The Analysis of the Drop Rate of the Indonesian Massive Open Online Course

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THE ANALYSIS OF THE DROP RATE OF
THE INDONESIAN MASSIVE OPEN ONLINE COURSE

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ABSTRACT

One of the benchmarks for successful online programs is the rate of participants' resistance. In short, the higher the participants' resistance to online programs, the better. The IMOOC (Indonesian Massive Open Online Course) was the first Indonesian MOOC developed by Indonesian English instructors from various universities in Indonesia. This online program was intended to enhance pre-service teachers with new skills that they could integrate technology into their classrooms. With this strategy, teachers not only made their teaching methods interesting and relevant with students' needs but also nurtured students' autonomous learning. The IMOOC was implemented in fifteen cities spread across various regions of Indonesia, starting from Aceh to Ambon. To complete the IMOOC program, participants had to follow this online program for ten weeks. After the IMOOC program came to an end, this study found that the drop rate of the IMOOC participants was quite high. Some factors causing high drop rate included instructional factor, course-related factor, technological factor and individual factor.

Keywords: MOOC, Online Learning, information and communication technology, autonomous learning, drop rate

INTRODUCTION

MOOC as one of the online courses always has a chance to have dropout rate. Smith (2010) mentioned 40% to 80% online students had dropped out of online classes. When comparing to traditional classroom environments, the online learning program had a 10% to 20% higher failed retention rate (Herbert, 2006). The MOOC by the University of Pennsylvania did not produce encouraging results with regard to the completion rate (Meinert, 2014). Most of the participants failed at the beginning of the program, and decided not to continue the MOOC program. There were only about four percent who successfully completed the MOOC program. While there was no dominant reason for dropping out (Willging and Johnson's, 2009), most students dropped out of a program due to personal, job-related, and program-related reasons.

Several studies mention that students' longevity in learning experience affects the continuation of the online course: the input in time and effort is a critical determinant as to when a student is more likely to withdraw. For example, Jaggars (2011) states that the mid-semester withdrawal rate for online courses are higher than face-to-face courses. Levy's (2007) also found similar results: students at a lower learning level at college were at a higher risk of dropping out than upper level students. The students at a lower learning level at college were commonly less experienced, and they were more likely to drop the program. They felt less prepared to deal with the academic rigors. On the contrary, students who have spent longer time in the program were more motivated to complete the course, because they have already invested considerable time and efforts on it. The input in time and effort is a critical determinant as to when a student is more likely to withdraw

MOOC is an online learning model that is strategic to widely reach participants regardless of space and time. While participants from different regions participate in MOOC with available internet access, they learn MOOC modules at their pace. However, if a MOOC program has a high dropout rate, the effectiveness and effectiveness of the MOOC program should be questioned. The fact that the online participants in MOOC programs are liable to withdraw at any given stage makes

it even more crucial to explore ways and means to mitigate the underlining causes of this phenomenon. A good place to start this is by examining why online learners leave, when in their academic careers are they most prone to leave, and what can be done to eliminate or mitigate these causes.

METHOD

This study was a preliminary study of the IMOOC as a pilot project that aimed to provide skills for pre and in service teachers to enable and utilize and integrate technology into their teaching and learning activities. The theme of the IMOOC program was Technology for Autonomous Learning (IMOOC). While the learning management system used was Canvas. five modules were prepared in the IMOOC: Autonomous Learning (Module One), Digital Literacy (Module Two), Mobile Devices for Autonomous Teaching and Learning (Module Three), Autonomous Learning Using Videos (Module Four), and Autonomy for Video Creation (Module Five) .The IMOOC was held for eleven weeks, starting from February 20 to April 29, 2017. The first week or also called pre-course was a period that provided participants with the opportunities to familiarize with some general information such as the course objectives, Learning Management System features, course policies, etc. Following the pre-course stage, the participants were required to complete the five modules for the next ten weeks.

Fifteen facilitators became the subjects of this study. They were e-teacher alumni from various higher education institutions, state universities, state Islamic universities, polytechnic, and private universities all over Indonesia. This selection was intentionally made to ensure the diversity of contexts and experiences, which they would bring to the facilitation of the IMOOC. The fifteen sites or chapters the MOOC was implemented were Aceh, Batam, Jakarta, Bandung, Salatiga, Jogjakarta, Semarang, Malang, Surabaya, Denpasar, Banjarmasin, Samarinda, Wantampone, Makassar, and Ambon. The numbers of IMOOC participants varied considerably from one chapter to another. The total population of IMOOC participants was three hundred and seventy six.

