Role of MOOCs in Indian Higher Education

Dr. Vijeta Banwari
Assistant Professor, Maharaja Surajmal Institute

ABSTRACT

This paper examines the role of Massive online open courses (MOOCs) in Indian higher education. MOOCs have a major role to play in increasing Gross Enrolment Ratio (GER) in Higher Education. One of the biggest problems that Indian higher education is facing is lack of applicability for the industry. Most of the MOOCs offered are closely related to industry demand and needs. Also in India, the major part of population resides in rural areas and people can’t afford to get quality education. Massive Open Online Courses (MOOCs) are cost effective way of learning. The Advantages of MOOCs are diverse courses offered by top universities and professors are available, free access to the content and lectures, Access of courses in diverse areas to diverse audience etc. However, MOOCs cannot replace the experience of real classroom learning and physical presence of a teacher. It cannot provide personalized content and individual attention by the teacher. Internet connection is a basic requirement and can be a barrier in remote areas where internet connection is not strong. It is difficult to keep track of students’ assignments and involvement. MOOC cannot replace the conventional system of education and learning but it has a huge role in bridging the gap between know and know nots and match supply with the demand.

Keywords: Gross Enrolment Ratio (GER), Massive Online Open Courses (MOOCs), fourth industrial revolution

I Introduction

Higher Education is of utmost importance for the economic development of country. Its role in developing countries like India is even more. In the era of fourth industrial revolution, battles between nations are not fought with weapons but with knowledge. This new era has brought it with immense opportunities along with immense challenges. Old jobs are being depleted and new jobs are being created. These new kind of jobs require new skills. Reskilling, upskilling and lifelong learning are some key words which have become more relevant than ever. The quality of and access to reskilling, upskilling and re-training support will determine how three billion people already in the world’s workforce will fare in the transition underway and engage with new opportunities in the labour market. The kind of jobs, the kind of skills that will be relevant in future is highly uncertain. Thus, the only way of survival is adaptability to changing situations and learning new skills relevant. Agile, portable and sustainable safety nets can provide short- and long-term benefits and services, as well as income security. They can also help connect workers to re-training and re-deployment opportunities, minimizing both the social cost of labour market disruptions and the waste of previous investments into people’s skills through prolonged non-use. Governments, insurers, non-profits, unions, and other organizations will need to work together to determine the appropriate mix, reach and financing models. (World Economic Forum 2018).

In India, Gross Enrolment Ratio (GER) in Higher education has increased from 24.5% in 2015-16 to 25.8% in 2017-18 which is calculated for 18-23 years of age group. GER for male population is 26.3% and for females, it is 25.4%. For Scheduled Castes, it is 21.8% and for Scheduled Tribes, it is 15.9% as compared to the national GER of 25.8%. (AISHE, 2018). Though there is slight improvement in GER but it is clearly not enough. Access of Education needs to be increased in order to increase GER. Massive online open courses
(MOOCs) have come up as a solution to the issue of quantity and access. MOOCs have made it possible for anyone to pursue a course from any university in the world through internet. This paper examines the role of Massive online open courses (MOOCs) in Indian higher education.

II Review of Related Literature

Malik, Sumeet (2015) in his paper ‘Indian MOOCs (Massive Open Online Courses): Need of the hour’ discusses the concept, features and role that MOOCs can play in Indian context and already existing popularity in terms of participation by Indian students in MOOCs over famous platforms such as Coursera, EdX and Udacity. The participation by Indians has been overwhelming in the major platforms such as Coursera, edX and Udacity. Indian MOOCs may also have subject topics that have not been explored yet, such as Classical Indian Music, Indian History, Yoga, etc. They can also be used to provide high quality education to remote parts with subjects that require intensive graphics and visual illustrations.

Devgun, P (2013) in her paper ‘Prospects for Success of MOOC in Higher Education in India’ proposes a framework for the success of MOOC’s in India to revolutionize the current education sector. If accurately implemented, the massive and economic nature of MOOC’s can provide a solution to the problems of the youth. Author provides an insight to the enthusiasm behind the MOOC woven into blanket of MOOC for Indian youth providing them jobs from the industry.

