Chinese And Moroccan Higher Education MOOCs: Rationale, Implementation and Challenges

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Abstract— Integrating technology in teaching helps students to understand all the concepts they are taught in class. Technology makes teaching a walk in the park, a paperless class is environmental friendly, teachers are able to track their students’ progress, students can access eBooks and other learning information at anytime of the day, anywhere and distance learning has been made possible. The rapid increase use of information technologies and E-learning throughout educational institutions is changing the way teachers and students learn, work, and establish collaboration. Recent declarations from top Universities to turn to new forms of educational delivery called MOOCs (Massive Open Online Courses) The MOOC movement have recently invaded the field of higher education in the world to the point that some describe it as the undisputed future of the university. Authors claim that online learning and hybrid devices are becoming more responsive to learners’ needs at a time where constrained educational budgets and accompanying decrease in professional development opportunities makes it hard for the universities to keep up with the expectations and demands of the 21st century learners. In line with this, this paper sets out first to present the MOOC framework, placing it in the wider context of open, online learning. Then, it discusses how the key elements of openness, anytime and anywhere learning of this new educational trend can meet learners' needs for flexibility, collaboration and agency. This paper also argues for the need to adopt a blended learning approach that combines both online and face-to-face experiences to optimize learning in Moroccan higher education. Finally, some challenges are discussed.

Keywords— blended learning; learner’s needs; massive open online course (MOOC); multi-access learning; open education.

I. INTRODUCTION

The education sector is growing in the world with respect to quality of education and the technology used for delivering the required information to the students. The paper reflects on the use of technology in education systems of two Asian countries i.e. Morocco and China based on the statistics gathered from different sources. The statistics issued by UNICEF reflect that adult literacy rate in China is 93.7% as compared to 56.4% in Morocco which reflects that the Chinese are paying more attention in making their population as asset through education. China being the leading nations in Asia has focused on use of technology in their class rooms even for distant learning in the far flung areas of the country. Dale F. Eickelman in his book Knowledge and Power in Morocco, contended “The Education of a Twentieth-Century Notable that Morocco had to struggle with evolution of its education system mainly due to Islamic notables hindering the ways for modern education specifically based on modern technology”.

Integrating technology in teaching helps students to understand all the concepts they are taught in class. Technology makes teaching a walk in the park, a paperless class is environmental friendly, teachers are able to track their students’ progress, students can access eBooks and other learning information at any time of the day, anywhere and distance learning has been made possible.

MOOC is an acronym; it stands for massive, open, online, course. The course is massive because it involves a large numbers of participants, including both instructors and learners who cannot be physically present same time same place around a specific topic of learning. The course is open because the material put by the facilitators, the work done by the participants are accessible to or shared between all the people taking it. It is also open in the sense that it is free. Participants might pay to get a credit through an institution,
III. JUSTIFYING A MOOC APPROACH TO HIGHER EDUCATION IN CHINA AND MOROCCO

According to a research conducted by the British council, and by Jeremy Chan (2013), China has the biggest market for academic and education items in the world. While considering education as a commodity, the largest education market is the country of China. To be specific, it has been estimated that the number of students in Chinese educational facilities is about 400 million, if not more. Further, it is claimed that about 7.5 percent of the figure, that is, 30 million students are in the higher education sector. The students grouped together are estimated to be equivalent to the population of 3 countries including U.S, Australia and UK.

As a matter of fact, many areas of society have undergone rapid change enabled by technology; however, education has been by comparison in a dormant state. This is because most universities in Morocco continue to offer the majority of their courses face-to-face.

Consequently, easy access is most of the time limited to only those learners who live within the areas surrounding the institutions. The increase in university enrollments, the regrettable rates of dropping out, the demands of the twenty-first century learners, and technological development make a radical shift to new approaches in higher education in Morocco necessary. Therefore, dialogue has started recently on the future of the Moroccan university, the importance of catching up with the technological advancement, and responding to the different demands of the new generation of Student. In fact, the literature emphasizes that research on how people learn has adopted new perspectives as a result of the advent of new technologies that affect the teaching/learning process. According to Calkins and Vogt (2013) “Next generation learning” research is informed by:

- A deepened understanding of learning: how, where, and why students (and people of all age) learn most effectively.
- A deepened understanding of learners: what’s required to engage and meet students’ complex, individual needs.
- The recognition that the world has changed: so thoroughly, in fact, that it requires a much higher level of achievement for much higher percentages of students.

