Comparative Analysis of Massive Open Online Course (MOOC) Platforms

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Abstract

The paper is exploratory in nature. It examines the potential Massive Open Online Courses (MOOC) platforms for the education scenario. MOOCs have commanded considerable attention of the netizens due to their rapid rise and potential to provide online environment for learning. But there are not enough literature to understand its research concept. This paper attempts to understand MOOC, who are offering it and at a basic level give a comparison of the offerings of the various MOOC providers. The paper also tries to understand what are parameters that effecting it. As such, it is not yet known how transformative the MOOC phenomenon has been so far or can be or will be. The author has identified arbitrary parameters and carried out observatory survey of 4 MOOC platform. Each of the identified parameters a measure the usefulness of the MOOC platforms is attempted. The end result is to identify the most effective MOOC platform.

Keywords: MOOC, Online Learning
1. Introduction to MOOC

Massive open online courses (MOOCs) are a recent addition to the range of online learning options MOOC have taken higher education by storm. In 2011, MOOCs were a notion, today they are an industry. Students in millions have enrolled from around the globe; thousands of courses have been offered; universities in hundreds are gearing up to pitch in their participation.

With more and more people seeking and opting for professional qualifications, educational institutions are innovating new ways of meeting their requirements. Distance Education has a long history, (Liyanagunawardena, 2015) where postal departments were the reliable conduit for the educational reading material to reach the learners. Over a period of time technology has evolved from telecasting classes to having interactive classes on a virtual platform. Moreover, the traditional classroom learning is not a viable option for working professionals who cannot afford to devote their time to a full-time course or program.

MOOCs are the educational buzzword since 2011. The year 2012 was declared as the year of MOOCs by the New York Times. MOOCs were developed in 2008 in the US (Asoke Nath, July 2014). The term MOOC was coined during the course "Connectivism and Connective Knowledge" by Dave Cormier, from the University of Prince Edward Island (Canada) (Mora, 2013) is considered as the first MOOC course launched. So what is a MOOC? Generally an Online course charges for the tuition, carries credit and limits the enrolment to some number to ensure interaction with instructors (Pappano, 2012). The MOOC, on the other hand, is usually free, with no credits and yes, massive. This type of online learning satisfies most of the learners who are self-paced and would want the qualification as a professional value-add.

Presently, MOOC is offered in different expanses of education. Shah (2014) in his study (Shah, 2014) has identified 10 core areas of education in which MOOC is offered. The areas and the percentage (%) of courses having MOOC is presented as Figure 1 below:

Figure: 1

Course distribution by subject

Source: (Shah, 2014)
MOOC is an online phenomenon gathering momentum over the past 2-3 years. Basically, a MOOC incorporates the connectivity of social networking, the facilitation of an acknowledged expert in a field of study, and a collection of freely accessible online resources (Alexander McAuley, 2010). The most significant aspect of a MOOC is that it builds on the dynamic engagement of several hundreds of learners/participants who are self-motivated and self-organized for learning, have prior knowledge and skills, and common interests. Although, as in a conventional course a MOOC will have predefined timeline and weekly topics for reflection and deliberation, a MOOC generally carries no fees, no prerequisites other than Internet access and interest, no predefined expectations for participation, and no formal accreditation.

In the year 2014, the number of universities offering MOOCs jumped to 400. Many of the top 25 universities in USA are offering MOOCs. In India, Swayam a MOOC is one of the educational initiative of the Indian Prime Minister Mr. Narendra Modi, started by IIT Bombay. The MOOC is on the OpenEdX platform. EdX is a MIT and Harvard backed MOOC provider.

![Course distribution by provider](image)

Source: (Shah, 2014)

2. Study Objectives
- To compare the MOOC platforms on the basis of pre-identified features
- To give weighted scores to the features
- To identify the appropriate MOOC platform according to methodology designed for the study.

The parameters identified for the study were
1. Profit / Not for Profit
2. Accreditation / Verified Certification
3. Available on Mobile platform?
4. Nos of registered students
3. Methodology

This study is conducted based on secondary information and statistics available from various sources like such as the MOOC platforms themselves, Google, World Wide Web, previous research papers etc. An attempt at comparing the features available on all the platforms from a user, technology and general perspective is done.

3.1 MOOC Platforms

MOOCs may be classified in a different way (Pratik Agrawal, 2015) - on its availability (Free / Paid), pace (self-driven / Schedule-Driven) and course offering (University / Private Firms). Traditionally MOOCs have been classified as:

cMOOC: Connectivist MOOC model emphasizes creation, creativity, autonomy, and social networked learning. Participants in the course act as both teachers and students, sharing information and engaging in a joint teaching and learning experience through intense interaction facilitated by technology.

xMOOC: This model emphasizes a more traditional learning approach through video presentations and short quizzes and testing.

