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MOOC: Challenges & Prospects in Indian Higher Education

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Abstract- A Massive Open Online Course (MOOC) is a web-based platform which provides unlimited number of students worldwide with a chance of distance education with the best institutes in the world. It was established back in 2008 and gained momentum in 2012 as a popular learning tool. Many MOOCs have communities that have interactive sessions and forums between the student, professors and Teaching Assistants (TAs) along with the study/course material and video lectures.

The Massive Open Online Course (MOOC) movement is playing a pivotal role in transforming the higher education. Courses designed for large numbers of participants, that can be accessed by anyone, anywhere as long as they have an internet connection, are open to everyone without entry qualifications, and offer a full/complete course experience online for free (OpenupEd 2015). As more initiatives are launched, millions of people around the world continue to participate in MOOCs through a small but growing diversity of courses and platforms; and they continue to attract a high level of interest from reputed educational institutions, senior politicians, policy-makers and popular media houses. The key point is that different interest groups and stakeholders have quite different reasons for promoting MOOCs and therefore the opening up of education agenda must be seen alongside powerful forces that view online learning as a means of intellectual development, enhancement in self esteem, increasing competition between institutions, introducing new business models with reduced public funding for universities, and the creation of a global higher education digital marketplace (Brown et al., 2015). On the other hand, they show

potential to challenge the closed and privileged nature of academic knowledge in traditional universities.

Massive Open Online Courses (MOOCs) have been a relatively recent entrant in the field of online learning, yet with their "massiveness" and "openness" was posited to have the potential to transform learning and development in developing countries by providing willing learners with ready access to knowledge and Higher Education.

Keywords- MOOC, Challenges, Prospects, online learning; MOOC platforms, Massiveness, Openness.

I. Introduction

"A MOOC is an online course with the option of free and open registration, a publicly shared curriculum, and open-ended outcomes. MOOCs integrate social networking, accessible online resources, and are facilitated by leading practitioners in the field of study." (McAuley, Stewart, Siemens & Cormier 2010, p.10)

- **Massive** - enrolment numbers
- **Open** - no mandatory qualifications
- **Online** - fully
- **Course** - structured, temporal

The term MOOC was coined by Dave Cornier, The first MOOC came in 2008 from the University of Manitoba. It is the latest buzz word; the unique feature of MOOC is providing education to public, at minimum level of cost at world scale and to deliver an attestation of completion to those who fullfil their study. This makes it attractive especially for the developing countries. The major players like Cousera, Udacity and Edx witness high number of enrolments from India. A course is designed for few weeks and imparted on web. Assignments are given to be solved using the collaborative learning. The students take up exam at the end and are given certificate. A MOOC on software architecture and cloud computing was conceptualized and offered for six weeks during January and February by Professor Prabhakar of Indian Institute of Technology, Kanpur (IITK) and Dr Balwinder Sodhi of IIT Ropar (IITR). The course material was offered at three levels: one, it was open for anyone to browse; two, learners would need to register to attempt the assignments; and three, the learners would need to pay a registration fee of INR 900 to get a certificate. That makes this MOOC partially 'open'. The reason for this was to discourage non-serious participants. The course started with just under a 1000 registrants, 470 of whom opted to pay the certification fee. Subsequently, 370 received certificates, a 37% success rate. This smaller MOOC demonstrated a much higher success rate than the bigger MOOCs which typically show completion rates of fewer than 10%.

Massive Open Online Courses (MOOC's) are witnessing a huge demand among the students, with majority of Indian students enrolling into foreign universities. When elite colleges are offering courses free of cost to students, it is definitely an offer hard to resist. As Coursera, a major player in the MOOC sector gets second highest enrolments from India. The growth of the MOOC has potential to address the problem of meeting increasing demand for higher education, particularly in developing countries where it is almost impossible to build enough traditional institutions to cope with the number of prospective students. Daniel (2012) believes the new openness movement is a real game changer, as it has potential to widen access to life-long learning, address key gaps in skill development, and ultimately enhance the quality of life for millions. There is even some hope in India that MOOC courses may be able to play an important role in closing the growing inequality gap of literacy and in reducing youth unemployment. The national institutes of India like IIMs and IITs also have started MOOC courses. The Government of India has also decided to start 350 online courses through SWAYAM (Budget 2017-18). There is a need to create a solid systematic structure for the validation and recognition of accomplishment of the courses from online sources as Coursera, Edx and SWAYAM, UGC, and other educational authorities which seeks cooperation between these institutions. The present paper describes the Challenges and Prospects of MOOC's in Higher Education system in Indian perspectives.

Objectives of the Study

The Present Study was undertaken to achieve the Following Objectives-

- To understand the needs and importance of introducing the MOOCs as a alternative platform to attain the goal of Higher Education.
- To know the history of development of introducing the MOOCs in India.
- To analyze the current status of MOOCs in Indian perspective.
- To identify the challenges for introducing MOOCs in Heigher Education in India.

- To highlight the prospects of MOOCs in Higher Education in India.