The primary data of this study were obtained from the report documents they submitted after the completion of the IMOOC program. For the quantitative data, this study used statistical description analysis by exposing information about distribution frequency and percentage. Meanwhile, the narrative data were analyzed thematically.

FINDINGS AND DISCUSSIONS

Dropout Happened Almost in All Chapters

Table 1 shows all fifteen chapters were prone to dropout rates. The dropout rates from one chapter to another chapter varied, ranging from 4.55% to 100%. While Banjarmasin had the lowest dropout rate of 4.55%, Bandung, Denpasar and Surabaya were among the chapters with highest dropout rate (100%). Quite surprisingly, such a high dropout rate had occurred in big cities where internet connection support should not be big problems. Unlike other chapters, the IMOOC programs in these big cities (Bandung, Denpasar and Surabaya) were not successfully carried out. Bandung and Bali only did the IMOOC less than five weeks. Moreover, the IMOOC in Surabaya lasted for one week. The facilitator in this city only did the pre-course stage while leaving the other five modules unattended. With regard to these unfavorable conditions, these three facilitators admitted they had a high workload in their offices. They found it difficult to cope with their responsibilities, taking care of their jobs at the office and facilitating the IMOOC

Table 1. Dropout Rate in Fifteen Chapters Facilitating the IMOOC 2017

| No	Facilitator	Chapter	Participants				
			Recruit	Complete the course	Complete the course but fail to meet the passing score	Dropouts	%
1	MLS	Bandung	25	0	0	25	100
2	NMA	Denpasar	25	0	0	25	100
3	HSW	Surabaya	25	0	0	25	100
4	DS	Samarinda	25	3	0	22	60
5	MT	Jakarta	25	8	2	15	40
6	RY	Aceh	25	6	0	19	40
7	HM	Ambon	25	12	4	9	36
8	AMY	Watampone	25	9	0	16	36
9	SS	Makassar	25	13	0	12	32
10	BTN	Jogjakarta	18	10	3	5	27.78
11	ET	Batam	25	14	0	11	24
12	HT	Salatiga	25	17	0	8	24
13	RH	Semarang	24	10	12	2	20.83
14	DG	Malang	37	21	11	5	13.51
15	PSR	Banjarmasin	22	20	1	1	4.55
	TOTAL		376	143	33	200	
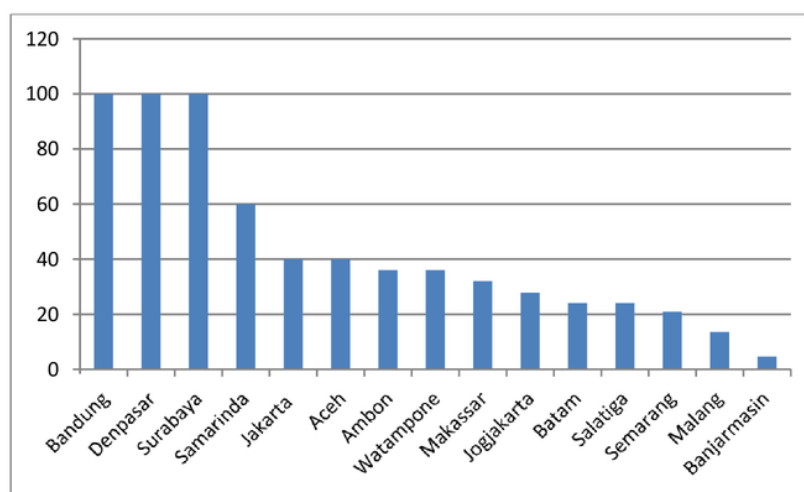
Figure 1. Dropout Rates in Fifteen Chapters

The Dropout Rate Level of IMOOC as Relatively High
The IMOOC 2017 has been dominated by the chapters with high dropout rates of 53% in comparison with those of 47% (see Table 2). The chapters with high dropout rate category were Bandung, Denpasar, Surabaya, Samarinda, Jakarta, Aceh, Ambon, Watampone and Makassar. The low dropout rate chapter were Jogjakarta, Batam, Salatiga, Semarang, Malang and Banjarmasin.

