

MOOCs: An Educational Space with Difference

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The article explains about Massive Open Online Courses (MOOCs) which is now a new educational space with difference in online educational world. The purpose of this article is to explain current scenario of e-Learning system using MOOC and its platform. The article is focused on MOOCs, its features, process / methodology, classification/category and platforms including different platform that offers MOOCs such as Coursera, edX, etc as well as parameter to evaluate MOOCs platforms.

1. Introduction

A Massive Open Online Courses (MOOCs) provides opportunity for flexible education with intervention of a teacher called mentor. It is an online course aimed at unlimited participation and open access to different courses over web. In addition to traditional course materials such as filmed lectures, readings, and problem sets. MOOCs provide interactive user forums to support community interactions between students, professors, and teaching assistants (TAs). In other word, it provides interactive user forums that help to build a community for students, professors, and teachers. Platform used for MOOCs are compatible with mobile technology as well as content shared on it.

MOOCs are collections of freely accessible open online resources with that anyone to register open courses without application process, only Internet access is needed to access MOOC. Moreover, all users can access the same content simultaneously from anywhere at any time without any pre-requisite such as qualification, entrance exam, application form, interview, etc.

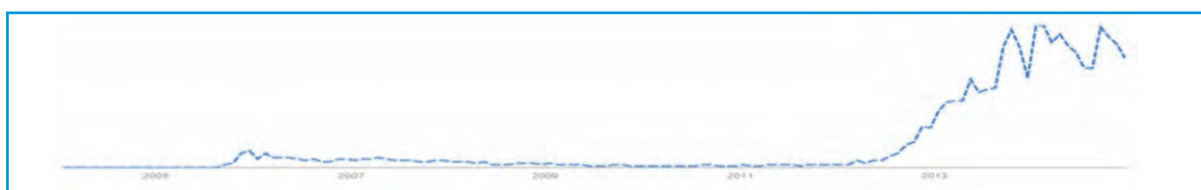
In light of the explanation given above, MOOC is

Massive - enrolment numbers

Open - no mandatory qualifications

Online - fully

Course - structured



Trends in Increased Usage of MOOC from 2004 to 2014

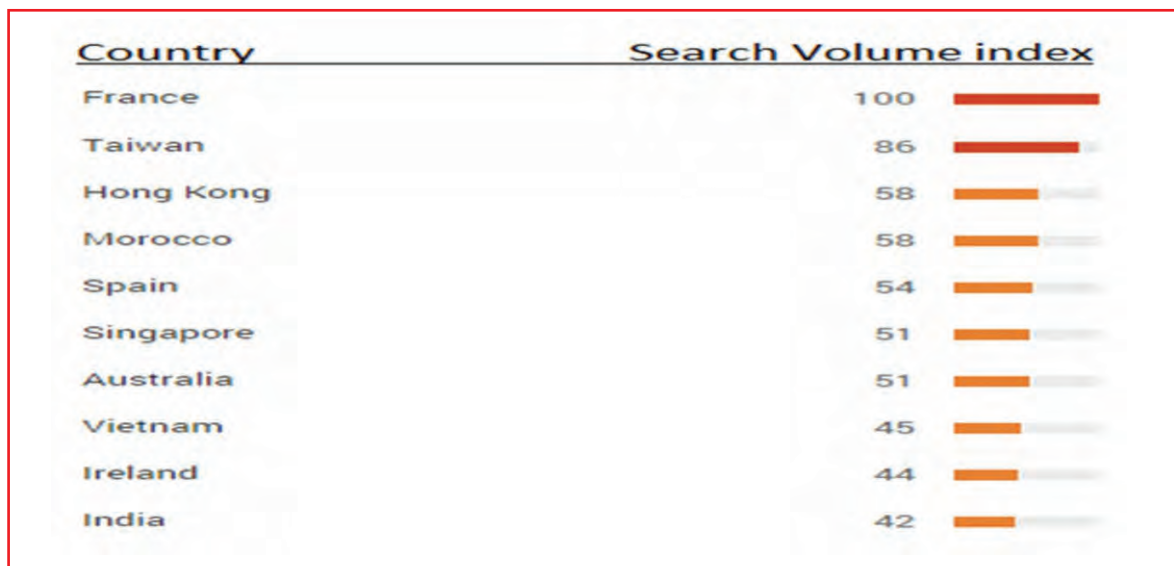
❖ Necessity and History of MOOC

Information communication technologies play a big role in all aspects of education revolution. E-Learning and virtual university is a result of application of ICT in education. Users of mobile and internet are increasing day by day. Earlier, open universities and correspondence courses were used as a media to extend education to the masses. Lessons and tutorial were sent to the learners using postal services which were cheaper and faster. Several universities in India had school/department of correspondence courses and several open university started function in middle of the 20th century. With advent of Internet and world wide web, environment for e-learning and e-education was matured and several e-learning platform started appearing in the education domain. These platform included Blackboard, Moodle, etc.

