IS AUTONOMOUS LEARNING POSSIBLE FOR ASIAN STUDENTS? THE STORY OF A MOOC FROM INDONESIA

by **Daniel Ginting**
Ma Chung University, Indonesia
daniel.ginting @ machung.ac.id
Patrisius Istiarto Djiwandono
Ma Chung University, Indonesia
patrisius.istiarto @ machung.ac.id
Ross Woods
Worldwide University, USA
ross.woods1945@gmail.com
and **Debra Lee**
Vanderbilt University, USA
dleetn @ gmail.com

Abstract

An autonomous learning attitude is crucial in determining the successful completion of an online program. Such an attitude is not always easy. Students in online programs need to strike a balance between online studies tasks and their other work, maintain motivation, and consistently follow all the stages of the program. It remains to be seen whether these attitudes prevail in some Indonesian MOOC (Massive Open Online Course) students. This paper was a descriptive sketch of learning autonomy among thirty-seven students of an Indonesian MOOC. Only a small percentage of students was genuinely autonomous, while most were not, and experience difficulty in completing the MOOC program. The study found a correlation between autonomy and academic achievement, but did not demonstrate a cause-effect relationship.

Keywords: autonomous learning; online learning; MOOC; independent learning

1. Introduction

The purpose of this study is to compare indicators of autonomy with indicators of academic success in a Massive Open Online Course (MOOC). Several factors gave rise to the increasing popularity of MOOCs. First, more students wanted access to educational services. Second, information technology has advanced at an impressive pace, enabling educators to modify and

enhance courses to cater for more students and their individual preferences. Third, MOOCs by definition have been open, that is, been free of fees and admission prerequisites.

The advent of MOOCs was a substantial support for individual learning, but it remains to be seen how well students manage their MOOC-based learning so they can learn autonomously and benefit significantly from them. Indeed, autonomous learning has been the focus of many studies, but, as Carini, Kuh & Klein (2006) noted, those studies were conducted in conventional classes and studies of autonomy in online settings have yet to be carried out more frequently.

MOOCs were first introduced in 2008. The word "massive" in MOOC means that the course can accommodate very large numbers of students. The word "open" means that the learning resources are available to the public free of charge (An & Wu, 2015). The words "online course" obviously mean that instruction was conducted over the internet. Consequently, MOOC students need to be able to learn autonomously.

MOOCs are a form of distance learning. Distance learning is primarily defined as the range of teaching systems where students live at a distance from their education providers. It has used a wide variety of media, starting from print correspondence and gradually shifting to more modern technologies such as CD-ROM, internet-based classes, digital video, and desktop conferencing (Kobelera & Strongman, 2011). E-learning is defined as "instructional content or learning experiences delivered or enabled by electronic technology" (Bonk & Dennen, 2003) and MOOC e-learning usually requires online presence. This accords with Benson's (2006) opinion that distance learning necessitates autonomous learning.

2. Literature review on autonomous learning in online environments

The concept of "autonomy"" has been widely reviewed and developed since its inception by Holec (1981: 48), who stated that autonomy is "the ability to take charge of one's own learning". Subsequent authors elaborated on his preliminary idea and specified other elements that make up autonomy.

Benson (2006), for example, suggested that it also includes the element of self-regulation and motivation. Little (2009) maintained that it includes the ability to take charge of one's own learning, developing a capacity for critical reflection, making decisions, and taking independent actions relevant to the learning tasks in hand. In a similar vein, Siemens & Downes (2008) argued that MOOCs require students to be autonomous. They believed that the students' success in MOOCs lies in their independence and willingness to search for new information from various sources from the Internet or other offline sources.

Following those concepts, in this paper autonomy is framed as a construct that encompasses commitment, self-management, motivation and time management. To these, language proficiency and media literacy are added as elements that promote the first four aspects. Ideally, MOOC students should adopt an autonomous attitude that enables them to complete the course. Yet, as An and Wu (2015) pointed out, despite the teacher's efforts to encourage students to independently search relevant materials, some learners still need the teachers' explicit guidance. This stifled the development of autonomous learning in MOOCs.