Chauhan, Jyoti. (2017) in her paper ‘An Overview of MOOC in India’ discusses theoretical and technical background of the platforms available in India. Currently, NPTEL, mooKIT, IITBX, and SWAYAM are the platforms used in India for offering courses. In recent years, the enrolment in Massive Open Online Course (MOOC) has increased tremendously. India after US is dominating the global growth in enrolments. Seeing the growth of enrolment from the country and satisfy their need of education, India has started various projects for offering MOOC courses. There are some challenges that are faced in implementing MOOC in India. With the launch of SWAYAM, some of these issues are already addressed.

Trehan.S, Sanzgiri.J, Li.C, Wang. R, Joshi.RM. (2017) in their paper ‘Critical discussions on the Massive Open Online Course (MOOC) in India and China’ situates the discourse around MOOCs from the unique perspectives of India and China with three broad objectives of sharing MOOC development in these countries, conducting a high-level discussion of the potential value of MOOCs for their HE systems and critiquing current issues with MOOC development there. This discussion is timely, since MOOC discourse in the international literature has swung between trumpeting MOOCs as “disruptive” technologies to warning of the “MOOC delusion”. We find that the concept and practice of MOOC in India and China are emerging. From the supply side, there is a need to focus on sound design, quality and accessible delivery, multi-lingual facilitation and efficient regulation of MOOC-credits, besides development of critical literacies for MOOCs in learners to realize the potential and promise of the MOOC.

Buhl, M., & Andreasen, L. B. (2018) in their work ‘Learning potentials and educational challenges of massive open online courses (MOOCs) in lifelong learning.’ discusses about benefits and challenges of MOOCs. According to the authors, recent developments of MOOCs seem to be driven by commercial interests rather than by pedagogical concerns. MOOC providers are creating new business models which are gradually connecting the educational activities of MOOCs with various degrees of payment. As an educational newcomer, the MOOC phenomenon prompts optimism as well as scepticism mostly because it is being considered within the discourses it disrupts. As often happens when a new technology emerges, hopes rise that the ultimate education formula has finally arrived. The “massiveness” and the “openness” are intriguing thought patterns in a world with ever more inhabitants, ever more need for education, and an ever-growing need for new solutions for societal and environmental issues. But an exaggerated confidence that e.g. self-directed learners follow learning patterns from well-known constellations by themselves or take up a new constellation – albeit on their own – may lead to misunderstandings of the ways in which “massiveness” and “openness” work for users.
Nath.A, Karmakar.A, Karmakar.T (2014) in their paper ‘MOOCs Impact in Higher Education Institution: A Pilot Study in Indian Context.’ Examined MOOCs methods and its impact on higher education institution. According to authors, following changes are almost unavoidable in Higher educational Institutions (HEI) such as (i) Globalization and the increased momentum for internationalization in HEI, (ii) Worldwide increased demand for access to HEI with a projection that there will be 120 million students worldwide by 2020 which means MOOCs will be one alternative to cater these needs. The time is not very far when MOOCs will be one alternative method for implementing green computing in HEI and giving degrees, diplomas to learners those who are situated in a remote place. There is a lot of scope in India to introduce MOOCs to make more sustainable and financially viable education policy. The reputed universities in India should come forward to start MOOCs in coming years to solve 100% literacy program and also to spread HEI.

III Background of MOOCs

Oxford dictionary defines MOOCs as “A course of study made available over the Internet without charge to a very large number of people.” Bates, 2015 in specifies the essential elements behind each acronym of MOOC. Common in these definitions are the following aspects to give meaning to the elements of a MOOC:

- Massive: designed for in theory unlimited number of participants. This means that the course is designed such that the efforts of all services does not increase significantly as the number of participants increases.
- Open: access to the course is free without entry qualifications.
- Online: the full course is available through the internet.
- Course: the offering is a course, meaning that it offers a complete learning experience, i.e. structured around a set of learning goals in a defined area of study and includes the course materials, quizzes, feedback, examination and certificate of completion.