Significance of the study

The study aims to provide authentic information for parents, educators and policy makers to reflect upon various factors that help the MOOCs to be a successful tool to educate millions of learners. In doing so, they can investigate the possibility of introducing those factors to their institutions, which may consequently lead to enhance learners' educational outcomes. This study will also be significant because the findings will stimulate the awareness on the importance of MOOCs and strategies that would reduce negative effects of MOOCs on learning environment. The findings of this study will also be useful to understand the opportunities and threats in relation to MOOCs. Further it will also act as a reference point to other interested scholars interested in this area of research.

II. THE HISTORICAL BACKGROUND OF MOOCS

The MOOCs have just born and, therefore, are in a process of transformation and settlement and nobody can categorically say what a MOOC is. But in some way, MOOCs are the natural evolution of Open Course Ware, first created by the Massachusetts Institute of Technology (MIT) in 2001. Therefore, it does not surprise that the MIT also leads the development of MOOCs, first with MITx, and then with edX. The term Massive Open Online Courses (MOOCs) was first introduced in 2008 by Dave Cormier to describe Siemens and Downes, "Connectivism and Connective Knowledge" course. This online course was initially designed for a group of twenty-five enrolled, fee paying students to study for credit and at the same time was opened up to registered only learners worldwide. As a result, over 2,300 people participated in the course without paying fees or gaining credit (Wikipedia, 2012). In 2011, Sebastian Thrun and his colleagues at Stanford opened access to the course they were teaching at the university, "Introduction to Artificial Intelligence", and attracted 160,000 learners in more than 190 countries (Wikipedia, 2012). Since then, MOOCs have become a label for many recent online course initiatives from institutions, individuals and commercial organisations. The original aim of MOOCs was to open up education.

Many initiatives have been taken by the Indian government to provide and support concept of open education. Initially, the objective was to provide open resources in terms of repositories, libraries, educational media files, e-books, etc. These were made accessible for everybody. Some of the efforts in this direction started as National Digital Repository of IGNOU, Sakshat providing e-content, Shishya for XI-XII Standards by CBSE Board, and Vidya Vahini integrating IT into the curriculum of rural schools by providing interactive training and developmental communication. Most of these initiatives started with establishing dedicated department to make education reachable to many learners as much as possible. Some of the common names in this path are, Education and Research Network (ERNET) connecting various colleges and schools by providing network connectivity; EDUSAT, a satellite launched for education in India, Consortium for Educational Communication (CEC), use the power of television to act as means of educational knowledge technology still MOOC was out of their reach.

In India, the institutes with the organizational capabilities along with the governing authorities are trying to serve the grown educational need of the learners, by offering MOOCs in the country. May be the efforts are in the process to grow yet and serve at the rate of growth in demand. Top institutes (IITs, IIMs, IISC) and authorities (UGC, AICTE, MHRD) have always been involved in the initiative of serving quality education learners in India including traditional as well as the online education. Some of projects serving currently for providing online education are NPTEL, mooc KIT offered by IIT Kanpur, and IITBX of IIT Bombay. The most recent initiative started by the government is "SWAYAM", started with a goal to serve at a very large scale and to cope with the increased needs of the learner's. FEATURES OF MOOC PLATFORMS

We have identified certain features of MOOC platform. Also, there are some self-paced courses that do not have any time restriction to join a course and always available for enrolment. Self-paced courses are only 6% all MOOCs offered. Therefore, we have identified some of the features provided by the MOOC platform, which are as follows-

- **Course Format:** Whether the platform delivers self-paced courses or scheduled course?
- **Learning Model**: Which learning model is supported by the platform, online or blended?
- **Number of courses:** a platform is running at present.
- **Number of users**: already registered in any course of the platform.
- **Institutional Credits:** Whether other institution.

III. CHALLENGES FOR MOOC IN INDIA

Some of the major concerns regarding the implementation of MOOCs in India are, the lack of technological infrastructure, investment, diversified population, quality of courses, adoption of MOOC among learners and their acceptance by the academic institutions.

Technological Infrastructure
MOOC needs the high speed internet connections for accessing the content delivered in their courses. In a developing country like India, Internet and computers comes under luxury and their availability is confined mainly to the urban areas. Limited availability of requisite infrastructure to access MOOCs has confined the extensive spread of MOOCs. India needs to work towards providing a better Internet access for the country's population and provides worldwide connectivity.

Diversified Needs
India is a widely diversified country having multicultural societies and different languages spoken. For acceptance of MOOC among the huge domain of audience, they need to agree upon a common language of speaking. English as this language accepted globally, again throws away a considerable amount of audience who do not possess the knowledge or adequate fluency in English. So, a switch over to mostly English based courses as offered via current MOOCs often discourages learner to continue their courses. The courses should also be offered in some regional languages, which may be

a tedious task and prone to loss of uniformity and quality. Therefore, language is one of the barriers for learners from Indian origin that need to be addressed by the MOOC providers in a more realistic way. Moreover, the challenge is to deliver the lecture, designing of the course material, and the platform itself, in a way that can be understood by all. Hence forth, the main motive should be to work in the direction which can minimize the existing differences amongst the learners.