Petra, Jaidin, Perera & Linn (2016) conducted a recent study on autonomous learning in Brunei. They used a Web-based Inquiry Science Environment system to engage students in a science subject. The system encouraged the students to search for relevant materials and discuss them with their classmates. Students were encouraged to collaborate with classmates in understanding complex photosynthesis and cellular respiration processes. The findings suggested that the students could complete collaborative work autonomously with minimal teacher guidance. This was an important finding with regard to our research as it also investigated autonomy. However, they promoted their area of autonomous learning by group work and face-to-face interactions, while our research focused more on autonomy in distance learning. Our research, then, sought findings that might enrich the dimension of autonomous learning.

Morgan (2012) conducted another study on autonomous learning. He did a qualitative research that elicited data by survey and diary entries. He found that although the young generation, labelled Generation Y, is adept at utilizing Web 2.0, they still need explicit teaching that guides them to use it successfully as a learning tool. In other words, this generation, although techno-savvy, lacks autonomy in using the internet to enhance their learning.

Lo (2010) reported a similar finding in a study of 101 Taiwanese students. Most students could not learn autonomously, that is, they lacked skills in decision-making and self-management. Students still needed the tutors' supervision and instructions to become more autonomous. Whether the same finding holds true with Indonesian students has yet to be seen, and our research embarked on that area.

Rabe-Hemp, Woolen & Humiston (2009) conducted another relevant study. They studied 283 college students and found a strong correlation between autonomous learning, student performance and student satisfaction. It indicated that the better the students performed academically and the more satisfied they were, the more likely they were to be autonomous. Their finding is important to our research because it could explain how high achievement contributes to the degree of autonomy of the students.

Completing an online program is not an easy thing to do for participants. Coursera, for example, had the completion rate of 7% only (Daniel, 2012). The rest 93% failed the online program. In Indonesia, a local university once conducted a MOOC and ended up with the completion rate of 16% (Belawati, 2019). Still this result indicates that the online course is challenging. Khalil and Ebner (2014) mention some causes of low retention rate in MOOCs such as shortage of time, low learners' motivation, feelings of isolation, lack of interactivity, insufficient background and skills and hidden costs. In addition to insufficient time, Swan (2005) also mentions difficulty with the subject matter and unchallenging activities that make MOOC's retention rate low. While high drop rates prove that the online program is challenging, the important questions to answer are who are those who successfully complete the program and what qualities make them successful participants.

Autonomous learning, "the ability to take charge of one's own learning" (Holec, 2001: 48), is a current issue which is considered as a factor contributing to the success of the completion of online programs. This sort of self-directed learning is needed due to the nature of semiotic features such as multimedia in online learning that make the participants take over the tasks initially carried out by teachers such as determining learning objectives, finding their own learning resources or trying new tools to make sure they work well (Rita, 2011). Online programs that have limitations in interaction result in problems that participants have to overcome. For example, immediate feedback or support needed by participants are not immediately obtained in online programs. Very often, the students encounter difficulties in comprehending course content that is technical, quantitative or scientifically oriented (Baker, 1986). They have to seek information and try to complete tasks independently.

Interestingly, other writers such as Ramadhiyah & Lengkanawati (2019) emphasized that autonomous learning is also related to participants' cultural perspectives. They conducted a case study on Indonesian learners' autonomy by examining the teachers' and the students' perceptions. They found that the teachers were cognizant that autonomy requires that the students carry out activities outside the classroom. They also realized they had to make necessary efforts to promote autonomy although they had yet to provide a wide variety of authentic materials. The students, however, perceived autonomy rather differently; they associated the concept with activities that were mostly still teacher-centered. Thus, it can be inferred from their study that learners' autonomy is a function of the culture in which the teaching-learning process operates. Their result could the basis of the discussion of result of the present study.

Kirmizi & Kirac (2018) conducted a similar study with a larger number of sample. Their study involved 100 students who were classified into two groups, namely conventional class and distance learning class. They were asked to answer a questionnaire presenting questions along several dimensions of autonomy. The results suggested that distance learning students perceived readiness for self-direction, importance of teacher, teachers' role in explanation and supervision, as well as assessment and motivation as vital in their learning. They also found positive correlation between learner autonomy and readiness for self-direction, independent work, importance and role of teacher, objective evaluation, and motivation. This finding could be the starting point for our study because it highlighted a number of important factors which are more or less closely associated with learner autonomy in a MOOC setting.