MOOCs are further divided into: cMOOCs, xMOOCs and quasi MOOCs

- cMOOCs are based on principle of dynamic development of content. Thus, there is no predefined or pre-set reading material, content. Materials are developed on the basis of online discussions and collaborations with the learners. cMOOCs are based on a connectivist pedagogical model that views knowledge as a networked state and learning as the process of generating those networks and adding and pruning connections. Of particular importance in cMOOCs is the view of knowledge as generative and the importance of artifact creation as a means of sharing personal knowledge for others to connect to and with. In contrast with xMOOCs, cMOOCs are largely open in terms of the activities that learners can pursue related to the theme, with limited structure and weekly themes. (McGreal, R., Kinuthia, W., Marshall, S., & McNamara, T., 2013)

- xMOOCs are based on conventional approach where the courses are well-structured and have predefined or pre-set reading material. The pedagogical model that underpins these courses is one of “teacher as expert” and “learner as knowledge consumer.” Learning is primarily a process of the learner duplicating the knowledge structure set by the course designer and the instructor teaching the course. Weekly course topics are addressed through recorded lectures that range from 3 to 30 minutes in length. Udacity, not affiliated with a university, relies on short lectures and interactive activities that rarely exceed five minutes. Coursera, which includes traditional universities as members, offers video lectures that typically range between 15 and 30 minutes. In order to meet the challenges of large numbers of students, assignments are computer-graded in xMOOCs. Direct instructor feedback is not common, except in discussion forums where teaching assistants and the course instructor respond to student questions. (McGreal, R., Kinuthia, W., Marshall, S., & McNamara, T., 2013)
Quasi-MOOCs provide Web-based tutorials as OER, such as those of the Khan Academy and MIT’s OpenCourseWare (OCW). These are technically not courses. They consist of OER intended to support learning-specific tasks such as an operation in algebra, or they are treated as asynchronous learning resources that do not offer the social interaction of cMOOCs or the automated grading and tutorial-driven format of xMOOCs. These resources are loosely linked and are not packaged as a course. (McGreal, R., Kinuthia, W., Marshall, S., & McNamara, T., 2013)

MOOCs were first started in 2008, created by George Siemens and Stephen Downs, and was called “Connectivism and Connective Knowledge/2008” or CCK08. It was created as a credit course for the University of Manitoba. CCK08 had 25 students who had paid fees for the course and around 2200 learners who took the course for free. MOOCs really took off in 2012, when Professors Sebastian Thrun and Peter Norvig of Stanford University offered the online course called “Introduction to Artificial Intelligence”. This course had approximately 1,600,000 students participating from 190 countries. After the success of Intro to Artificial Intelligence, Thrun and Norvig started Udacity, a business model for online knowledge sharing. There are also a few other MOOCs providers, include Coursera and EdX. (Srikanth, M, 2017) Since then MOOCs have experienced huge growth in number of registered users. According to a MOOC report by Class Central, an online website that keep watch on MOOC trends Around 23 million new learners signed up for their first MOOC in 2017, taking the total number of learners to 81 million. This is similar to the 23 million learners added in 2016. The top two MOOC providers in the world (by registered users) added similar numbers of learners in 2017 as they did in 2016. (Shah, 2018)

Top five MOOC providers by registered users are:

1. Coursera – 30 million
2. edX – 14 million
3. XuetangX – 9.3 million
4. Udacity – 8 million
5. FutureLearn – 7.1 million

MOOCs continue to rapidly evolve. The MOOC movement now has many different faces and is far more complex and nuanced than simply being a platform where traditional elite universities offer free online courses to help promote their international brands. Indeed, with the emergence of the third wave or generation of MOOC, and more specifically new global alliances and flexible credit earning pathways contributing to micro-credentials and even full degree programmes, many governments, policy-makers and institutional leaders would benefit from deeper appreciation and understanding of the evolution of the MOOC. Recent developments illustrate how the MOOC is starting to influence thinking about the nature of traditional campus-based education and through new alliances opening up opportunities for more flexible credit earning models of continuing professional development and life-long learning. It follows that we can expect the MOOC movement will continue to evolve. (Brown, 2018)

IV MOOCs in India

Learning through Massive Open Online Courses will enable in all Indians who want to learn, earn, teach or innovate, the capability to realize their true potential and transform our country. (FICCI, 2014)