Table 2. Chapters with Low and High Dropout Rates

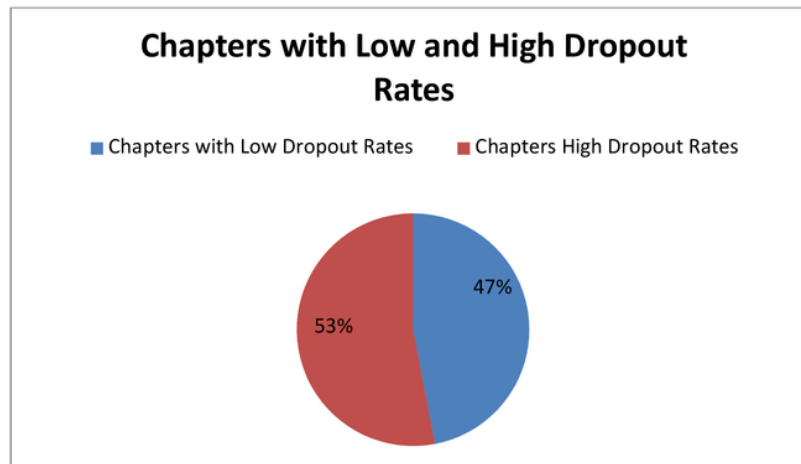| No	Categories	Freq.	%
1	Chapters with Low Dropout Rates (1 -- 11)	7	47
2	Chapters with High Dropout Rates (12 - 25)	8	53
	TOTAL	15	100

Figure 2. The Pie Diagram of Chapters with Low and High Dropout Rates

Factors Causing Drop Rate Based on Facilitators' Reports

There were at least five factors affecting the participants' dropout rates: individual factor, course related factors, instructional factor and institutional factor (Bonk & Khoo, 2014). Of the five factors, it was individual factors contributing to the highest percentage of the dropout rate (41%). The second factor was technological factor of 24%, followed by instructional factor (19%), course related factor (16%) and institutional support factor (0%).

Table 3. Factors Causing the Dropout Rate Based on Facilitators' Reports

No	Chapter	Factors				
		Individuals Factor	Course-related factor	Instructional factor	Technology Factor	Institutional Support Factor
1	Bandung	1	1	1	-	-
2	Denpasar	1	1	1	-	-
3	Surabaya	1	1	1	-	-
4	Samarinda	1	1	1	1	-
5	Jakarta	1	-	-	-	-
6	Aceh	1		-	1	-
7	Ambon	1	1	1	1	-
8	Watampone	1	1	-	1	-
9	Makassar	1	1	-	1	-
10	Jogjakarta	1	1	-	1	-

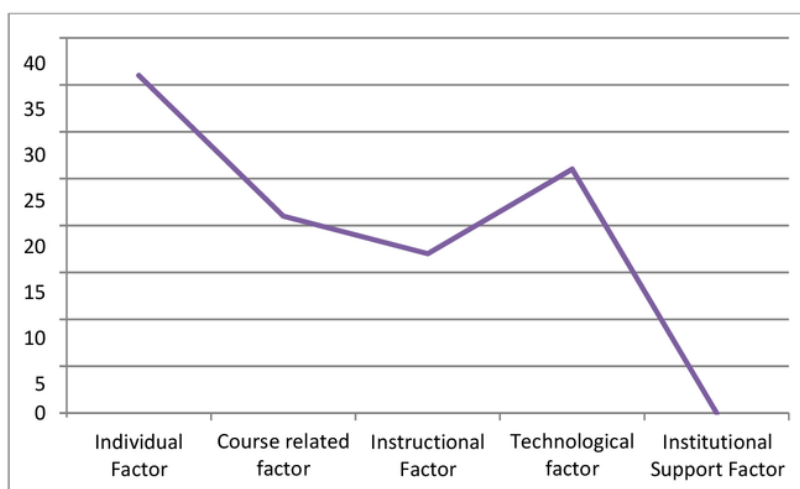|					
11	Batam	1	1	1	1	-
12	Salatiga	1	-	1	1	-
13	Semarang	1	-	-	1	-
14	Malang	1	-	-	1	-
15	Banjarmasin	1	-	-	1	-
	Total	15 (36%)	6 (21%)	7 (17%)	9 (26%)	0 (0%)

Figure 3. Factors Affecting Dropout Rates

Individual Factors

Nearly all the facilitators mentioned the individual factor became the biggest obstacle for the participants to complete the whole modules in the IMOOC. Not a few of the participants were teachers who had multiple responsibilities at their work. When they participated in the IMOOC, at the same time they had to prepare their students to face the National exam. With this responsibility, some participants decided to leave the IMOOC. Meanwhile, some others persisted, but they were often late in submitting their work.