Autonomous learning is intertwined with motivation (Mackness, Waite, Roberts & Lovegrove, 2013). Motivation is an element that drives human behavior if people manage to solve the challenges or avoid them, or they are willing to develop their skills effectively or vice versa (Dweck, 1986). Dörnyei (2001) mentions three elements of motivation namely why people choose certain activities, how long they really persevere to complete the task and how much effort they spend on the task. Intrinsic motivation deriving from self is the primary force for participants to successfully complete the online program. Participants with intrinsic motivation have a strong determination to take responsibility for completing their own tasks and obligations (Rita, 2011). Several studies (Masgoret & Gardner, 2003; Singh, Granville & Dika, 2002) have proved that motivation greatly impacts achievement, time spent and performance.

3. The study

3.1. The research context

This paper is a preliminary study of a pilot project of an Indonesian MOOC. In the first stage of implementation, program leaders socialized this online program to prospective students using both online social media such as Facebook and Twitter, and through offline media in the form of invitations to schools and colleges. To be accepted, prospective students had to provide their identities and demonstrate computer literacy skills on a Google form, and to upload their essays in English with the theme "Teachers and Technology." Students were then selected based on criteria such as their educational background (English pre- and in-service teachers), computer literacy, and English writing skills.

Several aspects of the selection process are notable. First, the course was not open access as a normal MOOC. The selection procedure gave a basic assurance that all accepted students (the population of the research) had the ability to complete the MOOC successfully. Although the population was not homogenous, the selection procedure at least reduced its heterogeneity. Second, it probably accounted for the completion rate, which was very high for a MOOC, where completion rates are normally about 6%. (Reich, n.d.)

3.2. Participants

The selected students, who became the subjects of the present study, were thirty-seven pre-service teachers (33%) and in-service teachers (67%). They came from various cities across Java such as Malang (70%), Kediri (3%), Surabaya (21%), Jakarta (3%) and Bandung (3%). The MOOC lasted for eleven weeks, starting from February 20, 2017 to April 29, 2017. The first week, known as the pre-course, was a general orientation to the MOOC: navigation techniques for the Canvas platform, the instructional objectives, and the graduation requirements. In the ten weeks after orientation, students were required to complete all tasks on five MOOC modules: Autonomous Learning (Module One), Digital Literacy (Module Two), Mobile Devices (Module Three), Video Use for Autonomous Learning (Module Four) and Making Videos for Teaching (Module Five).

3.3. Data collection and analysis

The data for the present study consist of the tasks in the modules (see Table 1): discussions (20%), movies (17%), projects (14%), peer review (8%) and multiple choice questions (6%). Scores from all assessments (discussion, project and multiple choice) served as a basis to divide the students into high, medium and low achievers. The range value was 98. The calculation to determine the interval of the three groups of MOOC students was as follows: 98/3 = 33. At the end of the MOOC, qualitative observations were made of students' feedback and of their work submitted during the MOOC.

Table 1. the modules, instructions and tasks in the MOOC

Module title	Instructions		Tasks				Total activities
	Readings	Movies	Multiple choice	Discussion	Peer reviews	Projects	
Autonomous Learning	4	0	1	5	1	2	13 (18%)
Digital Literacy	6	2	2	4	1	2	17 (24%)

Mobile Devices	6	5	1	3	1	2	18 (25%)
Video Use for Autonomous Learning	5	4	0	2	1	1	13 (18%)
Making Videos for Teaching	4	1	0	0	2	3	10 (14%)
Total	25 (35%)	12 (17%)	4 (6%)	14 (20%)	6 (8%)	10 (14%)	71 (100%)

Table 2. Descriptive statistics of the students' final scores

Scores of the MOOC	
N	37
Mean	59.86
Median	74.19
Mode	0
Std. Deviation	33.740
Range	98
Minimum	0
Maximum	98

As evidenced in the data in Table 2, MOOC students were divided based on achievement whether they were high (67-98), medium (34-66), or low achievers (0-33). (See Table 4.) These groups were subsequently divided into three categories: low, medium and high autonomy. These categorizations were based on the extent to which students demonstrated autonomy during the MOOC. A 'yes' answer was scored 0, and a blank answer was also scored 0.

