, affordable PCs and Laptops have been made available to students and professional within a monthly installment plan that could be also financed up by a low interest loan.

Moreover, numerous e-learning projects have been launched by a number of Egyptian government universities since 2002 such as:

- HEEPFE: Higher Education Enhancement project, sponsored by World Bank.
- Open source platform for Higher Education, named MEDA, sponsored by UNESCO.
- Finally Tempus projects, sponsored by European Commission Directorate for Education and Culture.

E-learning is considered as a means of alleviating conventional educational problems that faces Egypt (Baraka, 2005). One of the recent innovations in the research field of e-learning is about *Massive Open Online Courses*, shortly MOOCS. MOOCs have become a surging trend in higher education; traditional academic programs are scrambling to figure out where that trend is headed (Cormier, Siemens & Downes, 2011). These open courses are online, free of charge, open to anyone in the world who has a laptop and an Internet connection (Beker & Posner 2012).

MOOCs can provide innovative solutions to problems such as over-crowded classrooms especially in faculties like medicine and laws that have huge number of students, high prices of traditional educational books, transportation problems, need for continued education and specialized training, and those in the middle of their careers. Adapting MOOCs by Egyptian universities can be a further step in higher education. It'll bring teaching to multitudes of students who otherwise wouldn’t have access to it, without having to pay expensive tuition or leave their works. George Siemens, wrote about MOOCs saying, “Learning is now happening through communities of practice, personal networks, and through completion of work-related tasks, in an environment in which, “know-how and know-what is being supplemented with know-where the understanding of where to find knowledge needed”. (George Siemens, 2005, 4).

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