MOOCS IN DEVELOPING COUNTRIES : OPPORTUNITIES AND CHALLENGES

*Dr. Om Prakash Tiwari

Abstract

Over the last few years, Massive Open Online Courses (MOOCs), as a relatively new phenomenon, have been one of the most stimulating and debatable topics in the field of online education. Its innovative potential with regard to education in general and higher education specifically can not be denied. This alternative type of learning, which deviates from the one in traditional classrooms, is seen as a hope for developing countries to expand access and improve the quality of their higher education**.** In this paper, which is descriptive in nature**,** the author has explored the opportunities and challenges in development and implementation of MOOCs in developing countries for widening equitable access to quality higher education. Further, this paper also suggests certain measures for reducing the barriers and maximizing the potential use of MOOCs in developing countries.

Introduction

MOOCs' potential of 24 hour access to information, self-paced learning and cost effectiveness has attracted millions of learners across the world. MOOCs can reach out to a massive number of participants online and allow for interaction among diverse learners across ages, cultures and nationalities. As a result, MOOCs have received much attention from the media and have gained significant interest from institutions of higher learning (IHLs). There are now more than 4200 MOOCs offered by more than 500 Universities (Valenzuela, 2016)

In the context of developing countries, there is a need for huge improvement and advancement in terms of both higher education and access to new technology. Implementation of MOOCs in developing countries may poses various challenges because such countries face many difficulties in various spheres including infrastructure, structural, governmental problems, access to digital devices, internet connectivity, electricity. Hence, many questions remain: to what extent will MOOCs meet the educational needs of developing countries, namely to expand access to education? What will be the role of MOOCs in higher education in developing

*Assistant Regional Director, Indira Gandhi National Open University, Regional Centre Bhagalpur

countries? Does expanding MOOCs mean raising/expanding access for "underserved people" to higher education?(Clara Eugenia Franco Yáñez, Dilnoza Nigmonova,Wipada Panichpathom, 2014)

In this paper, the opportunities provided by MOOCs in higher education in developing countries are explored. Further, challenges encountered in the development and implementation of MOOCs in developing countries has been discussed. Finally, certain measures have also been suggested for reducing the barriers and maximizing the potential use of MOOCs in developing countries.

Opportunities provided by MOOCs in higher education in developing countries:

Specifically, MOOCs provide opportunities for widening equitable access to quality higher education in developing countries in following way:

a) Enhancing access to educational opportunities for youths and adults of developing countries

MOOCs can play a very important role in providing access to quality higher education to growing number of individuals in developing countries. Further, MOOCs not only provide access to quality educational materials over the internet but also help learners to learn with flexibility. Besides the learning itself, MOOCs provide the opportunity to connect with people who share the same interests or professional profiles. As a result, learners in general are able to reach out to new groups and generate new ideas to initiate novel projects or other interpersonal engagements for a wide variety of purposes (Patru and Balaji, 2016).

b)Democratization of higher education

Up to now, higher education has been the privilege of the few, but with access to MOOCs, economics, social status, gender or geography no longer determine a student's access to education or opportunity for success. Therefore, MOOCs are considered a means for democratizing education. Now, anyone can register and take courses from elite institutions. With the availability of affordable technologies, MOOCs increase access to an extraordinary number of courses offered by world-renowned institutions and teachers (Patru and Balaji, 2016).

c) Contribution to the Return On Investment (ROI) of higher education for society

MOOCs can contribute to the return on investment (ROI) of education. Learning is a highly valued good, as it is the driving force that enables the advancement of individuals and societies as well as economic, political and cultural development. Access to quality education

offers citizens a better standard of life and the ability to engage more productively in all areas of human endeavor. Hence, it is highly advantageous for both individuals and society to invest in education. A high ratio of participation in tertiary education is especially beneficial for governments and society, since well-educated people present lower unemployment rates, live longer, have better health (thereby incurring lower health costs for society) and are more satisfied with life in general (Baum, Ma & Payea, 2013).

d)Minimizing the cost of education

Economies of scale, which occur when long run average total cost falls as the number of units of production increases, produce the lower unit costs associated with MOOCs. MOOCs not only allow Colleges and Universities to realize economies of scale by serving a larger market, they also let institutions avoid the costs of duplicating effort (Stansbury, 2014).

Issues and challenges in implementation of MOOCS in developing countries:

As mentioned above, MOOCs present many opportunities to disrupt traditional higher education modes of learning and facilitate lifelong learning for adults. However, there are issues and challenges to overcome such as the quality of courses and completion rates as well as the award and recognition of credit, pedagogy etc.

a)Infrastructure related issues

Developing countries have poor ICT infrastructure in comparison to developed countries. The United Nations International Telecommunication Union (ITU) has developed ICT Development Index (IDI) to measure the level of advancement of ICT in more than 150 countries globally. The ICT Development Index is based on 11 ICT indicators, grouped in three clusters: access, use and skills. By employing this benchmark tool, the comparison of the level of advancement of ICT between developed and developing countries has been made by ITU in 2017 (table 1)

Table-1

Comparison of ICT Development Index (IDI) between developed and Developing Countries

Parameters	Developed Countries	Developing Countries
IDI 2017 Value	7.52	4.26
IDI Access Sub-Index Value	7.83	4.80
IDI Use Sub Index Value	6.91	3.32
IDI Skills Sub Index Value	8.12	5.05