Table 3. Factors of autonomy and indicators

Factors	**Indicators**	**Response**	
		Yes (1)	**No (0)**
Self-Management	Always submit the assignments on time and complete the program with final score ≥ 70		
Active Participation	Post the ideas at least three times in all the discussions		
Commitment	Provide enough time to learn online (average 0.45 hours/day)		
Digital Literacy	Select relevant sources and include citation sources in discussion tasks		
Language Proficiency	Have good writing skills based on essay projects		

The data were statistically analyzed in three stages. First, the analysis dealt with the descriptive statistics. Second, this present study used the chi-square test of a distribution of different categories. Third, following the chi-square computation, the data were analyzed by means of cross-tabulation statistical technique.

Table 4. MOOC students of the present study

Achievement category	Freq.	%
High (67-98)	21	57
Medium (34-66)	6	16
Low (LA) (0-33)	10	27

Table 5**.** Categorization of autonomy

Total Score	Percentage of Checklist Items	Category
0-2	45-55	LA
3-4	64-73	MA
5-6	82-100	HA

The chi-square technique was used to check for significant differences among the variables under investigation: the degree of autonomy in low, medium and high achievers of the MOOC. This study found that the value of the asymptotic significance (two-sided) Pearson chi-square was .003, which was smaller than the significance alpha (α) .05. As such, the approximately significant (.024) <.05 indicated that the null hypothesis (H0) was rejected. Hence, it was concluded that there was a significant difference in terms of the degree of autonomy in low, medium and high achievers of the MOOC.

Next, cross-tabulation was done to indicate the frequency with which the corresponding categories of the categorical variables co-occur. Based on Spearman Correlation, the sig. value of .00 was smaller than alpha .05. This indicated null hypothesis was rejected and there was significant correlation between the degree of autonomy in low, medium and high achievers of the MOOC. As can be seen in Table 6, the majority of the MOOC students (54%) were categorized as Low Autonomous learners (LA) category, followed by 14% as Moderately Autonomous learners (MA) category and 32% as Highly Autonomous learners (HA).

Table 6. Tabulation analysis of autonomous learning

		Achievement			Total	%
		Low	Medium	High		
Degree of autonomy	Low	9	7	4	20	54
	Moderate	0	0	5	5	14
	High	0	0	12	12	32
Total		9	7	21	37	100

Table 6 shows the same kind of polarization as Table 4. Only fourteen students were

categorized as Moderately Autonomous (MA) while 86% were categorized as either Low or High Autonomy (LA or MA). The reasons for this polarization are again unclear.

3.4. Findings

Student autonomy correlated with success in MOOC completion. Autonomous students showed initiative in finding ways to solve the problems they faced. They could find and read relevant literature on the internet, watch videos, discuss with colleagues, or consult their instructors. This study used five indicators of autonomy: self-management, contributions to discussions, amount of time online in the MOOC, digital literacy, and language proficiency.

Thirty-two percent (32%) of students were categorized as HA (Highly autonomous), while the remaining students fell into MA (Moderately autonomous) (14%) and LA (Low autonomy) categories (54%). Five factors contributed to this finding: self-management (0.43), active participation (0.49), commitment (0.57), digital literacy (0.65), and language proficiency (0.78).