One of the biggest problems that Indian higher education is facing is lack of applicability for the industry. There is a huge gap between the demand of the industry and what is being taught in educational institutions. In the fourth industrial revolution, where skills are becoming increasingly obsolete, new technology must be learned and new skill must be developed to survive in the competition. Most of the MOOCs offered are closely
related to industry demand and needs. Also, it is abundantly clear that in India there is a need to significantly expand opportunities for post-secondary education in a big way. This comes at a time when there has already been a very significant expansion in the last decade. The anticipated expansion should happen while we simultaneously and significantly improve the quality of instruction. Given that faculty is in short supply (itself an understatement), we must resort to technology enabled learning to help fill existing gaps in access & quality as also grow opportunities for post-secondary education. (FICCI, 2014)

Also in India, the major part of population resides in rural areas and people can’t afford to get quality education. Massive Open Online Courses (MOOCs) can definitely considered as a game changer. This cost effective way of learning through online medium definitely possess a bright future in India as Government doesn’t have to spend money on the construction of schools and colleges, students do not have to travel up to long distances. One only needs to get a laptop or desktop and an internet connection. (Subrahmanyam, V. V., & Swathi, K. 2017)

V Advantages and disadvantages of MOOCs

MOOCs have the potential to drastically change the Indian Higher Education. Problem of lack of faculty and resource crunch

A new model built around massive open online courses (MOOCs) that are developed locally and combined with those provided by top universities abroad could deliver higher education on a scale and at a quality not possible before. University enrolment in India is huge and growing. It surpassed the U.S.'s enrolment in 2010 and became second only to China that year. Every day in India 5,000 students enrol at a university and 10 new institutions open their doors. At more than 3 percent of the country's GDP, India's spending on higher education is one of the highest in the world. Yet per-student spending is among the lowest. While recent expansion has widened access to universities, it has further reduced per-student spending and motivated already acute faculty shortages. As a result, quality has declined. India must continue to expand access to higher education while preserving quality and reducing costs. This situation is not unique to India, but given its enormous size and unique position, India's challenges are formidable. Digital technologies, particularly the extensive use of MOOCs, could help. India has experimented with online classes before, but their impact has been marginal. A decade ago the country began using the Internet to distribute video and Web-based courses under a government-funded program, the National Program on Technology Enhanced Learning. Developers created more than 900 courses, focused mainly on science and engineering, with about 40 hours of instruction each. With limited interactivity and uneven quality, these courses failed to attract a large body of students. MOOCs have given Indian academics a better sense of how a lecture could be restructured into short, self-contained segments with high interactivity to engage students more effectively. (Nath.A, Karmakar.A, Karmakar.T, 2014)

The Advantages of MOOCs:

- Diverse courses offered by top universities and professors are available
- MOOC courses have free access to the content and lectures.
- Does not require infrastructure
- Access of courses in diverse areas to diverse audience
- Data captured can be used to evaluate learner’s performance.

The Disadvantages of MOOCs:
• It cannot replace the experience of real classroom learning and physical presence of a teacher.
• It cannot provide personalized content and individual attention by the teacher.
• Internet connection is a basic requirement and can be a barrier in remote areas where internet connection is not strong.
• One of the barriers of MOOC courses can be language. Most courses are offered in English. Hence the spread of MOOCs is limited in India
• It is difficult to keep track of students’ assignments and involvement.
• There is a chance of plagiarism as MOOCs are web based and there is no monitoring of students
• Interaction with teacher and other students is essential for overall development of personality and development of attitude.

VI Conclusion

MOOC cannot replace the conventional system of education and learning but it has a huge role in bridging the gap between know and know nots. It can help match supply with the demand. In a developing country like India, we cannot rely completely on formal education system to meet the demand. MOOCs are an economic alternative to formal set up of education without compromising on the quality of education. Also, in the era of fourth industrial revolution, where individuals need to reskill or upskill themselves continuously, MOOCs is a great solution. Courses offered by top universities in the world provide great exposure to the students who could not get admission in these universities. To sum up, MOOC courses are future of education across the world including India.

References


