

First Day Stands Out as Most Popular Among MOOC Leavers

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Abstract: The open nature of MOOCs poses new challenges for educators to engage students in their learning. It defies the traditional classroom bound learning and demands new measures to be taken that would help keep students engaged in the course. This paper studies the enrolment data of three MOOCs offered on Future Learn in 2013/14 and identifies that at any given day in its lifecycle the highest number of students leave the course on the very first day they join it. Hence, it proposes strategies such as buddying, feedback, briefing and incentives to facilitate students to stay on board and engage with the course for maximum benefit possible.

Key words: Distance education, e-learning, MOOCs dropout rates, MOOCs engagement.

1. Introduction

Massive Open Online Courses (MOOCs) are a fairly recent phenomenon in the online education industry that have garnered great support from the world leading institutions over the past three years [1]. MOOCs are Massive. They are Open. They are Online. They are Courses offered by some of the most elite educational institutes around the world.

Massive scale of MOOCs has been evident since its very birth in 2008 when Siemens and Downes opened their online course on connectivism to all who wanted to attend for free. Before it was free the course had 25 participants registered for it. After the course was opened to all, the course registered another 2300 participants [2]. In another instance, an Artificial Intelligence course offered by Stanford attracted 160000 students [3], however, it would be an exaggeration to quote this number for every MOOC. A recent study done by The Chronicle of Higher Education in 2013 indicates that average number of enrolments for a MOOC is about 33000 [4].

Openness aspect of MOOCs fuels the massive scale it is known for. Openness means the courses are open to everyone in the world to join. The openness in itself is not a new phenomenon in the education world. The open universities of the world have been successfully running distance programmes for about half a century now [5]. However, MOOCs not only offer freedom to just about anyone to join the course, it offers the flexibility for anyone to join the course at any time during its conduct. There are no strictly enforced prerequisites, thus, participants can join and leave the course at any time. The course material is open and can be used by anybody who has access. However, it must be added that some MOOC providers have now started charging for material to strengthen financial returns [6].

Online nature of MOOCs provides it the convenience and reach. Basically, anyone with internet access can join these courses at their own time and space regardless of where they are on the globe [7]. It also presents an opportunity to interact with a large and diverse body of students that could not be possible in a classroom setting.

Courses offered are delivered on a platform that partners many institutions, most often these are the institutions of repute. These include universities like MIT, Harvard and Stanford, among others. After Stanford's AI course, as mentioned above, several MOOC platforms such as Udacity, edX, Coursera and EdX emerged. So much so that The New York Times coined 2012 as the year of MOOC [8]. Having open access to joining the courses offered by institutions of repute attracts masses to attend them.

The voluntary mode of participation causes students to disengage and even leave the course when they lose interest [9]. It is no surprise that studies continue to show low completion rates [10]. Some may shrug it off and blame it on the inherent nature of MOOCs. However, with this attitude there is a risk of students losing interest too quickly to benefit from the material. Hence, in order for students to gain the maximum benefit out of the course material, engaging learning strategies must be deployed that encourage the willing student to voluntarily participate in the course.

Researchers have attributed the disengagement and dropouts to factors like: lack of time, feeling of isolation, insufficient background knowledge and skills [11], varying Learners' motivation [6], varying Learners' approach [12], and hidden costs e.g. purchase of textbooks. Solutions such as: flexible time tables [13], motivating students to complete courses through formal recognition [11] and encouraging community building [13] have been proposed and can be seen implemented for many MOOCs. Coursera has been offering certificates at a price for people who have completed the course [14]. Many cMOOCs encourage peer to peer learning and participation on their forums [15].

To further research, we need to drill down and study exactly when students disengage from the course. This will help us figure out and address any common pattern in behavior. In this paper we identify the peak periods when students leave the course during the lifecycle of three MOOCs run on Future Learn in 2014. We then propose strategies on how best to engage the willing student at the point when s/he joins the course and propose further research areas in the field.

2. Data and Methodology

We studied enrolment data of three MOOCs offered on FutureLearn in 2013/14.

- Digital Marketing: (1 course)



Fig. 1. Digital marketing MOOC details on FutureLearn [16].

It explores the latest trends in digital marketing, Fig. 1 above [16]. It is facilitated by Dr. Lisa Harris of the University of Southampton. It takes a story telling approach and encourages participants to share their own experiences as consumers and marketers. It runs for three weeks and three hours per week. We obtained

data for one Digital Marketing course for this study where the course activity started in August, 2014.

- Exploring Our Oceans (2 courses)



Fig. 2. Exploring our oceans MOOC details on FutureLearn [17].

It explores the half of our world covered by deep-ocean, and how our lives affect the hidden face of our planet, Fig. 2 above [17]. It is facilitated by Jon Copley and Verity Nye of the University of Southampton. It runs for six weeks and three hours per week. Each week is meant to cover different aspect of the course with a common narrative of understanding our oceans better. We obtained data for two Exploring Our Oceans courses for our study where the course activity started in January and June, 2014, respectively.

