International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

A Brief Study on MOOCs

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Abstract: ***This paper presents a brief report on the MOOCs.Some of the famous MOOCs are discussed with their key features and revenue models. The current research gap was identified.Based on the research work already done, various factors were identified which affect the adoption of MOOCs, these were classified based on two perspectives – user point of view and the university which is offering the MOOC. At the end of the paper, we highlight some of the primary research which is to be done in this field.***

Keywords: MOOCs, business model, adoption rate, course completion rate, branding

1. Introduction

Distance learning has a long history of correspondence courses based on delivering reading material and submitting assignments by universal postal services(Casey 2008)[1]. With the rise of digitalization, many spheres of social interactions have changed drastically. MOOCs have contributed to this change in a big way. The arrival of MOOCs has marked an era of regulated and organized online courses with the reliability of famed and well-established universities. They have bought with them huge possibilities of both rise and disruption of the online education system. Many kinds of research have been done to understand its business model, impact on higher education, strengths, and weaknesses, cost-effectiveness, ease of availability, benefits and other relevant factors. These researches show that MOOCs have been very popular among advantaged class and developed countries(Zhenghao et. al. 2015)[6]. They serve successfully for skill development and educational benefits but still, there is very less completion rate of these courses which is less than 10%. Only the availability of internet does not ensure enrollment in open courses which are visible from very less popularity of MOOCs in developing countries. That means there are other factors which affect the subscription to these courses and their successful completion. We will be understanding the factors which affect the adoption of MOOCs and its success rate. We are focused on understanding the model and stats of some popular MOOCs initiatives like Coursera, Edx, Udacity, and SWAYAM which will give us an insight on approach these initiatives take and its impact on their overall growth. These MOOCs provide service in both developed and developing countries(US and India) and this will help us understand the country-specific factors which contribute to the success of them.

2. Literature Survey

We have gone through a brief working history of some of the major MOOCs services in the world like Coursera, Udacity, EdX, SWAYAM, NPTEL. The study is done for understanding the business model, target users, revenue growth, specialties, collaborating universities and their objective, participation rate, completion ratio of courses of these MOOC providers. It is not a comparative study because we want to understand the individual approach of each of the providers so that different factors and their outcomes can be considered separately. Brief of our study is compiled below.

2.1 Udacity

Udacity was founded in June 2011 by Sebastian Thrun and David Stevens with a vision "to democratize education". It all started with the floating of the free course on Artificial Intelligence which gained traction from over 1.6 Lakh students around the world.

In Spring of 2013, Udacity and San Jose State University collaborated to launch the SJSU Plus program comprising of three courses which were run on the online Udacity platform. These courses were a requirement for most of the students to graduate. This program proved to be a failure as observations lead to suggest that the students pursuing the normal classes fared well in comparison to the students who pursued the online course program. This led to the suspension of the collaboration.

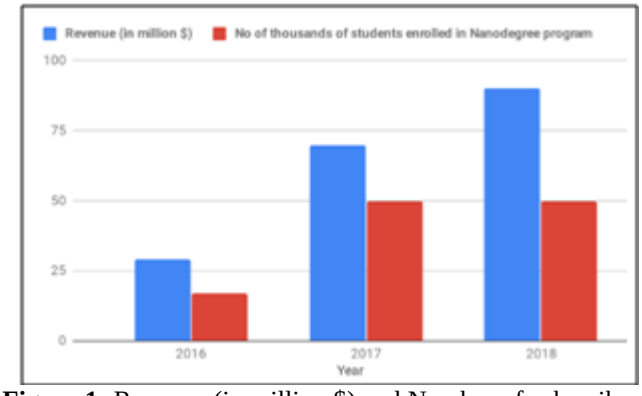

Figure 1: Revenue (in million $) and Number of subscribers (in thousands) vs time [11]

Having failed in collaborating with universities now focuses on forming **partnerships with industrial and corporate giants.** The industrial and corporate giants pay for their employees accessing the resources on Udacity platform making the approach more job and skill-centric. Udacity launched the **nanodegree program** [9] with this attempt to reduce the gap between real-world skills and education. Major target segments are the employees who are in look to upgrade their skills. The nanodegree program currently has

about 50,000 students enrolled and a total of about more than 27,000 students graduated which accounts for about 35% graduation rate. Nanodegree graduates have been a salary hike of 33 in Canada and the United States. The main source of revenue is graduates and employees who want to hone their skills.