Table 7. Analysis of autonomous learning

		Digital literacy	Commitment	Active participation	Self-management	Proficiency
N	Valid	37	37	37	37	37
	Missing	0	0	0	0	0
Mean		.65	.57	.49	.43	.78
Median		1.00	1.00	.00	.00	1.00
Mode		1	1	0	0	1
Std. deviation		.484	.502	.507	.502	.417

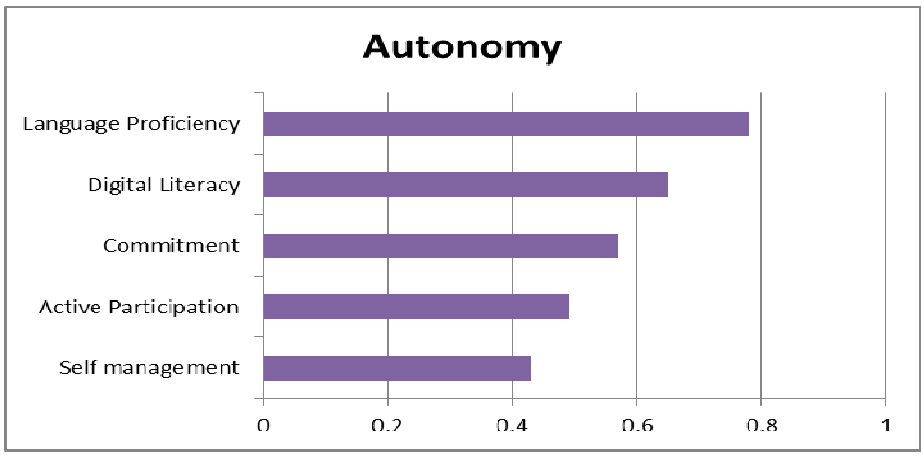

Figure 1. factors affecting autonomy in the present study

3.4.1. Self-management

The aim of the first part of the checklist was to find out whether students had self-management strategies. Self-management referred to students' attempts to work on assignments. In most

cases, LA and MA as majority groups (62%) were often late submitting work. When asked why they were late, they said they had workplace responsibilities: helping their students to prepare for the national examinations. Besides classroom teaching, secondary school teachers were required to give extra teaching to their students outside school hours. They also had to provide time for their children at home in the evening. Their free time was later at night when they had less energy to participate in the MOOC.

Table 8. Self-management

		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	No	23	62.2	62.2	62.2
	Yes	14	37.8	37.8	100.0
	Total	37	100.0	100.0	

High Autonomy students always completed all tasks just in time. Unlike MA and LA who were mostly in-service teachers, most HA were pre-service teachers in universities and had campus obligations. Some were doing internship programs at schools or in companies. They enjoyed the tasks if they had enough time and generally did the tasks two or three days before the deadline. They also reported that information the instructors shared through WhatsApp instant messenger was very helpful, reminding them about the assignment schedules. Later, they put the information on the calendar or typed it on their notepads. Canvas also had a calendar of task deadlines, but students felt that WhatsApp was more helpful than Canvas. In fact, they also relied heavily on WhatsApp for all their other communication.

> The reminders in the WhatsApp group helped. I just wish Canvas mobile app functioned better to give us instant notification of new assignments. (Student A)

> I kept in my mind that I had a deadline on a particular date. I put the information on the notepad or the calendar on the android. Though I didn't work on it long before the due date, I had started thinking about the answers. Therefore I could manage almost all the assignments pretty well. (Student B)

> I paid attention carefully on the deadline. If the task is hard, I did not do it suddenly. Maybe 2 or 3 days before the deadline. (Student C)

> I kept checking the upcoming assignments so that I could make the right timing to do the assignments. (Student D)

3.4.2. Active participation

Lack of active participation was the second biggest inhibiting factor affecting the completion of the MOOC. This referred to the degree to which students were willing to be involved in the fourteen interactive discussions throughout the MOOC. The criterion was at least three posts of ideas in every discussion. Table 9 shows that most (57%) students did not meet this criterion.

Table 9. Active participation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	21	56.8	56.8	56.8
	Yes	16	43.2	43.2	100.0
	Total	37	100.0	100.0	

LA often performed passively during discussions. The numbers of their posts were relatively unstable; they posted their ideas more than three times in some discussions but frequently did not post anything in others. Unlike LA, MA posted more frequently than LA. However, the ideas in their posts did not reflect the substance of the discussion; they only posted to meet the minimum requirements to get scores.

HA performed better than the other two groups. The numbers of their posts were relatively stable from one discussion to another, and they were higher than those of MA and LA (see Figure 2). They usually met the discussion requirements, posting their ideas at least three times, and their ideas also reflected comprehensive understanding of the topics.

