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### Moocs - Colour Up Your Life

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#### Abstract

MOOCs create enormous learning opportunities for those who are interested to learn new courses irrespective of curriculum. MOOCs provide learners to access resources from anywhere. With the changes in technology and availability of various tech gadgets people are interested to get access of resources in these gadgets and are interested to learn online rather than traditional mode. By identifying the shift in learning process of learners most of the Universities are offering online modules in the form of MOOCs and they also made it as a part of curriculum. This paper mainly focuses on historical background, types, essential characteristics, trends, advantages and disadvantages of MOOCs.

**Keywords:** 1. MOOCs 2. cMOOCs 3. xMOOCs 4. Online learning 5. Digital learning platforms

#### Introduction

The acronym MOOCs stand for “Massive Open Online Courses”. It was first used in the year 2008<sup>1</sup> and refers to online university-level courses. MOOCs offer online courses with the help of Internet and anyone can access the course from anywhere. With the increase of internet accessibility to public, Universities are coming forward to provide various courses by using open learning platforms such as edX, Coursera and Udacity etc. These platforms offer online courses to the users at free of cost or by charging nominal fee for awarding credits and certification. Future learn is a new company launched by Open Universities of UK to provide a wide range of free, open, online courses. Now most of the universities have included these courses in their curriculum and made it mandatory for the students to do these courses for additional knowledge in multi disciplines for employment and career development.

In India a number of initiatives were taken to improve learning by developing various platforms like NPTEL, SWAYAM, and E-ACHARYA by the government of India and most of the IITs, IIMs and other universities have started their Free Online courses through these platforms for all disciplines. Our Prime Minister Shree Narendra Modi gifted “Swayam (Study Webs of Active Learning for Young Aspiring Minds) Platform”<sup>2</sup> on the birthday of Shree Pandee Dindayal Upadhyay. MHRD is also planning number of projects for open and free education for the development of the education system in India and videos created for SWAYAM will also be available on E-Acharya platform. Global players like Pearson and Google are entering into education sector by adopting the concept of MOOC to reach its audience.

## Meaning

MOOCs are courses designed for large numbers of participants that can be accessed by anyone anywhere as long as they have an internet connection and are open to everyone without any entry qualifications, and they offer a full / complete course experience online for free.

Massive: Large amounts of information are being shared with a large number of people.

Open: The information is available to anyone.

Online Courses: The course is accessed via the Internet.

Course: It is a class on a specific topic taught by a Professor completely with a syllabus and lesson plans.

## Concept and Definition

The concept of MOOCs (Massive Open Online Courses) allows the participants to have free access and unrestricted participation to any course of their choice and learn at their own pace at convenient time. Besides the conventional modes of teaching such as lectures, videos, quizzes, assignments and reading material, MOOCs provides interactive forums that encourages self-paced learning which focuses on the skills that learners wish to acquire for the betterment of their job opportunities.

## Review of Literature

Lambert (2020) systematic reviews the literature published on massive open online courses and student equity and social inclusion during 2014-2018 and this study further pointed out the gaps in the literature and research directions in the future.

Sallam et al. (2020), through a systematic literature review, mapped the research trends in language massive open online courses (LMOOCs) through different angles. This study also pointed out that the language massive open online course is an emerging field to do serious research and studies. On the other hand, very few studies were discovered on the reviewing of the literature on massive open online courses and library and information science area.

Quiliano-Terreros et al. (2019) reviewed the literature on how to judge the quality and effectiveness of massive open online courses from 2012 to 2017 using Scopus and Web of Science databases.

Lee et al. (2019) systematically reviewed the literature on self-regulated learning aspects of the massive open online courses and found that self-regulated learning plays a positive role to the users in learning through massive open online courses.

Sanchez-Gordon and Luján-Mora (2018) examined systematic literature on the accessibility of massive open online courses to the researchers from 2008 to 2016 using four stage methods and found that accessibility of massive open online courses will be beneficial to the researchers.

Kaushik (2018) presented genesis of massive open online courses concept in detail by using a survey and discovered that the massive open online course phenomena are useful in the library and information science domain.

Bezerra and Silva (2017) reviewed the literature on drop rates in the massive open online courses (MOOCs) using four databases like Springer, Science-direct, ERIC and ACM digital library and discovered twenty-four reasons of the drop rates in the MOOCs setting. This study also suggested ways to prevent drop rates in massive open online courses.

### **Types of MOOCs**

MOOCs are divided into two main categories that are xMOOCs and cMOOCs.