With further improvement in e-learning with active participation of teachers and learners MOOC started taking its shape and launched. First MOOC, launched in 2008, is 'Connectivism and Connective Knowledge 2008' (CCK8), developed by educators Stephen Downes and George Siemens. Several MOOCs provider initiated courses on different platforms like Udacity, Coursera and edX. All MOOC providers may have different features and functionalities but they all share a common theme i.e. "students and teacher" and their interaction and collaboration in the process of learning.

Australian National University has even created the first ever Hindi MOOC, a 10-week course, called 'Engaging India' which started on April 2014.

The figure, given below, shows that India is ranked 10th based on search volume index in world for MOOC related search queries.



Country Rank based on Search Volume Index

2. Features and Functionalities of MOOC

Features and functionalities of MOOCs are as follows:

- **Openness:** it is open and free, any one access it from anywhere.

- **Autonomy:** It depends on individual learner to decide extent of their participation in the course. Some MOOC platform are self-paced i.e. individual has to decide pace of their learning.
- **Diversity:** Participants are from different backgrounds and global connection become wider.
- **Interactivity:** Lectures guidance, social networking, discussion forums are incorporated to make it more interactive.
- **Best University is at our Place:** Students can take up a course from Stanford or Harvard without having to step out of their homes without taking admission and without going through application procedure.
- Students can make global connection and complete university level courses without going through the hierarchy programme of university.
- Discussion forums enable students to make their knowledge global.
- It enables lifelong learners from around the world to interact with one another at unprecedented scales.
- It educates learner based on what they want to learn like employee can improve their resume and scholar can gain knowledge on latest trends.

3. MOOC and Other e-Learning Terminology

i) Traditional Learning System and MOOC

Traditional learning system needs academic requirement or eligibility criteria to take admission in a course whereas MOOC is open for all without prerequisite academic qualification.

MOOCs allow massive number of students whereas traditional learning system has limited number of learners.

Flexibility is one major difference, in traditional classroom student have to learn as per plan by university whereas MOOC platform provide students flexibility like they can start a course anytime and complete it as per own schedule.

ii) e-Learning and MOOC

MOOCs are usually supported by e-learning platforms. However, several interaction, assessment and communication aspects need to be incorporated for preparing e-learning platform suitable for MOOCs. Massive nature of such courses requires the platform to support thousand users and hundreds of thousands of interactions.

iii) MOOC and Learning Management System (LMS)

LMS is like a coach whereas MOOC is like a school / university. MOOC is different than LMS in two senses. Like traditional learning system, teachers provide the course content, assessment work and institute /university provides certificate/degree/etc to the students. In same fashion LMS is a coach which serves through an e-Learning platform but MOOC is an institute that has teachers (coach) as well as it's empowered for issuing certificate / degree /etc.

In LMS user can access material any time, whereas many MOOC platform disable the access of course materials on completion of course from public domain and enable it access on reopening the course.

LMS provides materials which may not be designed keeping a specific course whereas MOOC platforms provides course with detailed syllabus with schedule and detail explanation about content for a given course.

4. Category of MOOC

MOOC can be categorised in the following two modes:

- i) **Course based (Open/Free):** There are two kinds of courses offered by the MOOCs platform, free or paid. Such courses may be conducted by private firms or university or both.
- ii) **Pace based:** MOOCs provides either self-driven courses or scheduled-based courses. Details are as follow:

Scheduled Model	Self-Paced Model
It has start date & end date on scheduled plan.	The courses are always accessible, there is no end date.
Coursera, edx work on scheduled model.	Udacity class work on self paced model.
In some model one to one coaching provided.	Teachers are unlikely to actively participating.

5. Platform for MOOCs

There are several MOOCs platform that provide different courses in different model such as scheduled / self-paced / free / open course. In other words, it hosts online university-level courses in a wide range of disciplines to a worldwide audience.

The following three major steps are involved in the process of execution of courses:

- Registration;
- Selection of Course; and
- Course Completion & Certification.

❖ Major MOOCs Platform Providers

1. edX

edX is a non-profit organization which provides online courses across different subject domain. It is owned and funded by MIT and Harvard University. More than 50 institutes are participating in edX with their courses. MIT offers courses on edX. edX built on database MongoDB, SQLite with Django framework.