2.2 Coursera

Coursera is an online learning platform where anyone who is keen enough to learn can go and satiate his/her hunger for knowledge. It was founded in April 2012 by Stanford University computer science professors Andrew Ng and Daphne Koller[7]. Inspired by their experiences offering their Stanford courses online in fall 2011, Andrew and Daphne left Stanford and they launched Coursera. It has tied up with various universities including Stanford and others around the globe to offer free online courses. Coursera is an enterprise venture of various universities and venture capitalists firms like Kleiner Perkins Caufield & Byers, New Enterprise Associates, Black River Ventures, EDBI, GSV Asset Management, GSV Capital, etc.

Some of the free courses offered by Coursera have received a recommendation from the American Council on Education for approval of credits at the end of these courses and students who have participated in the course can request for the course transcripts. The courses under this system remain free but the cost of availing a transcript is there and it is also a choice of the university to accept credits for Coursera's courses[8].

Coursera has also started offering specialization courses to students as well as professionals who are looking to upgrade their skills. These courses are certified. Coursera has partnered with companies like Google, Shazam, and Instagram to offer capstone projects to interested participants. Through these initiatives, Coursera is targeting young adults[8].

In order to generate more revenue, Coursera has provided its student database to potential employers who can select the employees as per their requirements. Although this service is available for free to students, Coursera charges the employer. Coursera also shares the revenue earned with the partner university on the basis of their contract[13].

2.3 EdX

EdX was founded by the collaboration of MIT and Harvard in March 2012. They received an initial investment of $30 Million each from both the universities. Unlike most of the MOOCs, EdX is a not-for-profit organization. Rather, it is a self-sustaining company i.e. it does not require to return back the initial seedings to its investors but has to ensure that it earns enough revenue to cover its costs.

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Inferences

1) As compared to other MOOCs EdX offers a bigger share in revenue to the partner universities. It offers shares as high as 70% as compared to 10-15% of Coursera.
2) In contrast to other MOOCs, EdX pays the university only after it collects an initial minimum amount. On the other hand, Coursera guarantees a cut to the university even if a small amount of revenue is collected.

Micromaster

This is the most sort after credential offered by EdX. This Programme makes the student eligible to earn credits in a masters course if the student is accepted for the master's degree in that university. Hence, passing a micromaster programme is an easy and cheap way to earn credits for a masters degree. EdX is currently investing a lot of its resources on micromasters. This is clearly evident from the fact that after the launch in 2015 the number of micromasters courses has increased from 20 in 2016 to 51 in 2018.(Adam Gordan 2018) [14]

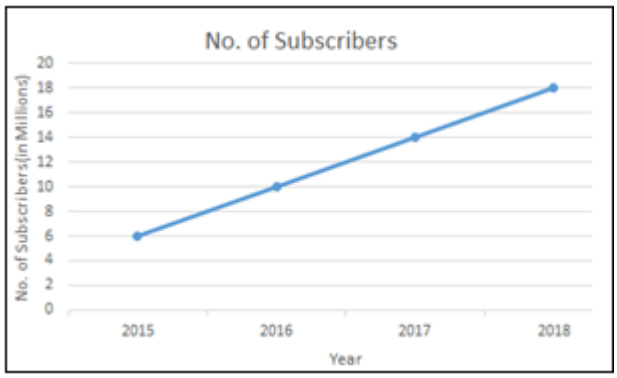

Figure 2: Increase in no. of micromasters subscribers [18]

2.4 Swayam

Study Webs of Active Learning for Young Aspiring Minds (SWAYAM), is an initiative of the Ministry of Human Resource Development. The programs are designed from 9th class till post-graduation which are accessible to each and every person having an internet facility.[21]

According to the notification issued by UGC/AICTE-"Credit Framework for online learning courses through SWAYAM Regulation 2016" it advises the Universities to transfer the credits of courses done by a student on SWAYAM platform[20].

The Faculty Development Program is also in its developing phase where untrained teachers are given the necessary education/skills through SWAYAM platform.

The main revenue sources are funds provided by the Govt.

3. Problem Definition

After conducting thorough research on various existing business models of MOOCs, we have come up with the following research objectives-

1) Factors affecting the adoption and completion of MOOCs.
2) Effect of MOOCs on the brand value of the linked university.

