ORIGINAL RESEARCH PAPER

MASSIVE OPEN ONLINE COURSES(MOOCS) AND INDIAN EDUCATION

Education

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ABSTRACT

Massive Open Online Course (MOOC) enrollment has grown significantly in recent years. After the US, India is leading the world in enrollment growth in MOOCs Programme. India has initiated a number of programmes to provide MOOC courses in response to the rising enrollment from the nation and to meet their educational needs. As an alternative to physically attending classes at a traditional educational institution, online learning technology, which is now a fundamental requirement of modern civilization, is also developing into an affordable, practical information provider as well as a provider of professional courses and educational degrees and this option has just been available through MOOCs (Massive Open Online Courses), particularly in India. India now uses NPTEL, mooKIT, IITBX, and SWAYAM as its course delivery platforms. This paper discusses the aspects of these platforms and provides a theoretical background and technological underpinning for them. The implementation of MOOCs in India and the main obstacles need to be addressed to make the programme a great success.

INTRODUCTION

Massive Open Online Courses are one of the most prominent and recent innovations in higher education. It illustrates the phenomenon of learning where students access online instructional content and become involved with a huge variety of other using social interaction platforms like forums to educate students (Liyanagunawardena and colleagues, 2013).

Evolution Of 'MOOCS' In Educational World

In 2008, Stephen Downes and George Siemens created a course named Connectivism and Connectivity Knowledge, for which they invented the term MOOC. Their goal was to create a richer learning environment that would be achievable with conventional tools by making use of the interaction opportunities that online tools make possible between a wide range of participants. On the University of Manitoba campus, 25 students took the course, and 2300 more from all around the world participated online. These days, MOOCs with a focus on connectivity and interactions are known as cMOOCS. Stanford made three courses available online for free in the fall of 2011. Over 160,000 students from all over the world initially registered for Peter Norvig and Sebastien Thrun's Introduction to Artificial Intelligence course. More than 20,000 students finished the programme.

These xMOOCs put less emphasis on student interaction and more emphasis on finding new ways to reach a large audience. In February 2012, Thrun established Udacity, a business that started creating and distributing MOOCs for free. In April 2012, two other Stanford CS professors, Andrew Ng and Daphne Koller, founded a business called Coursera that collaborated with universities to create and provide MOOCs.

The MOOC platform known as MITx was created by MIT and later renamed edX after a cooperation with Harvard. More than 30 universities have joined the nonprofit edX consortium, which creates and provides MOOCs, including McGill. The most widely used method for providing online courses nowadays is the MOOC. Massive Open Online Courses (MOOCs) are courses that are made available through a platform and are intended to facilitate infinite (logical) participation. Since its creation in 2008, it has experienced significant growth in popularity. As of December 2016, over 700 colleges were offering MOOCs, and over 6850 different providers—including Coursera, edX, and Udacity—had roughly 58 million students registered for their courses.

What Are MOOCs

MOOCs are open-access, asynchronous courses offered online that are designed to enrol hundreds or thousands of students at once. Online readings, evaluations, recorded video lectures, and various levels of student-student and student-instructor interaction are all used in MOOCs content delivery. Massive Open Online Courses (MOOCs) are free, open online courses that welcome unrestricted enrollment. While some MOOCs may be fairly big in scope, others may be relatively tiny.

Due to its design, MOOCs can accept students with similar interests from a variety of educational backgrounds, professional backgrounds, and geographic locations. Similar to free MOOCs, the majority of MOOCs are available to anyone who is interested. Some MOOCs offer certifications, which range from statements of accomplishment for meeting minimum course standards to verified certificates for passing proctored exams; most MOOCs, though, do not count for college credit.

MOOCs, according to Sadera (2014, p. 9), can be understood as having the following key features relating to their nature, mode of delivery and weight in formal university education
- Entirely online/digital
- Free to anyone
- Requires no previous qualifications to study
- No limitation on age or geographical location of students
- Asynchronous—participants study at own pace though there are often marked dates and deadlines
- Communication is via email or discussion forum
- Teaching materials usually consist of short videos, audios, lecture recordings, online quizzes and activities, forums and readings
- Principally uses peer-marking model and/or computer-marked assignment for formative assessment
- Main lecturer(s) supported by a number of facilitators
- Usually not credit bearing
- Certification rewards participation and completion rather than grade
- Current participation analytics suggest that only a proportion of those who register start each course, and then a successively smaller proportion completes each assessment point.
- There are currently low rates of completion

Thousands (more than 8,000) of MOOCs are being offered by major universities (more than 700) to millions of students

worldwide.