HA always took initiative to find their own solutions to the problems. Before conveying their ideas in the discussion, they carefully read all the information provided in the modules, and if not satisfied with it, they sometimes searched for information from other sources. They were willing to ask their colleagues or instructors if they still did not understand the questions or certain ideas in the discussions.

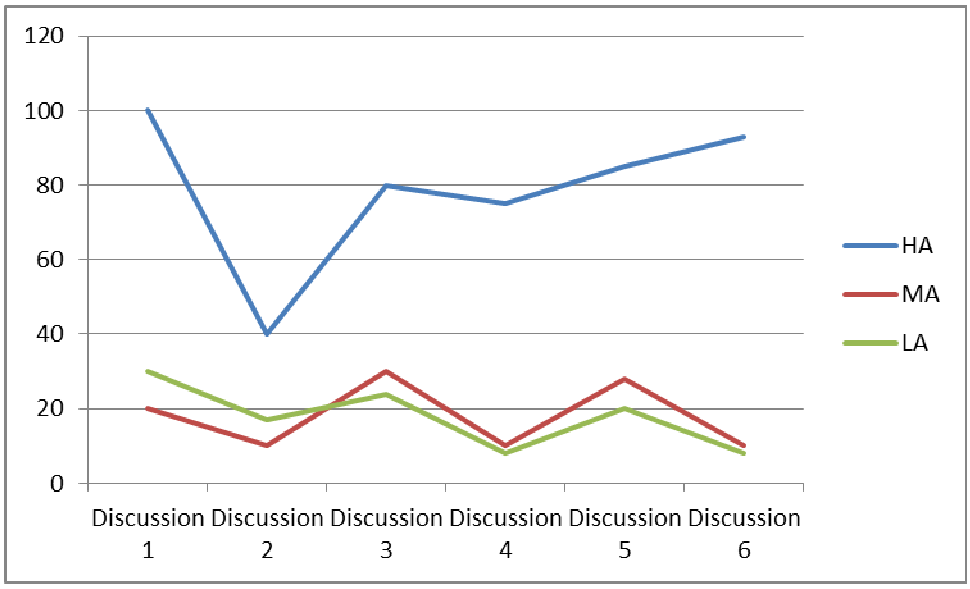

Figure 2. The discussion post patterns among the HA, MA and LA

Table 10. Total discussion posts among the groups of students

Facilitator	Discussion 1	Discussion 2	Discussion 3	Discussion 4	Discussion 5	Discussion 6
HA	100	40	80	75	85	93
MA	20	10	30	10	28	10
LA	30	17	24	8	20	8
	150	67	134	93	133	111

> First, I'm going to dig in by reading some references which are usually given or attached prior to the assignment itself. In case I still have no clear pics, I'll read the forum or discussion. The last step is that I'll contact my advisor (Student A).
>
> I would ask in the Whatsapp group. The tutor and other MOOC students were supportive (Student B)
>
> I usually discussed with other students. If they could not answer my question, I decided to ask the instructor. (Student C)

3.4.3. Time commitment

Completing all tasks in online programs is challenging when students also face other commitments, and they must often sacrifice one of the two. The MOOC required students to commit time to understand the content of each module through reading text, watch tutorial videos, complete quizzes and work on projects. It was assumed that students could complete all tasks in the MOOC if they had made a strong commitment, and this study used the amount of time online as an analogous measure of commitment to serious learning. It was found that students had different hour totals for completing the MOOC. On average, students spent about fifteen hours online in the MOOC throughout the ten-week period, or an

average of about only twenty-two minutes per day. Most students (54%) spent less than fifteen hours.

Table 11. Commitment to learn

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	20	54.1	54.1	54.1
	Yes	17	45.9	45.9	100.0
	Total	37	100.0	100.0	

A comparison of average times spent by the three groups reveals different patterns. HA tended to have spent more time than MA and LA. Compared to the other two groups, HA frequently accessed the MOOC to discuss topics with their peers, complete quizzes and work on projects. They found such apps as Socrative, Rubistar, Canva useful especially when it came to teaching their students in language courses or schools. They said that their students found applications effective stimulation to learn English. They also said that getting the certificate was another important factor that motivated them to complete the MOOC. Pre-service teachers wished to have better job opportunities while for in-service teachers the certificate would be used as complementary document for their certification report.