> *Participants are also committed for other professional responsibilities that demanded them to be fully focused on their office tasks. All of PNS English teachers withdrew from the IMOOC because they have to focus on preparing the students for the National Evaluation. It is difficult to discuss and review others' work because many participants are not submitting their assignment on time. The scores for assignments are not well-balanced; some assignments are time consuming but scored relatively low compared to other tasks/assignments.*
>
> *(Script 1 by facilitator RY)*

> *The time for IMOOC should be implemented in the first semester (July –December) since the second semester (January-June) was teachers' busy time for national examination preparation and accreditation.*
>
> *(Script 2 by facilitator DS)*

Studying independently through the IMOOC program was a challenge for participants. The participants were accustomed to waiting for instructions from the facilitators. Very rarely did they take initiatives to record the deadline of the assignments. As a result, they were often late for assignments. They did not pay attention to the schedule or deadline although the facilitators often reminded them of deadlines either via email or instant messenger.

> *Participants have never joined or experienced any online learning before they joined IMOOC. The dominant cultures of learning in Indonesia which is mostly teacher-dependent*
>
> *(Script 3 by facilitator HT)*

Media literacy was also another major obstacle. Not a few were still completely new to the online program. They were often overwhelmed with navigation features in the Learning Management System such as uploading files, linking to pages, typing essays neatly, and so on.

> *This is an online learning course and new learning atmosphere and experience for all participants, I believe that the participants, to a certain degree, have to develop strategies or technique to engage in the course. Participants motivation was low as they thought it was dealing with technology. They are familiar with the social media but not with the use of the apps/internet for their teaching and learning process.*
>
> *(Script 4 by facilitator HJM)*

Technology Factor

The second primary factor that kept participants from having good online performance was related to the technological factor. Slow Internet connections often prevented them from learning. Complaints about internet connection were often delivered by participants, especially those from areas outside Java. With limited bandwidth availability, participants could not always enjoy watching IMOOC movies instantly. Instead, they had to wait for the buffering system before they could see the movie completely. Moreover, the internet interruptions also prevented them from submitting tasks through uploading files on time. The task submission became more challenging when the file sizes they uploaded were large enough. These unfavorable circumstances indeed tested their patience.

> *In my context where internet connection seem problematic, all participants started by downloading all the course contents and save them in word doc file, and so did the response they make to all the questions that they type first in word doc before posting in canvas board.*
>
> *I once thought of having collaboration to be a guest teacher for one of the module discussions, but due to frequent power outage and internet connection, I canceled the collaboration because I think it will not bring an expected result from such collaboration.*
>
> *(Script 5 by facilitator HJM)*
>
> *Not all participants have good internet connection*
>
> *(Script 6 by facilitator HT)*

Instructional Factor

Instructional factor was a factor related to facilitators: online teaching skills and self-management. With regard to online teaching skills, most of them admitted that it was a special skill that differed from the classroom teaching skills face-to-face. Teaching online required special skills and teaching techniques. In fact, most IMOOC facilitators were English instructors accustomed to

teaching face-to-face in the classroom. Most claimed that online teaching was a new experience to them. They mentioned that this situation certainly affected their confidence and the quality of their teaching at the IMOOC.

> *Being an online instructor is different from being an online learner. My experience as an online learner really helped me to adjust to the new teaching experience in online teaching. However, I have to admit that I took sometime to adjust to the new situation and learn to manage my time better. I feel quite relaxed in module 1 since I was in charge for it so I do not need much time to ensure that I master everything in it. I found myself a bit unprepared in the second module because I got carried away. I feel unconfident with my ideas so I tend to wait for others to post or even post something that is very general.*
>
> *(Script 7 by facilitator BTN)*

> *Basically, I am not keen in technology and I don't* **have enough confidence with my technology skills. Most of the cont***ents in IMOOC are new. I do not legalize there a hundred apps available to be explored for facilitating teaching and learning and wonderful article written about technology to make us as educator to be aware of their value and their treat to education. Basically I gain new perspective from my involvement as module developer and facilitator.*
>
> *(Script 8 by facilitator HJM)*

Time management was a big challenge for the facilitator: they were required to be able to manage all responsibilities well. They had to complete all offline tasks on their campus while facilitating the IMOOC program. To accomplish these goals, some facilitators created strategies: monitoring the performance of the participants online their mobile devices and setting up their official online hours/days. According to some of the facilitators, the use of the mobile devices such as tablets and hand phones were quite effective for them to monitor the performance of IMOOC participants. This tool enabled them to give feedback quite equally without being worried about space restrictions.