Rise Of MOOCS In Indian Scenario

In India, MOOC offers a wealth of chances. In recent years, India's student population has grown significantly. India is considered to be among the top nations in terms of enrollments in classes provided by numerous well-known MOOC providers among them are edX, Coursera, and Udacity. MOOCs currently have influenced numerous individuals in India to address unmet demand for higher learning This internet-based instruction is offered in both deliverables are available in a variety of regional languages greatest and most comprehensive education available throughout India.

Open education has a long history in India. Thanks to the broadcasting space granted by All-India Radio and Doordarshan for telecasting recorded educational programmes for both higher education and all levels of education. While there are numerous educational institutes, including UGC, NCERT,IGNOU using services provided by All India Radio and Doordarshan still needed the students' participation and interaction due to the fact that all of these broadcasts were archived. The Indian government has undertaken numerous measures to offer and support the idea of open education. Initially, the goal was to offer free resources such as libraries, repositories, educational media files, e-books, etc. . Some of the early initiatives in this approach included IGNOU's National Digital Repository, Sakshat's e-content delivery, the CBSE Board's Shishya for XI-XII Standards, and Vidya Vahini's integration of IT into rural schools' curricula through interactive training and communicative development. In this regard, ISRO made an attempt in 2005 with the launch of the EDUSAT satellite, which was created by the late "APJ Abdul Kalam" former President of India. This effort was made in partnership with MHRD and IGNOU. Despite its best efforts, EDUSAT was unable to meet the demand as anticipated since the necessary communication technology has not yet been established to support such a project.

The Consortium for Educational Communication (CEC) uses television's reach to spread knowledge; the Information and Library Network Centre (INFLIBNET) is an independent, inter-university hub that links university libraries, and it has also launched a number of additional initiatives. These are all efforts to promote open learning, yet even with the advancement of information technology, MOOCs remained out of their grasp. The government introduced the e-PG Pathshala in 2013, which is hosted by UGC's INFLIBNET specifically for postgraduate courses. It is less of a MOOC and more of a repository of electronic material and evaluation. Additionally, there are two more course providers: myBskool.com and Apna Course, both of which are based in India. But since both of these organizations are managed for business, it is obvious that one of their goals is not to offer free education. As a result, the government started to provide online courses on creating their own platforms. Only a few institutions and institutes in India currently have the resources necessary to launch or support such a project.

Ministry of Human Resource Development Department of Higher Education has come up with certain guidelines for the Development and Implementation of MOOCs. There are four quadrants that need to be fulfilled while developing a MOOC course and those are:

Quadrant-I is e-Tutorial: which shall contain: Video and Audio Content in an organised form, Animation, Simulations, video demonstrations, Virtual Labs, etc.

Quadrant-II is e-Content: which shall contain: PDF, Text, e-Books, illustrations, video demonstrations, documents and Interactive simulations wherever required.

Quadrant-III is Web Resources: which shall contain: Related Links, Wikipedia Development of Course, Open source Content on Internet, Case Studies, books including e-books, research papers & journals, Anecdotal information, Historical development of the subject, Articles, etc.

Quadrant-IV is Self-Assessment: which shall contain: Problems and Solutions, which could be in the form of Multiple Choice Questions, Fill in the blanks, Matching Questions, Short Answer Questions, Long Answer Questions, Quizzes, Assignments and solutions, Discussion forum topics and setting up the FAQs, Clarifications on general misconceptions.

MOOCs Initiatives In India

The Indian government has taken a number of steps to boost online learning, which has helped many individuals complete their education and raised the country's enrollment rate. NPTEL, edX, Coursera, SWAYAM, and mooKIT are the well-known online websites in India. In addition to the platforms mentioned above, Others offer online education in a variety of fields, although they very little known. The list of online education companies in India are Shikshit India, U18 eVoulte, Million Lights, Apna Course, UpGrad, EduKart Open ,LearnVern, Digital Vidya.