- xMOOCs are based on traditional course structures and make use of established teaching approaches and materials. In this learners will watch pre-recorded lectures, complete readings specified, and participate in discussions and submit assignments as specified by the course instructor or an instructional team.
- cMOOCs are collaborative learning models that encourages active participation of learners. These insist learners to work together to evaluate, contribute course content and upload materials through tweets, blog posts, blogs, wikis, etc. to the learning platform. cMOOC facilitate learning by way of aggregating, finalizing, and assessing the contributions of students to the course. Even though a number of online courses are available for decades, MOOCs has changes the scenario of learning, due to its global reach, design, delivery, accessibility, content and ease of learning. Due to the benefits, popularity and easy accessibility to learners, MOOCs are creating trend that will change the future learning system.

### **Historical Background**

#### **Global Scenario**

Dave cornier of University of Prince Edward Island and Bryan Alexander of National Institute for Technology in Liberal Education introduced the concept of MOOC in the year 2008. Later on Stephen Downes and George Siemens in partnership with University of Manitoba in Canada created MOOC named Connectivism and Connective Knowledge and then in 2011 by Sebastian Thrun and Peter Norvig offered modern MOOC “Introduction in to Artificial Intelligence”. These first generation MOOCs largely relied on open web sources and over a period of time with their increasing popularity private and non profit institutions shown interest in development of MOOCs and they relied more on Video Lectures, Learning Management System and Discussion Forums. Many new platforms like Edx, Udacity, Khan Academy, Coursera etc are evolved with the changing learning process to meet the needs of the learners. Some of them are joint attempts by US Universities that New York Times in 2012 named as “The Year of the MOOC”<sup>3</sup>.

Future Learn is the first UKMOOCs platform launched in 2013 having more than 20 partners from UK and other international universities. Most of the British universities offer MOOCs through this platform. Later on Coursera and edX of Massachusetts Institute

of Technology and Harvard University joined this platform and offers over 300 courses of 62 global universities.

Due to increasing popularity worldwide number of MOOCs was emerged out of which the most popularly known MOOCs Platforms are:

**edX:** It is the second largest MOOC platform with around 10 million learners and have high-quality content from Harvard, MIT, Berkeley and Oxford, among others.

**Coursera:** It is the platform with over 20 million participants and most of the courses were developed by the Stanford, Princeton, Yale, London, Munich, Zurich universities.

**Udacity:** Stanford University created it and at present it is offering programming courses in collaboration with industry partners such as Google, Face book or Daimler.

**Future Learn:** It is a UK-based MOOC platform which includes courses of various British and European universities and it offers shorter duration courses.

**Udemy:** It provides courses relating to programming, marketing, data science etc and it is having over 155000 courses and 40 million students.

**Khan Academy:** It is a platform that provides free math, art, computer programming, economics, physics, chemistry, biology, medicine, finance, history and many more areas.

**Canvas:** It is a learning management system that provides inbuilt open, adaptable, reliable cloud technology that makes teaching and learning easier. It is used by more than 18 million higher education, K-12, and workforce users worldwide.

**Open Education Europa:** The European Commission launched Open Education Europa in September 2013 as part of the Opening up Education initiative to provide a single gateway to European OER. It is a dynamic platform built with open-source technology by offering various tools for communicating, sharing and discussing in multiple languages.

**The Open University:** It is one of the oldest learning platforms with over 50 years of experience in delivering flexible learning and over 170000 students are accessing and getting benefit out of this platform.

### Indian Scenario

Majority of the people in India are unable have quality education due to lack of income sources, dependency on single person in family and high cost because of which education has become dream for them. With the help of MOOCs the entire scenario has been changed and helps these people to make their dreams come into reality by accessing quality educational resources at cheaper and affordable cost from anywhere. The popularity for MOOCs is increased because it doesn't require much establishment and the only basic requirement is availability of mobile / laptop / desktop with internet connection.

In India GOI had taken many new initiatives like e-PG Pathashala, Apna Course, myBSkool, eGyankosh, NPTEL, NCERT online textbooks, UNESCO-SALIS e-learning portal, IITBombayX, IIT Delhi, Indo-German EGurukuon Digital libraries, SWAYAM etc with the help of UGC and MHRD for the development of higher secondary education and higher education.

It has also made compulsory that students have to choose one or more courses from these platforms in each semester for the improvement of the skills and knowledge which the industry requires. Most of the companies are also giving weightage for the MOOCs credits and certificate in recruitments. MOOCs are playing a crucial role in filling the gap between industry skill set and individual skills required for development and promotion in organization.