MA and LA students spent less time online in the MOOC than HA students. They prioritized their work as teachers, and were required to prepare their students to be successful in the national examinations. Nevertheless, they said that the MOOC materials for learning English, in particular the Android apps, were appropriate for classroom use. Most of their students were familiar with the internet, but its use was limited to communication tools (WhatsApp, Hangout, Telegram) and social media (Facebook, Twitter). Even if they were busy, they still accessed the MOOC to read certain topics or to watch movies relevant to their needs.

Table 12. Learning hours spent by the students

Category	N	Module One (hour/week)	Module Two (hour/week)	Module Three (hour/week)	Module Four (hour/week)	Module Five (hour/week)
HA	12	3	4	3	4	3
MA	5	2	1.5	2.5	1.5	2.5
LA	20	0.45	0.225	0.375	0.375	0.5

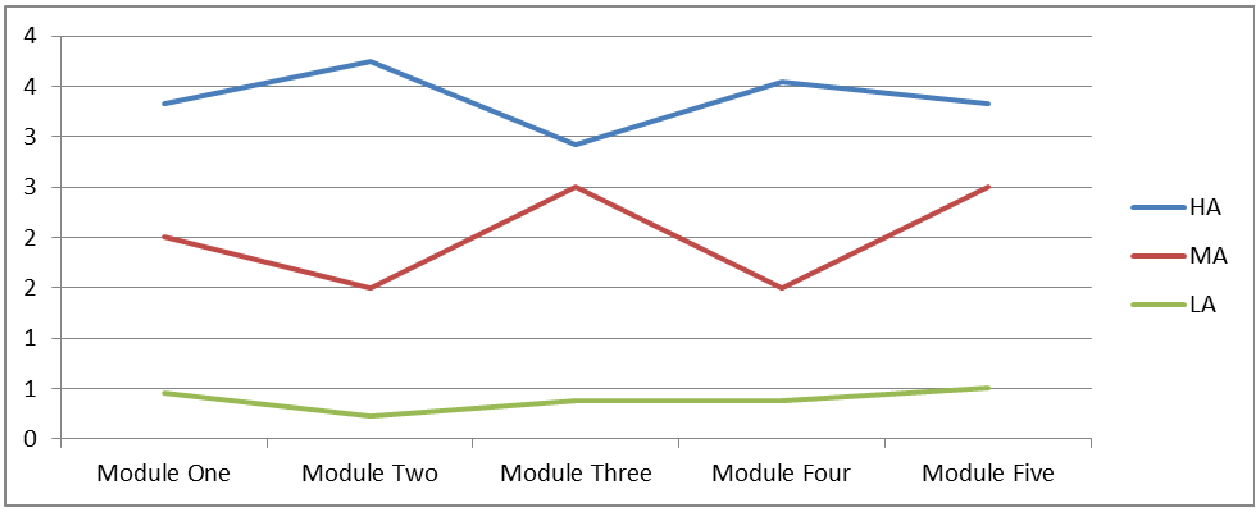

Figure 3. Learning hours spent by HA, MA and LA

3.4.4. Digital literacy

In the context of this research, digital literacy is understood as the students' ability to assess, select and allocate information when expressing their opinions in a discussion forum. Interestingly, the LA and MA groups (68% of students) had identical features. They made minimal contributions and their posts did not reflect the subject matter of the discussions. Their posts tended simply to complement other students' post by typing "Yes, I agree with you" or "You have very good ideas." They generally did not explain the reasons for their agreement. When citing other sources, they often failed to give references.