Source : ITU2017 global ICT development Index

These data very clearly reflect disparity in the availability of information and communication technology (ICT) infrastructure between developed and developing countries of the world. Because of poor availability of ICT infrastructure, MOOCs do not particularly address the problems of access to higher education in developing countries. Further, MOOCs are still out of reach for the majority of the population. People who do not have access to higher or even basic education are very likely also not to have access to MOOCs because of issues such as a lack of access to broadband internet or even to a stable internet connection which is very much required to watch the videos which are a substantial part of most xMOOCs and for many forms of course interaction such as constant e-mails, participation in online forums etc (Clara Eugenia Franco Yáñez, Dilnoza Nigmonova & Wipada Panichpathom 2014).

b)Issues in the pedagogical context

Three of the most pressing critiques of MOOCs are (a) lack of an effective system to measure and validate the progress of the learners (b) how to integrate the course credits into the present system so that it counts towards a degree from a college and (c) how do we ensure personalized guidance and mentorship (Yuan and Powell, 2013).

c)Issues in assessment and certification

Assessment is an emerging issue in literature on MOOCs leading to questions like "What sorts of learning can be assessed at scale?", "How should individuals be authenticated so that the correct person's work is being assessed?", "How can cheating be prevented?" and "Who should decide how much University credit a MOOC is worth?" (Bayne & Ross, 2013). It becomes clear that "openness" of a MOOC has a very different future in a system of accreditation than that it does in informal learning settings (Admiraal, Huisman & Pilli, 2015).

Most MOOCs make use of the online quizzes during and after the video lectures, to assess students' performance. The "short answers" questions do not have 'timely' feedback, while the multiple choice questions do have the automated feedback for the users. The limitation of assessment of the MOOCs would be the inability to evaluate and give feedback to a large student body in a timely manner. (Clara Eugenia Franco Yáñez, Dilnoza Nigmonova,Wipada Panichpathom, 2014; Yuan & Powell, 2013).

d)Issue of drop-out rates

Despite the great enthusiasm for and rapid growth of MOOC courses and platforms, there has also been rising concern over consistently high dropout rate of MOOC learners. Although

many thousands of participants enroll on these courses, the completion rate for most courses is below 13% (Parr, 2013). As noted by Kolowick "massive open online courses have gained renown among academics for their impressive enrolment figures and conversely for their unimpressive completion rates" (Kolowick, 2013). Few MOOCs have a percentage completion, which reaches double figures (Jordan, 2013). Of the millions of learners who have already participated in MOOCs, the vast majority do not get to the stage of obtaining a certificate of completion.

Many attribute these low completion rates to lack of interaction (Kopp & Lackner, 2014) or to the fact that completion is not important, as learners usually enter to look for a specific piece of information they need (Matthew, 2015).

Language as a barrier

Language is also one of the most frequently cited potential barriers of access to MOOCs. Most developing countries have local languages and only a small proportion of the population is competent in an international language English. The majority of the MOOCs today are run in English. We can find that Coursera offers 538 different MOOCs in twelve different languages, but of which 475 are in English (88.28% of them). Only 28 are offered in Mandarin (5.20%) and the courses in French, Spanish and Russian combined make up only 8.17% of MOOCs (Coursera, 2013). The platform EdX offers most of its courses only in English, stating that "Some courses are offered in Mandarin with English subtitles. A few are offered solely in "Mandarin"(EdX, 2013). Thus we may say that majority of people in developing countries are not competent enough in English language to the level to take up online courses (Liyanagunawardena, Williams and Adams, 2013).

Reducing the barriers and maximizing the potential use of MOOCs in developing countries

The potential use of MOOCs in developing countries may be maximized in the following way (Clara Eugenia Franco Yáñez, Dilnoza Nigmonova, Wipada Panichpathom 2014, Commonwealth of Learning 2016, Christian Friedl, Anita Maček, Oana Driha, Darco Jansen, Sarah Bridgman, 2016).

a) There should be collaboration between Universities and MOOCs platforms to ensure that MOOCs are implemented with the consideration on the specificities of culture, tradition and

pedagogy of that country or region. Despite the fact that MOOCs are open and accessible to everyone, if the contents are not adjusted to reflect the 'regional' and 'cultural' values of the country, perhaps it would not be as successful as we would desire them to be. For instance, to have MOOCs in local languages would be one of the ways to adapt to the specificities of that educational system.

b) There is a need for sector specific strategies in order to harness MOOCs for skills development and capacity building. Generic approaches are not adequate.

c) Open licensing policies should be adopted by the Governments for content and software to augment the effectiveness of using MOOCs in development.

d) There is need to focus on capacity-building amongst faculties in the management of MOOCs.

e) There is need to develop a system for better recognition of online course achievements. Improved certification schemes would help online learners by documenting their newly acquired skills.

f) Awareness should be raised regarding the potential of MOOCs within the professional community.

g) Quality of the learning experiences of a MOOC (i.e. does it provide practical, hands-on learning experiences grounded in real life) must be assessed.

Conclusion

MOOCs have a distinct advantage in their ability to scale and provide education to large number of learners simultaneously including those in developing countries. Decreasing costs and increasing prevalence of ICTs worldwide offer a tremendous opportunity for experimentation in expanding education quality. MOOCs have potential in developing countries to enhance skills and capabilities of specific groups of professionals.

However, as discussed in this paper, MOOCs can only improve the quality and access of higher education in developed countries where majority of population already has the formal educational experience with well-developed learning skills, while leaving behind the majority of population of developing countries which do not have formal educational experience and well-developed learning skills. Further, when developing countries try to implement MOOCs, they face considerable challenges such as financial constraint, internet access, limited trained teachers, policy issue, scalability, language problems, pedagogical issues, dropout rate, student

motivation etc as discussed in the paper. In the near future, there will be need to keep updating MOOCs' pedagogy to find ways to define, measure and assure pedagogical quality and to explore further ideas that could help MOOCs in addressing the particular needs of developing countries .

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