> *I had to manage my responsibilities: teaching the students at the campus and monitoring students' work in the IMOOC. This was the biggest challenge for me. Yet, I found my table very helpful. I could be online all the time to check my IMOOC. I did that when I was in the car, at the café, or any places.*
>
> *(Script 9 by facilitator DG)*

> *Managing my own time to organize my regular agendas with the IMOOC class and all the very active and fast communication with the participants and the IMOOC team, particularly when there was problem in the Module*
>
> *(Script 10 by facilitator E)*

For other facilitators, determining official hours and days to work online was helpful. For example, the facilitator set up Tuesdays and Fridays at 10 pm as their official hours/days and informed them to the participants. With this information, the participants could predict when their work would be evaluated by their facilitators.

Course-Related Factor

Course related factors were factors related to the content of online programs facilitators and participants used in the online teaching and learning process. In relation to the course related factor, the facilitator mentioned several issues that needed be considered: the number of tasks and the setting   time.

Module one and module two were harder for the participants and for me as well. Time to get used to with the procedure and deal with the module took energy and time. So, I assumed that the participants would have similar perceptions. Since they perceived that module one required more assignments while at the same time they needed to adjust themselves to the new style of the course, then they thought that the following modules would be much harder. Therefore, just in the module one, some of the participants were already demotivated.

(Script 11 by facilitator DS)

Some facilitators mentioned that the number of tasks in the five modules was not well distributed. For example, in modules one and two there had more tasks than any other module (see Table 4).

They normally don't have any issue on the tasks and assignments. Only later I learned that they were facing difficulties completing tasks which due very close to one another. The participants think that the module tasks and assignments are very challenging and practical

(Script 12 by facilitator RY)

Time frame for each assignment needs to be revised so the participants have enough time to learn and to complete the assignment.

(Script 13 by facilitator DS)

Table 4. The Modules, Teaching Instructions and Tasks in the IMOOC

Name of the Module	Theme	Tasking			
		Multiple Choice	Discussion	Peer Reviews	Projects
Module One	Introduction & Autonomous Learning	1	5	1	2
Module Two	Digital Literacy	2	4	1	2
Module Three	Mobile Devices for Autonomous Teaching and Learning	1	3	1	2
Module Four	Promoting Autonomous Learning Using Videos	0	2	1	1
Module Five	Autonomy Through Video Creation	0	0	2	3
TOTAL		4	14	6	10

Some facilitators also complained about such a close time setting among tasks in the module. With this improperly set assignment schedule, participants could not prepare their projects properly nor did good performance in quizzes and discussions. They needed more time to learn and do preparation.

Discussions

That the magnitude of the individual factors has contributed to the dropout rate of the IMOOC program reflects how the program can be very challenging for them (Willging & Johnson, 2009). The participants admit that they do not have enough time to complete the IMOOC tasks. They

think that completing the tasks requires investment of time, thoughts, and energy. In the meantime, they are also required to complete responsibility at the institution immediately. The availability of limited time is an important issue especially when the IMOOC deadlines are very close to each other. In addition, the tasks in the IMOOC module are relatively numerous.

The IMOOC participants are relatively new to online learning. Learning new material or a skill, for which a schema in long term memory is undeveloped or non-existent, can cause working memory to quickly overload its limited capacity (Keith, 2006). This overloading can result in a learner becoming highly anxious and losing confidence, which in turn leads to the learning process, in effect, freezing and the learner being unable to continue.

Technology support in the form of internet connection is also a very crucial issue. Good online programs are no longer good if participants do not reliable internet connections. This study has found that some areas outside Java often complain about it. In addition, the facilitators' interference through effective online instructional strategies is indeed important to promote to the success of the online learning. Slow feedback or the absence of feedback on the participants' performance only demotivates participants to continue learning online.

CONCLUSION

One of the characteristics of a good online program is due to a low dropout rate. Conversely, if there is a high dropout rate, this online program needs to be improved. In practice, the dropout rate is influenced by various factors such as individual factors, technological factors, course related factor, instructional factor and institutional support factor.

The high workload and the difficulty to manage the time are related to individual factors that often discourage them to complete the online program completely. In addition, the lack of media literacy and shortage of willingness to learn is also a matter of inhibiting them to complete the online program. Moreover, the dropout rate is also related to misalignment between the content or the learning objectives of the online program with the characteristics of the participants in terms of their interest or needs. This unfavorable condition is likely to happen of the program takes up much time with a lot of tasks scheduled too close to one another. The lack of facilitators' skills in facilitating online learning and providing on-time feedback is also an important issue contributing to the dropout rate. Finally, internet connection is also a very important issue. Without the support of good internet connection, it is impossible for the participants to complete the online course.

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