The data was in the form of participant enrolments timestamps. It contained participant unique ids in a scribbled format to protect user identity. For each user there were timestamps for when the user enrolled and unenrolled from the course. Every user had an enrollment timestamp. However, only those users had the unenrolled timestamp who left the course. Participants who stayed with the course had no unenrolled timestamp. Details on participant enrolments helped us understand how long a participant stayed with the course.

The attempt was to identify any patterns as to when the participants are most likely to leave the course. For this we analyzed 'enrolled' and 'unenrolled' data to identify distinct patterns, if any. To this effect, we obtained the difference in the period between 'enrolled' and 'unenrolled' timestamps to figure out how long do participants stay with the course. We segregated the data for each day and sorted it out to obtain how many students enrolled and unenrolled in a given day. To obtain the participants who unenrolled, we used a filter to extract the data that had the unenrolled timestamp. We then obtained the difference in timestamps for each participants. This presented us with a map of how long a student, who unenrolled, stayed with the course.

3. Data Analysis and Findings

For each of the courses we sorted the data according to the number of days a student, who left the course, actually stayed with the course. The charts below depict the data in a pictorial format for further analysis.

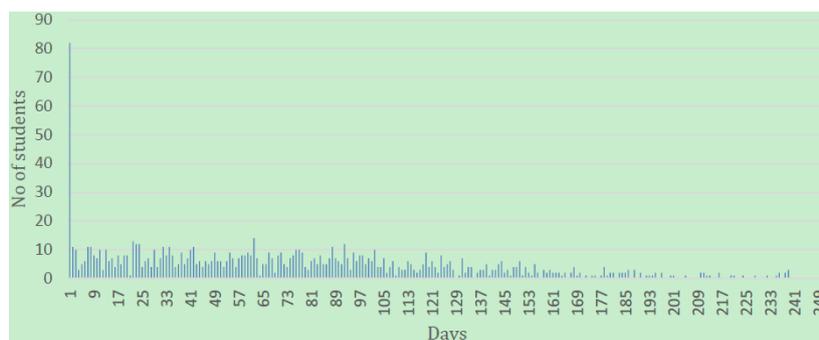


Fig. 3. Length of stay of unenrolled students.
MOOC: Exploring Our Oceans (Nov 2013)

Fig. 3 above shows that 82 students left on the very first day they joined the course. The second highest score recorded for any other day is 14. This means first day holds great importance in the life of a MOOC participant in terms of whether he or she would like to stay with the course or not.

Students can join in the course at any time. This may mean they join on the first day or the last day or any day in between, regardless, on any given day the first day holds great significance in their decision to stay or leave the course.

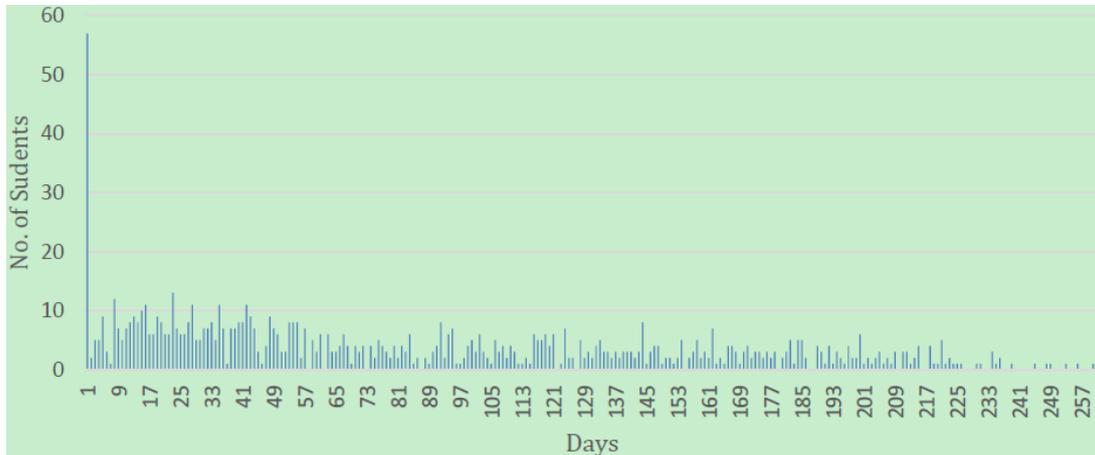


Fig. 4. Length of stay of unenrolled students.
MOOC: Exploring Our Oceans (Mar 2014)

Fig. 4 above shows that 57 students left on the very first day they joined the course. The second highest score recorded for any other day is 13. It is evident that first day is when the highest number of leavers decide to leave at any time during the conduct of the course.