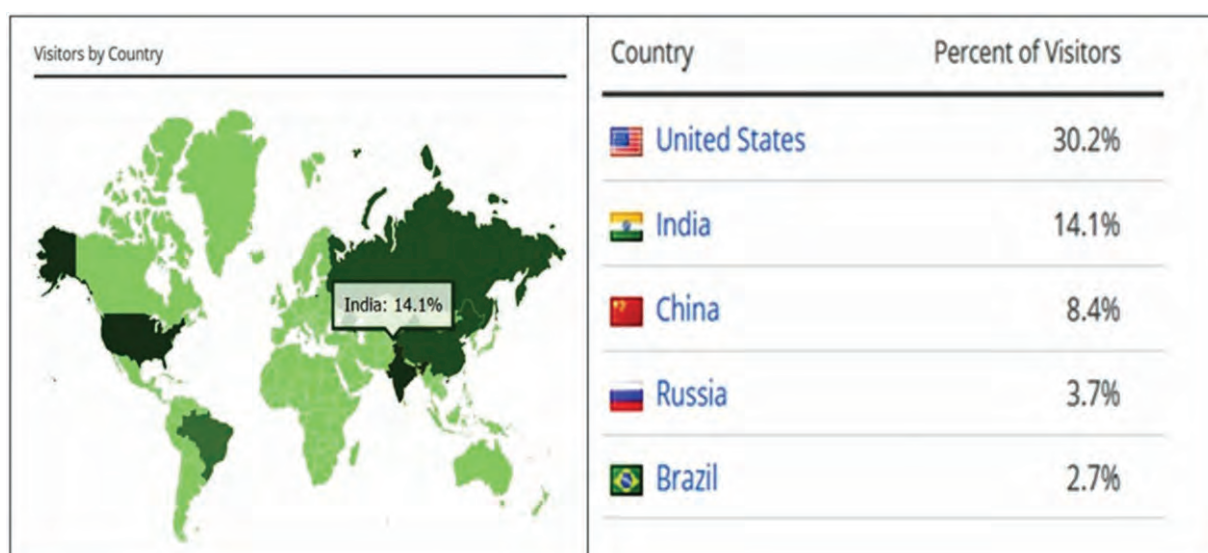
It is strong for enterprise-quality MOOC implementations and is getting better by the day. The usages of this platform are across the world and India's share is 13% (approx.).



Edx Visitors

2. Coursera

Coursera is another major MOOCs platform that focuses on more course and profit educational technology, launched in April 2012 by Andrew Ng and Daphene Koller. It provides platform for hosting as well as application level services. It works on scheduled model and provides one to one coaching. It has discussion forums that result in healthy group discussions. This course provides test, exercise, and final projects. The courses are from six to ten weeks long duration. As on October 2014, more than 10 million users had registered. 14% of share in terms of visitors are from India.



Coursera Visitors

3. Udacity



Udacity was born out of a Stanford University experiment in which Sebastian Thrun and Peter Norvig offered their “Introduction to Artificial Intelligence” course online to anyone, for free. Over 160,000 students in more than 190 countries enrolled and not much later, Udacity was born. Now Udacity is a growing team of educators and engineers on a mission to change the future of education by bridging the gap between real-world skills, relevant education, and employment.

❖ Parameters / Dimensions to Evaluate MOOCs Platform

The following major parameters are used to evaluate a MOOCs platform:

Dimension/parameter	Description
Openness of content	Whether MOOC provides access to content without registration or not and type of licence used for content. If MOOC uses creative common license and allows access without registration.
Openness of technology	MOOC is built using open source tools.
Use of multimedia	Along with videos, ppts, animations specialized simulation software used.
Use of social media	Presence on social media platforms. Collaboration with social media platforms to promote MOOC.
Language support	Number of languages in which courses available.
Certificate Courses	Number of courses which have provision of certificate.
Responsive web design	Has mobile version of website.
Mobile apps	Availability of smart phone apps on different mobile operating systems like Android and iOS.
Catalogue diversity	Type of courses Engineering, humanities, etc.

❖ Recent MOOCs Initiative in India

The Ministry of Human Resource Development has recently launches the Study Webs of Active-Learning for Young Aspiring Minds (SWAYAM), a Web portal where Massive Open On-line Courses (MOOCs) will be available on all kinds of subjects.

Currently, SWAYAM is expected to offer three different courses - one from UC Berkeley’s Umesh Vazarani’s and two from IIT Bombay. And SWAYAM is going to use open Edx as its MOOC platform.

❖ Disadvantage of MOOC

Major disadvantages of MOOCs are as follows:

- i) Lack of real identity of learners i.e. anyone can take a course on behalf of others.
- ii) Drop-put: A large number of learners register themselves for different courses but drop-out from the courses in middle.

- iii) Cultural difference in teachers and taught. Content offered by one country may not match the educational culture of another country learner.

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