### **Important MOOC trends**

India is the largest populated country which produces more than one million graduates from various disciplines of these only 10% are from top universities of country like IITs, IIMs, AIMS ,State Universities, Central Universities etc and rest are from private, autonomous and non autonomous colleges. Most of the colleges are affiliated to different universities in India to offer conventional education. These universities will have different syllabuses which are rigid and lengthy. In the present semester system it is difficult to have in depth knowledge of the subject as students has to cover around six to eight subjects to get their degree. It is also not possible to change the curriculum frequently which fits the industry requirements because in the external market numerous changes are going to happen frequently. So, gap is built between the academic and industry requirements. In order to overcome the gap MOOCs are offering different courses as per the latest industry requirements to upgrade the skills of students. In this process following transformation are happened in MOOCs.

**In-depth course series:** Coursera, MicroMasters at edX and Nanodegrees at Udacity comes with specializations in various fields and covers elaborately the entire topic or specialization.

**Certificates:** It is one of the changes that MOOC providers provide to its users who are looking for certificates. They are also developing courses in collaboration with universities and provide academic credit and degrees (e.g., at Coursera, edX or FutureLearn).

**Business models:** In the process of development MOOC platforms are coming with certifications. They are offering courses at free of cost but if certificate is required they will charge nominal fee and issue certificates which can be placed in social network groups and also in resume. In this way they are also generating revenue.

**Internationalization:** With the increase in popularity and usage of MOOCs most of the companies are also recognising these certificates for recruitment purposes. This has changed the scenario of learning process and with increase in demand for these courses platforms are providing MOOCs by translating them into languages other than English.

**Learning analytics:** Over the period of time a number of courses in different disciplines are available in MOOCs platform and they are also providing self assessment tests and exams to build confidence and understanding of subject to the users for their continuous learning and improvement.

**Terminology:** With increase in popularity to MOOCs number of providers is available in the market and they are using different terminologies like online courses, online learning and digital education for MOOCs.

#### **Essential Characteristics of MOOCs:**

- They provide free study material to the users who avail the course.
- MOOCs provide its uses clear idea about course content, reference books, videos etc for better understanding of the subject.
- There is no restriction on number of users to access the course, hence it is massive.
- Flexibility and compatibility are the main components of a MOOC
- Participants are diverse and distributed across the world.
- Easy accessibility and no specific requirements to most of the courses.
- Free to access and reliable on content

#### **Advantages of MOOCs**

**Easy Accessibility:** MOOCs are internet based courses which can be accessible from anywhere and also provide interaction to users to make learning interesting and easy.

**Time Bound:** MOOCs provide start and end dates to make users to track their pace of learning of topics and make them bound to complete the course with in the stipulated time.

**Collaborative:** MOOCs platform provide opportunity to share the thoughts and discuss with likeminded group people for better learning.

**No restriction on access to courses:** The only requirement to learn course is willingness to learn and users can register to classes without any prior knowledge on subject.

**Subtitles:** MOOCs provide subtitles for all courses for easy understanding of the subject.

**Global Content:** MOOCs provide the opportunity to access classes of eminent professors of top Global Universities.

**Instructiveness:** With access to social networking MOOCs provides platform to interact and share the knowledge and ideas with others and help to develop better course material and content. It also helps the students to have better understanding of subject and clarify their doubts simultaneously while studying the course.

**Sharing:** MOOCs platform provide opportunity to all academic and industrial fraternity who want to share their practical knowledge and skills to make the concepts simple and clear.

**Continuous Learning:** In order to survive in the dynamic world continuous skill upgrading is necessary. MOOC platform is playing vital role in providing easy access to resources for lifelong learning.

**No Exam Fear:** Most of the people avoid learning because of Exam fear. MOOC removes such fear encourages such people to improve their skills by using self assessment tests to assess their learning levels rather than traditional exams.

### **Disadvantages of MOOCs:**

Despite of several advantages MOOCs have certain disadvantages:

- Majority of learners got registered with the free courses but they won't complete them on time because of lack of supervision.
- As MOOCs is self paced learning system it requires constant motivation for completion of the course which will not be there in most of the cases.
- Learner's perception and expectations towards content and faculty will also influence the course completion.
- Since most of the courses are pre recorded video lectures they lack active participation from listeners and it is also difficult to judge the knowledge and understanding level of target audience in advance by the faculty.
- MOOCs platform requires continuous internet connectivity but users are facing technical difficulties like signal, connectivity problems and lacks supervision which makes learners prefer traditional class room structure.
- Online learning kills relationship between teacher and students, personal care, empathy and respect.

### **Conclusion**

Nowadays MOOCs have become one of the major learning sources to upgrade the skills and acquire knowledge at a self paced manner irrespective of various disciplines. They play a vital role in this pandemic situation by replacing traditional classroom scenario. Majority of the users are getting benefited with wide range of courses available through MOOCs and are also earning certificates which are useful for the academic and job purposes. Academicians, students and working people have utilised the MOOCs platforms during the pandemic and got benefitted. Thus MOOCs have potential to bring education to millions who otherwise would not have access through traditional learning system.

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