MOOC in Higher Education in India: Benefits and Challenges

T. Raghotham Reddy
Lecturer in Computer Applications, Department of Computers, Kakatiya Government College, Hanamkonda, Warangal Urban

Abstract

Massive Open Online Course (MOOC) is a web-based platform which provides an 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 along with the course material and video lectures. Nowadays, the enrolment in Massive Open Online Course (MOOC) has increased vastly. India after the US is dominating the global growth in enrolments. Seeing the growth of enrolment from the country and satisfy their need for education, India has started various projects for offering MOOC courses in Higher Education. Currently, NPTEL, mooKIT, IITBX, and SWAYAM are the platforms used in India for offering online courses. In this paper, a theoretical and technical background of these platforms is provided with a discussion of their features. Further, a comparative analysis of the platforms is provided, using web analysis. Some challenges are faced in implementing MOOC in India. With the launch of SWAYAM, some of these issues are already addressed.

Keywords— MOOC, MOOC in India, NPTEL, MooKIT, SWAYAM, Higher Education.

I. Introduction

Online learning uses technology for delivering the courses. Education with technology is considered as the most promising development in Higher education. With technology globalization, the concept of learning and teaching has undergone a tremendous change. Technological usage in education provides a global learning environment, which allows accessing the course material anytime, anywhere, connect other learners, and get access to the content without considering any geographical boundaries. The significant changes in the use of technology in online education in Higher Education in India have seen the emergence of the concept of Massive Open Online Course (MOOC).

Nowadays, MOOC is the most popular way used to offer online courses in Higher Education, globally. MOOC is a massive course designed to support unlimited (logically) participation and is offered through a platform. It has gained a lot of popularity since the time of its development in 2008. As of December 2016, approximately 110 million students are registered for the MOOC courses excluding China, offered by more than 800 universities and approximately 6800 courses, offered by various providers such as Coursera, edX, Udacity.

In India, the Higher Educational 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. The University Grants Commission (UGC) along with the HRD (Human Resource Development) Ministry has launched the MOOC program.
in India for higher secondary, bachelors and master’s degrees. This will cover a wide range of subjects that may or may not be taught in regular campus studies.

A new portal for MOOCs named 'Study Webs of Active-Learning for Young Aspiring Minds', in short, SWAYAM, is said to present students with an opportunity to study anything from a list of 2000 courses out of which 200 are currently available for registration. Audio-visual medium, illustrations, research and case studies with self-assessment are few of the mediums chosen to approach the study of these courses

II. Benefits of Open Online Courses

1) Work from anywhere, at any time

This is the most appealing benefit of online education for students with many duties to balance. Since everything is available online, accessing class materials and submitting work is very convenient. Exactly when and where this takes place is up to the student, as long as assignment due dates are met.

2) Review lectures instantly

It's easy for minds to wander during a lecture. University of California psychologist Jonathan Schooler found that students lose focus about 5 times in a 45-minute class session. In many online programs, however, students can review words from professors instantly, either by rewinding the audio or video or by reading the transcript that accompanies the lecture.

3) Less intimidating

Many students in classroom environments aren't comfortable speaking in public. In an online environment, it can be much easier to share thoughts with others. With 74 per cent of people suffering from speech anxiety, according to the National Institute of Mental Health, online education tends to foster better class participation.

4) More time to think before sharing

Online schooling still has a discussion element to it, often in a forum or discussion board. On-campus students have to choose a stance or formulate a thought in class quickly, and sometimes speak before they've fully examined everything. In an online environment, students can spend as much time as they want thinking about and honing their ideas. This can lead to greater confidence and more elegant discussions.

5) Focus on ideas

With an estimated 93 per cent of communication being non-verbal, online students don't have to worry about body language interfering with their message. While body language can be effective sometimes, academics are more about ideas, and online education eliminates physical judgments that can cloud rational discussion.
6) Group communication

Many degree programs today incorporate some sort of group project or teamwork. Working with others on-campus or locally means coordinating specific days and times so everyone can attend. Distance learning programs, however, foster virtual communication and allow students to work with team members via email, chat rooms and other easy-to-use methods.

7) Flexible learning schedule

On-campus students may have to endure in-person lectures that last hours. While not all online programs are built the same, many use PowerPoint presentations and other media that students can digest in pieces. In other words, a student can experience the first half of a lesson one day, and the second half the next day. This can be especially helpful for those who don't enjoy sitting in one place for too long.

8) Instructor availability

At traditional colleges and universities, talking to a professor after class can be challenging. Yes, instructors have office hours, but it's often only an hour or two each week, with too many students waiting for attention. While professors who teach online may also have set hours for student interaction, web-based technologies make conversing with multiple students at once much easier.

III. MOOC Platforms in India

1. NPTEL

NPTEL stands for National Programme on Technology Enhanced Learning. It is a project funded by MHRD, initiated in 2003. It is a joint initiative of seven Indian Institute of Technology (IITs) and Indian Institute of Science (IISC) for offering courses on engineering and science, initially. Now, NPTEL has started an online course in computer science; electrical, mechanical, and ocean engineering; management; humanities, music etc. It offers a free course with nominal fees for certification. Anybody from anywhere can join their course.