In this respect, the massive open online course (MOOC) trend has lately emerged in higher education in the world, and the advocators claim the anytime/anywhere mantra and the principle of multi-access learning that underlie the MOOC movement can attend to learners’ needs for personalization, flexibility, and agency. Code (2010) explains that learners’ agency is reflected in their choice and abilities to interact with personal, behavioral, environmental, and social factors that make up their learning context. So, learner agency can be carried out through three different ways: personal, proxy, and collective. Personal agency refers the learners’ ability to initiate action. Proxy agency is a socially mediated form of agency through which individuals decide to have others act at their own will in order to attain the results they desire. Collective agency makes it possible for people to use interactive and dynamic means to work together towards common objectives (Bandura, 2001).

To demonstrate, MOOCs make it possible for learners who cannot attend classes regularly to have access to live-video or video-recorded lectures and assignments whenever and wherever they can. Hence, this mode of learning fosters learners’ ability to control their own pace of learning. Also, one of the prominent aspects of the MOOC framework is how learners can learn from each other within an online course community.

Cadi Ayyad University of Marrakech is the pioneer and leader in the educational innovation called MOOC in both Morocco and Africa. Since 2013 the university has started filming courses and putting them online available to students via the university’s servers.

In an interview with the Maghreb Arab Press Mr. Miraoui, the president of the university, stated that 65,000 students were enrolled in 2014, 18 000 more than the year before, for only 1400 teachers. This is why the university launched its own MOOC to facilitate access to education for learners who work in crowded classes, and optimize faculty resources.

The camera of Réussite, a program produced by the group Jeune Afrique, Canal+ and Galaxie Press, reported the experience of a Professor of Physics who can now, thanks to the MOOC technology, give a tutorial session to five hundred students at a time. In a traditional university this tutorial cannot be given but in small groups of maximum 25 students because of the size of the laboratory. The MOOC can solve the problems of making such kind of tutorials, mainly: not enough laboratories, not enough equipment, and not enough time.

IV. A BLENDED LEARNING APPROACH TO INTEGRATING MOOCS IN MOROCCO

The recent years has seen Morocco invest more on green technologies. This influence can be linked to the Chinese influence in the continent. Notably, the bilateral relation between China and Morocco has seen the country benefit more in terms of technology of education. This is mainly because it is unlikely that the Moroccan universities can abandon face to face lectures as the main delivery mode. However, since the learning styles and requirements of learners differ, it’s mandatory for these institutions to use a blend of learning approaches to be responsive to these differences. Adapting the MOOC principle to the Moroccan university context, a university may use some version of a
course management system application to connect all students within a specific department. Through this platform, students can access videos of lectures not just but their group teacher but also teachers of the same subject in the department, track assignments and progress, interact with professors and peers, and review other supporting materials, like PowerPoint presentations or scholarly articles. At a larger scope, teachers of the same major across universities of the country can collaborate to structure online courses and allow students to benefit from the lectures of not just their own teachers but other teachers in other universities, attending hence to different learning styles. These include face-to-face traditional instructor-led lectures, synchronous online, and asynchronous online modes.

A. Synchronous Online

According to Irvine et. al (2013), in a synchronous online framework, learners on campus are together in a multi-access enabled classroom and have the instructor present in the classroom with them. Learners who cannot attend participate by joining in via Internet webcam and content can be exchanged between participants using desktop sharing.

B. Asynchronous Online

McKinney et. al (2009) argues that having an asynchronous access to archived synchronous learning events may be a suitable option for those who are unable to attend synchronously. Students can listen to or view archive recordings of lectures (podcasts). To move the asynchronous group beyond merely watching archived class videos, student collaboration can be enhanced through discussion boards, separate personalized synchronous student-led or teaching assistant-led sessions for a pod within a different time zone.