MOOCs progress in India
Table-1

Web Platform / Provider	Year	Initiatives
NPTEL	2006	NPTEL was started as educational content repository as MIT Open Course Ware. Today, It is one of largest publishers of OERs in the world.
	2014	NPTEL MOOCs powered by Course Builder were launched. Course builder is Google's open-source platform.
	2015-16	In 2015, NPTEL offered 90 MOOCs courses. January – May 2016, 47 new courses were offered and 100 MOOC courses have been stated between July to December 2016.
mooKIT	2012	A lightweight platform designed and developed in IIT Kanpur in the year 2012
	2014	Two MOOCs were launched using this platform: (a). Architecting Software for the Cloud and (b). MOOC on MOOCs .It witnessed around 2300 participants.
	2016	It launched a program called ag MOOCs comprised with set of five agricultural courses. Students and teachers of agricultural programs were the target of ag MOOCs.
edX and Coursera (Indian MOOCs)	2014	In July 2014, The first Indian MOOC on edX developed and targeted learners across the world. It witnessed massive success with attracting over 35,000 learners.
	2015	IIT Bombay, Birla Institute of Technology and SciencePilani, IIM Bangalore, and Indian School of Business were launched MOOCs on edX and Coursera.

SWAYAM	2014	Ministry of Human Rights Development (MHRD) announced SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) under its National Mission on Education through Information & Communication Technology (NME-ICT).
	2015	MHRD formed the 'Main Committee regarding SWAYAM platform for MOOCs' to conduct a thorough examination of all elements for a successful MOOC project.
	2016 (March)	MHRD developed and provided Guidelines to institutions for development and implementation of MOOCs.
	2016 (June)	Microsoft was awarded a contract for development of SWAYAM.
	2017	The SWAYAM portal was successfully launched on July 9, 2017

Source: SangeetaTrehan et al., 2017

Obstacles To MOOCS In India
- Because of the low retention rate and increased wealth among students, MOOC platforms have generally failed in comparison to edu-tech businesses that charge for each piece of information.
- Learners' needs, such as instant doubt clarification and motivation to finish the course, cannot be addressed by MOOCs, which frequently results in drop-offs.
- The major drawback of MOOCs is their lack of involvement and real-world tasks, which a live, online learning model may readily deliver, especially when it comes to technical instruction.
- Animation, voice, and video are all examples of digital content. It needs a different type of digital content creator than subject experts .
- End devices are needed to view and, if available, download the digital content.
- The most significant and difficult element is the availability and speed of the internet. The internet platform may be accessed with a minimum amount of bandwidth, which is significant setback in the country's rural areas.
- An important impediment to online education, particularly in India, is the language barrier. Almost all online learning platforms provide English-language courses. MOOCs should take this into account and provide the training in multiple languages and used in regional settings.
- High dropout rates are one of MOOCs' main problems. Only 5 to 10 percent of students will finish the entire course (De Coutere, 2014). Motivation to participate and continue the courses is required to overcome the dropout ratio. Economic gain,Personal development and professional identity play a role would be applied to inspire students.

CONCLUSION
Massive Open Online Courses (MOOC) are a type of free online distance learning programme that are intended for huge numbers of students that are spread out geographically. By offering free online courses for higher education, executive education, and workforce development, they are revolutionising the field of education. These classes are taught by highly trained professors from some of the most prestigious universities in the world. People from any location in the world with internet access can take these courses to receive a virtual education. Massive open online courses are anticipated to support the development of higher education globally. Indeed, MOOCs have contributed significantly to the democratisation of education. To maintain high levels of participation, generate revenue for maintenance, and remain current, MOOCs must use a variety of formats, teamed up with institutions, developed a tiered strategy, and established enterprise solutions to help people reskill and upskill so they can reinvent themselves. Businesses must take a multi-layered approach when considering Freemium models in order to balance the conflict between sustainability and universal access. Different pricing structures are necessary for the same courses' basic, with assignments/ grading, certified, or mentor-led levels.

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