4. Methodology

In this paper we have tried to understand the factors of adoption of MOOCs through two perspectives:

4.1 User's perspective

Usefulness-When a learner enrolls in a MOOC, he/she has a motive of performance enhancement, skill development or learning something new. If a MOOC provides the learner facilities to achieve his goals, then he is more likely to enroll in it and also complete the course. NPTEL, SWAYAM, coursera makes available many videos, assignments, projects and evaluation system which helps learners in building their knowledge

Interaction-As a platform, MOOCs is an individual learning model and its interface provides learners with some tools for involvement. But this is one of the major setbacks for those who feel ease in interaction-based teaching. MOOC services have started providing Learner-Learner, Group-Group, Learner-facilitator, learner-resources interaction. Learner-resource interactions in improving the performance(Zimmerman 2012)[2], learner-learner interaction increases the satisfaction level and perceived effectiveness(Nandi, Hamilton, Harland 2012)[3] .

Global MOOC quality survey(2017) [4] indicates that there is a very high significance of overall effectiveness of MOOC and these four levels of interaction.

Accessibility- Depending on different demographic conditions, language preferences, area of access, needs of learners change. Lack of good internet connection can be a huge barrier for developing countries. Most of the courses on popular MOOCs are in English and this creates a problem for learners from non-English speaking countries. Surveys show that MOOCs like coursera, EdX, Udacity lack accessible design and none of them were fully accessible (Bohnsack and Puhl 2014)[5] .

Learning tradition- A paradigm shift from traditional teaching methodology has occurred with the introduction of online learning and this is one of the major concerns for pioneers of MOOCs. India traditionally has Guru-Shishya method of education and it is embedded in conscious of people here. The positioning of MOOCs in the Indian mind demands a lot more effort than European countries. So, the future of the MOOCs depends on the approach they take.

4.2 University's perspective

Extending Outreach

The worldwide outreach of MOOCs is the primary reason why universities are adopting. It allows them to emblazon their quality of teaching as well as learning to a vast audience from different parts of the globe. Through the data collected from MOOCs, the universities are able to learn about their prospective learners demographic according to which they can develop their marketing strategy. MOOCs are also a unique way for universities to promote themselves to their potential students through a structured course which they avail through available online courses.[16],[17]

Branding

MOOCs, when used to bring the area of expertise and excellence of a particular university, could help strengthen the brand while providing quality education. Examples include MIT offering MOOCs on electronics, IIT Delhi offering MOOC on Data Structures and Algorithms, Computer Sciences by The University of Washington. Publishing such courses of expertise can really help to make an impression of the quality of education of an institution. When it comes to elite institutes it becomes too difficult to comment on the nature of the impact that MOOCs have on the brand. As the elite institutes have high recognition and demand in the market by default, the nature of impact cannot be ascertained.

One thing can be said for sure, a poorly maintained MOOC can hamper the brand of an institution. One such example is of one of the courses of Georgia Tech[12] crashed. Students were unable to download learning material and were often mailed apology letters for technology glitches. It is no shocker that the brand of Georgia Tech took a dip.

Hence, for non-negative influence maintenance, consistency and a support system for students become important.

5. Results and Discussions

Demographics of qualification of people who are taking up courses via MOOCs and its coherence with the initial purpose of MOOCs which was the empowerment of underprivileged classes. Past researches are skeptical about the real outcome of these services.

Research on the MOOCs courses as a product which will help us in identifying what other necessary details, other than the core product, can be focused upon in making the augmented version of a course. For instance, support/doubt clearing system, quizzes, length of lectures, etc.

Public universities in developing countries like India are skeptical about offering MOOCs. We need to understand the factors and consequently conduct hypothesis testing to check reality.

Study of the impact of MOOCs on the brand of the Ivy League and other big universities. Research attempts have failed to comment on the kind of impact MOOCs have on the brand.

The completion rate of courses in MOOCs is really low and so is the retentivity. Various factors affecting them are unexplored.

6. Conclusion

MOOCs is a relatively new service which is being offered only for the past 7 years. So, there is a lack of research both qualitatively and quantitatively. There are a lot of factors, for instance, the type of people accessing courses through MOOCs, the type of courses MOOCs offer, the brand associated with the MOOCs, etc. which are unexplored. There is a lot of scope for research in this direction which can help in the construction of a sustainable MOOCs for future generations.

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