Coursera (www.coursera.org), established by two Stanford University professors, is currently the biggest MOOC platform providing 212 different courses in such areas as: economics and business, computer sciences, biology, social sciences, music and film, medicine, health, food and nutrition, physical and earth sciences. Coursera has a consortium of 33 of the most well-known and highly regarded universities in the world delivering free online courses including Harvard, Stanford, Pennsylvania, Washington, London, Edinburgh, Toronto and Melbourne. Coursera has a mobile app for iOS and Android. As of March 2015 Coursera has 12,088,380 users from 190 countries enrolled. It offered a whopping 1000 courses from 133 (FAHS, 2015) partnered Institutions and Universities.

<table>
<thead>
<tr>
<th>Profit / Not for Profit</th>
<th>: For Profit</th>
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<tbody>
<tr>
<td>Accreditation / Verified Certificates</td>
<td>: Yes (Paid)</td>
</tr>
<tr>
<td>On Mobile platform</td>
<td>: Yes</td>
</tr>
<tr>
<td>Nos of registered students</td>
<td>: 15.2 million (approx.)</td>
</tr>
<tr>
<td>Types of Courses offered</td>
<td>: Ranging from Astronomy to Business Management</td>
</tr>
<tr>
<td>No. of courses offered</td>
<td>: 1451</td>
</tr>
<tr>
<td>Platform Technology</td>
<td>: Proprietary (Closed) software</td>
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Udacity (www.udacity.com) has a focus on computer science courses and provides a range of topics from beginner courses to intermediate and advanced courses. It is a for-profit educational organization founded by Sebastian Thrun, David Stavens, and Mike Sokolsky offering (MOOCs). The name Udacity comes from the company's desire to be "audacious for you, the student". While it originally focused on offering university-style courses, it now focuses more on vocational courses for professionals.
EdX (www.edx.org), owned by the prestigious academic institutions Harvard University and Massachusetts Institute of Technology, draws content from a selection of their highly regarded courses. It is a Not-for-Profit organization founded in May 2012. It also does a lot of research into learning methodologies based on how the learner use its platform. In October 2015 there were more than 82 institutions (FAHS, 2015), organizations and corporations that offer / plan to offer courses on the EdX platform.

FutureLearn (www.futurelearn.com) is the newest significant player reflecting how MOOCs are constantly changing. FutureLearn comprises a consortium of 12 major UK universities that included Birmingham, Warwick, Cardiff, Leeds, Bristol and St Andrews. FutureLearn is a private company wholly owned by The Open University, with the benefit of over 40 years of their experience in distance learning and online education.

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<th>No. of courses offered</th>
<th>Platform Technology</th>
</tr>
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<tbody>
<tr>
<td>Coursera</td>
<td>For Profit</td>
<td>Yes on Payment</td>
<td>Yes</td>
<td>15.2 million</td>
<td>Wide Ranging</td>
<td>300</td>
<td>Proprietary (Closed)</td>
</tr>
<tr>
<td>EdX</td>
<td>Not-for-Profit</td>
<td>No credited Course</td>
<td>Yes</td>
<td>4 million</td>
<td>Wide Ranging</td>
<td></td>
<td>Open Source</td>
</tr>
<tr>
<td>UdaCity</td>
<td>For-Profit</td>
<td>Yes on Payment</td>
<td>Yes (limited MOOCs)</td>
<td>1.6 million</td>
<td>More of Technical courses</td>
<td></td>
<td>Open Source</td>
</tr>
</tbody>
</table>

Table 1: Comprehensive Comparison of MOOC Platforms
3.2 Analysis
Without doubt Coursera is leaps and bounds ahead of the other MOOC platforms because of the head start it has had. But the FutureLearn and EdX are not far behind. What Udacity lacks in terms of the bouquet of courses offerings, it makes it up in terms of the depth of knowledge it offers in the technical courses. Coursera and edX, two of the biggest MOOC providers, dominate the market. Coursera offers 34% of MOOCs, the report says, and edX comes in second, at 17%. After that, Canvas.net gets 7% (Wexler, 2015).

In 2013 more than half of the MOOCs (Wexler, 2015) came from Coursera, and in 2014 the MOOC platform still offered about a third of MOOCs on the virtual world. Coursera is the biggest one, and are still adding more courses than any other MOOC platform. WhileCoursera’s business model is centred on rapid addition in the number of partners they have EdX is slightly slow on this front. But edX has focused on building its technology, a decision that might pay off in the future.

4. Conclusion
The growth of MOOC providers totally depends on the growth of credentials in online education. This leads to sustainability of the MOOC platforms. Lot of new courses on a MOOC platform actually are adding to the credential.

Ultimately the MOOC user needs to decide which platform to go for learning and what is the key takeaways that the learners wants – professional gain / personal knowledge.

References