Adoption of MOOC among learners

Generaly in MOOC courses the communication between a teacher and learner and among learner as well is in written form. It results in the lack of oral communication skills among the learners and to improve this they need undergo a traditional program. Also, watching the course videos of other content on a computer screen can make the learner feel isolated. Due to this, motivation of learner falls resulting in dropping out from the course. Moreover, the courses that require lab or hands-on training may not fulfil the purpose completely in online mode .Therefore, the challenge faced by MOOC could be adoption of technology by learners.

Quality-

To create and deliver quality content in MOOC, quality of teachers and technical staff is required. India has huge vacancies of teachers not filled, compounded by infrastructure deficit as the absence of laboratories. Also, it may be possible that teachers are not technically sound to create course content using the tools. Emerging initiatives internationally and nationally are working towards offering quality educational by providing their content as open resources, but some of them are constraint by the adoption policies of their country or organization. India should also need to leverage these initiatives as a readily available, economically viable source of quality content or adoption. Also, a national quality assessment framework to assess the quality and adoption of new approaches like, credit transfer, MOOC, integrated courses etc., should be adopted along with teacher training, their performance related appraisal and midterm re-evaluation. Thus a complete revamp is needed to meet the present demand and address the challenges that India is facing in offering MOOCs.
Besides these there are the following important aspects of MOOCs-

- Although digitalization is a must now, there are many nations that are unable to provide the basic necessities to enrol for MOOCs hence the spread of MOOCs are limited.
- It is not always certain that all MOOCs provide degrees, certificates and/or diplomas which limits the number of candidates that enrol for these courses as many companies ask for records of the education levels achieved and candidates are unable to provide them with the same.
- A student's life is confined to one room that has internet access and a laptop or a computer which allows little or no interaction with the outside world.
- Since MOOCs are web-based, there is no monitoring of the candidates/students, which carries a risk of plagiarism or cheating.

IV. PROSPECTS FOR MOOCS IN INDIA

- MOOCs, particularly MOOCs, deliver high quality content from some of the world's best universities for free to anyone with a computer and MOOCs can be useful for opening access to high quality content, particularly in developing countries, but to do so successfully will require a good deal of adaptation, and substantial investment in local support and partnerships;
- MOOCs are valuable for developing basic conceptual learning, and for creating large online communities MOOCs are an extremely valuable form of lifelong learning and continuing education;
- MOOCs have forced conventional and especially elite institutions to reappraise their strategies towards online and open learning; institutions have been able to extend their brand and status by making public their expertise and excellence in certain academic areas;
- MOOCs main value proposition is to eliminate through computer automation and/or peer-to-peer communication the very large variable costs in higher education associated with providing learner support and quality assessment.
- There's nothing particularly new about MOOCs. Most universities have offered online courses for many years and the basic technologies involved – video lectures, discussion forums, tests, and the like – are the same we have used with on-campus and distance students. The only difference By their very nature – large numbers of students, no direct faculty interaction with individual students, a "pre-programmed" course of study and assessments – MOOCs would appear to have what some have called limitations when compared with a traditional face to face course or smaller online credit course with high faculty involvement. However, these aren't limitations as much as features that make MOOCs unique.
- MOOCs are built on efficiency of scale, giving access to the teaching of a world class professor to thousands of students at once. The lectures, assessments and activities for a course – especially an online course – and the expertise of the professor behind the content isn't cheap and, in many cases, is unique to a particular university. A MOOC throws open the door of the professor's classroom, allowing him to teach more than just a few dozen students at a time.
- Because of the scale, "hands on" involvement by the faculty member is limited. This shifts the responsibility for learning the material squarely on the shoulders of the individual student and their motivations to learn. It also shifts conversation and dialogue about the content to a more diverse student population that could be worldwide – a community of learners.
- MOOC courses aren't fixed into traditional term and semester models of the university, so they can start any time and can be of any length. That makes the MOOC compelling for short-term courses that are highly focused on a topic or a series of courses that might build towards a deeper understanding in a knowledge area.
- Finally, MOOCs aren't bound by traditional university credentialing – they can be offered with or without a certificate or "badge" indicating that a student has completed the course. The credential can be separate.

V. CONCLUSION

"MOOCs may potentially drive a larger strategy that increases access and builds capability for anyone to learn effectively what they want or need to learn. However, this potential may be realized, provided the MOOC design, pedagogical, delivery and certification issues are successfully resolved and sincere localization efforts made."

MOOC can provide the Indian students an edge required to compete in the global market. Its may be regarded as contributing to the democratisation of Higher Education, not only locally or regionally but globally as well. MOOCs can help to democratise content and make knowledge reachable for everyone. Students are able to access complete courses offered by universities all over the world, something previously unattainable. With the availability of affordable technologies, MOOCs increase access to an extraordinary number of courses offered by world-renowned institutions and teachers. To combat the challenges of reducing drop-out in higher education in India, MOOCs maybe introduce as an alternative platform. Therefore, all stakeholders of higher education should be very much adaptive and co- operative to make the MOOCs friendly for all.

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