It is important to note that these results are from a subsequent rerun of the Exploring Our Ocean course. When you compare the two courses the students who leave the course on the very first day they join it is less. This may be due to several factors such as changes in the course content, delivery, design or other reasons. This paves way to further research where subsequent rerun of the courses are analyzed for changes and improvements.

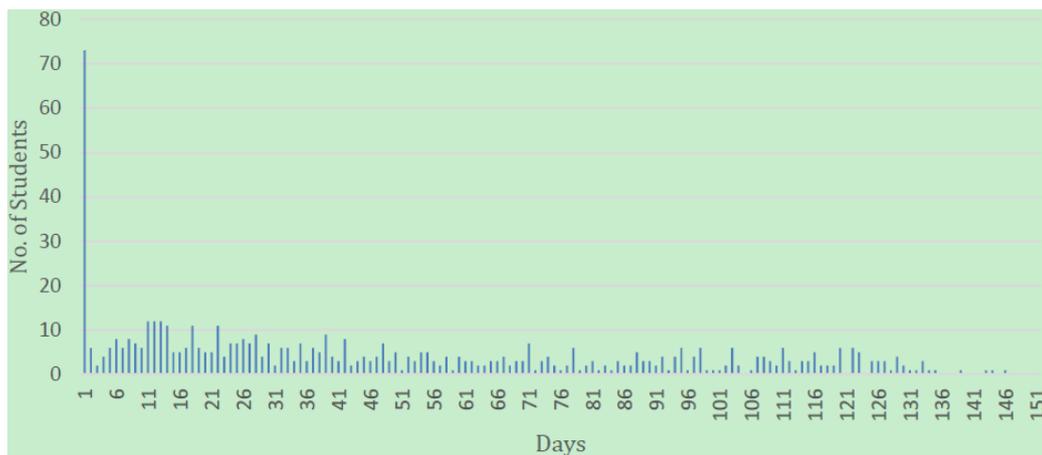


Fig. 5. Length of stay of unenrolled students.
MOOC: Digital Marketing (Jun 2014)

Fig. 5 above shows that 73 students left on the very first day they joined the course. The second highest score recorded for any other day is 12. The figures from the first day are many folds higher than the next highest day recorded.

It is clear to see from all the three courses analyzed that the highest number of the students who leave do

so during the very first day of them enrolling on the course. It is worth mentioning that students can enter and leave the course at any time during its life. Regardless of what day of the course the students join the very first day stands out as most significant when students decide to leave the course. Hence, we must develop strategies that will help us onboard students onto the course better at any point in time during its lifecycle.

4. Discussion and Suggestions

Regardless of the reasons of why students leave a course it is evident that first day holds great significance in their decision to stay. We can say that this is natural and expected because registration into a course is free and since the course is open students enroll to check if they are interested in the course or not. Thus, who are not interested leave the course the very first day. However, since the enrolments and un-enrolments happen all through the lifecycle of the course it is also likely that a student enrolls into the course and fails to assimilate into the group or catch up with the progress of the course. Therefore, we must implement ways to facilitate willing students to join and benefit at any point in the course lifecycle.

Listed below are some ways to facilitate students for an easier on board process into the course:

Briefing — it is a common practice among MOOC developers to begin the sessions with overview and wrap-up with summary or conclusion. However, this is not enough as it is a cumbersome process for a newcomer to go through the many overviews and summaries of the course. In addition, there should be an up to date recap of the course at any one point in time. This will work as debrief for the new joiners and help them catch up with the course proceedings.

Buddying — this technique has been well practiced in corporates to induct their newcomers into the organization [18]. At the time of joining the new entrant is 'buddied up' with an old timer who can help him quickly catch up with the way things get done in the organization. Research shows that early socialization experiences have a long-term impact on newcomers' satisfaction, performance, and intention to stay in a group [19]. Similar strategy can be deployed in MOOCs whereby a fellow participant is suggested to the new entrant as his/her buddy. This will not only help newcomers get up to speed with the course faster but also encourage community building.

Feedback — It is found that first time posters who receive response in an online community are more likely to post again or to post sooner [20]. Feedback engages participant with the community. Hence, MOOCs could be monitored to raise priority for feedback on first response on the forums.

Incentives — this can be a great way to motivate and engage participants into the course. Incentives could be given around completion of learning tasks so participants are geared towards tackling and completing the tasks. This will also add to their sense of achievement. One such way is to offer badges [21] as a form of recognition. Learners can earn badges through completion of different learning tasks and this in turn can get them accredited for peer to peer reviews/feedback.

5. Further Research

The discussion above can be furthered by surveying students' reasons of leaving. This can uncover other issues that could be tackled for better engagement of a student with the course.

Engagement of students could also be further investigated with how students interact with the course. Cross-sectional studies could be conducted into the aspects of the course that translate into low or high engagement periods.

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