NPTEL uses open-source technology for offering courses. The courses are powered by Google's open-source platform Course Builder that runs on App Engine and Compute Engine. Also, it offers course content mainly in video lectures prepared in a conventional classroom environment, while some may also use slides to share the content.

2. mooKIT

MooKIT is a lightweight MOOC management system built entirely using open-source technologies by Indian Institute of Kanpur (IITK), in 2014. It is a powerful system that can be used to offer online courses at any scale, from micro to massive. It is designed to offer cMOOC (connectivist MOOC). It has been used in 15 courses with about 100,000 registered learners.
It is specially designed to solve the problem of dealing with low-bandwidth and low-computing power situations using existing MOOC platform. To solve the problem, mooKIT provides an indicator that shows the current bandwidth of the connection, similar to the bars on a mobile phone. It gives a visual indication of a bad connection to the learner and they can use other content delivery options that mooKIT provides – for example, stream only audio and play it in sync with the slides, which is often very close to the video experience. If the bandwidth is still low for that even, the learner can receive a call on the phone and listen to the audio from there using the calling control provided on the interface. This feature is very helpful for learners to belong to rural areas not having a smartphone, laptop, internet connectivity, high bandwidth. They just need a dumb or basic phone. One more special feature of mooKIT is the support of a very powerful analytics interface. Along with the instructor, it also allows the learner to view their course activities, which is not commonly provided in any other platform.

3. IIT Bombay

IIT Bombay is a non-profit MOOC platform developed by IIT Bombay using the open-source platform Open edX, in 2014. It was created with funding from National Mission on Education through Information and Communication Technology (NME-ICT), Ministry of Human Resource Development (MHRD), Government of India. Currently, it is offering 63 courses on different subjects from multiple disciplines.

IIT Bombay is implemented as the basic version of the blended learning MOOC with the help of edX organization. Blended learning is a combination of both face-to-face classroom learning and online education methods. This approach is adopted to combine direct supervision in face-to-face learning and academic freedom with self-paced learning using the online courses. Moreover, course completion is not optional but compulsory. This model is named as "Blended Learning - MOOC Model of IIT Bombay (BLMM)". In this system, prime universities from India are offering MOOC courses to Indian local college learners.

4. SWAYAM

SWAYAM stands for "Study Webs of Active Learning for Young Aspiring Minds". It is a MOOC platform MOOC launched by the Ministry of Human Resource Development (MHRD), Government of India, to bind online and offline education together. It is started with an expectation of launching 2,000 courses, to make it largest course catalogue, among all provided so far. For SWAYAM an independent platform is developed.

Learners across the country can get credit for MOOC courses offered on SWAYAM, and they can get their credits transferred and recognized at the parent institution, that was not possible in conventional MOOC platforms. In a talk, Dr Phatak (IITK) mentioned that the mostly the learner drop out from the course as they find the courses either advance or not suitable to help them in scoring good grades in their university exam. Therefore, SWAYAM is a right effort of credits using the course that will encourage the learners to complete the course and get their certificate. For SWAYAM, a credit framework has been finalized that would allow the transfer of credits between institutions. An academic institution in India can offer up to 20% of its catalogue in a particular program via SWAYAM.
Currently, SWAYAM offers courses for school, certificate, diploma, undergraduate, and postgraduate. The responsibility of delivering courses is assigned to six institutes based on their types, such as NCERT and NIOS for offering school education, IGNOU for out of college learners, CEC for under-graduate education, UGC for post-graduation education, NPTEL for engineering, and IIMB for management studies. Though much of the course content for SWAYAM is the same content that has already been created for NPTEL, which is to be re-purposed for SWAYAM. Also, the content or videos created for this platform will be available on a platform called e-Acharya that already hosts educational video content created by MHRD. So, SWAYAM is promoting the best use of resources, which is already a very costly affair.

IV. Challenges of MOOCs

- Relying on user-generated content can create a chaotic learning environment
- Digital literacy is necessary to make use of online materials
- The time and effort required from participants may exceed what students are willing to commit to a free online course
- Once the course is released, the content will be reshaped and reinterpreted by the massive student body, making the course
- Trajectory difficult for instructors to control Participants must self-regulate and set their own goals lack of an effective system to measure and validate the progress of the learners
- How to integrate the course credits into the present system so that it counts towards a degree from a college.
- How do you ensure personalized guidance and mentorship?

V. Conclusion

MOOC platforms are being used globally for offering an online course and India is no exception. Various MOOC platforms are being used in India for offering the courses, such as NPTEL, mooKIT, IITBX, and SWAYAM. Except for the NPTEL, these are the new platforms having a history of hardly 4 to 5 years, while SWAYAM is launched very recently. Therefore, to set up a ground for understanding including theoretical as well as technical aspects, a discussion is provided about each of these platforms with their features. Also, while using these platforms it is needed to understand their current state, popularity among learners, use of social media for referring, searched etc, and several other parameters or features. For the purpose, a comparative analysis is provided for these platforms using web analysis considering several parameters as mentioned. Furthermore, some issues are faced while implementing MOOC in India. These challenges are mentioned here. Some of these issues are already addressed by SWAYAM, which is the most recent platform.
References