V. THE RISE OF E-LEARNING IN CHINA

Technology has become a very critical facet of the modern society and its footprints have been felt in the education sector the most. In the contemporary Moroccan and Chinese societies, technology has been embedded in to learning with the sheer objective of improving results and learning experience. A precise comparison of how technology has been integrated in to the education systems of the two countries indicates that China has recorded more success but both countries have reported advantages as well as disadvantages of technologically hinged learning.

Market of E-learning in China can be separated in three sectors: The first sector: online degree education. The second sector: enterprise E-learning, language training and the last one is professional training for certificates.

From 2004 to 2012, online degree education has been quadrupled. In 2012, the overall market revenue reached 64.6 billion RMB ($10.4 billion approximately) and there were 1095 thousand new registers professional E-training courses and 1270 thousand new students for university E-learning courses. Online professional trainings and language trainings also take a stable rate of increase.

In China, for online higher education, students should take exams to get the degree certificate and many universities including Beijing University and TsingHua University give this kind of courses to educate Chinese people.

VI. LEARNERS' MOTIVATION AND INVOLVEMENT

In the context of distance learning research, how to motivate student to use MOOCs for learning is one of the most frequently studied variables. It results from the interplay of goals, emotions, and the person’s sense of personal agency. Motivated students for learning, spent more time and effort to achieve higher levels of performance than those who were not confident and motivated.

Pintrich and De Groot affirm that student with high learning motivation tended to engage in more meta-cognitive strategies and were likely to persist at a task than student with low learning motivation.

Current research also suggests that learning involvement is another variable that influences students’ learning and satisfaction within traditional and/or online learning environments. Learning involvement is defined as the degree to which learners interact with other learning component (i.e., learning content, learning activities, peer learners, tutors, and instructors) and are engaged in the learning process.

Our research team is interested in the periodic learners because the fixation of learning periods has a major role in learning by encouraging their personal touch. They become more involved and provide the best of themselves; this also helps to empower them.

The purpose of this paper is to propose a process of collection and transformation of traces and calculation of activities’ indicators. In order to measure learners’ motivation and involvement in distance learning, we will address the collection of traces of learners’ activities in Moodle platform.

VII. CHALLENGES and Future Prospects

With China being the largest higher education market in the world (25 million students at undergraduate level) and at the same time having the largest internet population worldwide
MOOCs have huge potential in China. To implement a MOOC framework in Morocco or in China and create a meaningful learning environment a variety of issues need to be addressed; these are mainly institutional, pedagogical and technological factors (Singh, 2003).

The institutional factors are mainly related to the preparedness of the organization, the availability of content and infrastructure, and the implementation of a needs analysis to understand learners’ needs.

MOOCs are free of charge courses for massive number of learners on the web; it must be considered that course design and the way of presenting course materials, and interactivity through social networks and study groups [13].

The Pedagogical or Andragogical dimension is concerned with the combination of content (content analysis), the learner needs (audience analysis), and learning objectives (goal analysis). The pedagogical or andragogical dimension also addresses the choice of the most appropriate delivery method. It is also concerned with whether both the teachers and students have the knowledge required to use new technologies and, possibly, more sophisticated instructional practices.

The technology issues need include creating a learning environment and the tools to deliver the learning program. They include also the choice of the most effective learning management system, that would manage multiple delivery types and a learning content management system that catalogs the actual content (online content modules) for the learning program.

**VIII. CONCLUSION**

The use of technology in the Republic of China’s education system is highly advanced as compared to the Morocco’s system of education. Technological advancement in the education in China has seen many graduates and high school students in China perform well in the world market where digital technology is highly valued. It is estimated that the education market in China has attracted over 450 million students and thus the use of technology in teaching has improved efficiency and accountability. It is however important to note that Morocco is also embracing technology in education and it is an issue that is very essential for the ultimate improvement of the education sector.

Moroccan higher institutions need to adopt reform strategies that are mainly informed by students’ needs. These institutions need also to provide via multi-access learning delivery modes. In this respect, the multi-access Learning framework that underlies MOOCs supports student choice and agency. When talking about MOOCs as an educational technology, the primary focus should not be the technology itself, but rather the pedagogy. That is to say, we should first specify the learning experiences we want to create, the learning outcomes we want to achieve and then enable them with technology.

## References