Table 13. Digital literacy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	25	67.6	67.6	67.6
	Yes	12	32.4	32.4	100.0
	Total	37	100.0	100.0	

HA as the minority group (32%) showed excellent digital literacy capabilities. To support their ideas, they cited other authors and gave references to their sources. Their ability to navigate the LMS was also very good. This was evident from the discussion posts that included images and links that were very relevant to the discussion. When asked why they included references, they said that they were obliged to include sources of the ideas of others, and added that they carefully selected the source text on the internet. Here is an example from a student's discussion of the most important aspect of digital literacy:

> The three most important aspects of Digital Literacy to me are. The ability to perform tasks effectively in a digital environment. Literacy itself means the ability to read and interpret media, to reproduce data and images through digital manipulation, and evaluate and apply new knowledge gained from digital environment (from The University Library of The University of Illinois). As in the words of Kern (2006, p.194), "the Internet (a) introduces multimedia dimensions that go beyond print textuality, (b) alters traditional discourse structures, (c) introduces new notions of authorship, and (d) allows users to participate in multicultural learning communities", being literate does not only entail the ability to comprehend and construct texts. Learners need to be able to correctly interpret materials, have a critical eye on the validity of claims, and acknowledge online sources tactfully. Gruba (2008) suggests that learners need to be proficient in the use of hypertext to incorporate different modes (texts, graphics, audio, and video) into their linguistic production when online…. (script from student A)

Another example is from student B.

> Prior to an opinion, I am going to write here, I mostly refer it to a blog by Leah Anne Levy, (2016). This is the link for you to read. I found this information very enlightening. Please help yourself read it for more details. To me, as a teacher who happens to live and teach in the 21st century, we are forceful to fit in this century and to equip ourselves with digital literacy skills. Digital literacy, cited in American Library Association (ALA), is defined as ability to use information and communication technology to find, evaluate, create and communicate information, requiring both cognitive and technical skills.
>
> Here are the three most important aspects: **Critical thinking**. It means that teachers should be able to provide students with the additional skills to bring the answer to the next level. Here the students are able not only to search an answer with a search engine, Google for instance but also to understand why it is the answer (deep learning). Teachers' job is to teach students to evaluate and question their sources. Furthermore, they also have to teach students how to draw a strong conclusion…

3.4.5. Language proficiency

To check the writing language abilities of the students, the authors examined two essay assignments of seventy sample essays and assessed their proficiency level using the American Council on the Teaching of Foreign Language (ACTFL) standard. Most students (65%) were LA and MA and classified as Intermediate Low to Mid Intermediate. A small proportion (35%) were HA and were categorized as Intermediate High to Advanced High.

Table 14. Language proficiency

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	24	64.9	64.9	64.9
	Yes	13	35.1	35.1	100.0
	Total	37	100.0	100.0	

The Low to Mid Intermediate students had the following characteristics. First, those students were able to meet some limited practical writing needs with short, simple, conversational-style sentences in basic word order, written almost exclusively in the present tense. Writing tended to consist of a few simple sentences, often of a repetitive structure. Second, vocabulary was adequate to express elementary needs. Third, they made basic errors in grammar, word choice, punctuation, spelling, the formation and use of non-alphabetic symbols. Fourth, their writing would be understandable by native speakers who are accustomed to the writing of non-native speakers, although it would require additional effort.

The HA group had varied levels of written language proficiency. Most were classified as High Intermediate and a small percentage demonstrated features of Advanced. Writers at the Advanced level were characterized by the ability to write routine informal and some formal correspondence, as well as narratives, descriptions, and summaries of a factual nature. They can narrate and describe in the major time frames of past, present, and future, using paraphrasing and elaboration to provide clarity. Advanced level writers produced connected discourse of paragraph length and structure. At this level, writers showed good control of the most frequently used structures and generic vocabulary, allowing them to be understood by those unaccustomed to the writing of non-native speakers.

4. Discussion

The study showed that only a relatively small percentage of students was genuinely autonomous. Most were not, and had difficulty completing the MOOC program. In the light of the reviewed studies discussed in the previous section, this result could be attributed to the learning culture in which the subjects learn. As Ramadhiyah & Lengkanawati (2019) stated, Indonesian students are used to a learning culture that is predominantly teacher-centered. They tend to follow the teachers' instructions and decisions regarding materials, learning activities, duration of studies and evaluation. Thus, when left without teachers' constant monitoring and supervision, they perhaps felt disoriented and soon lost the drive to learn autonomously. For some respondents, their low language proficiency and high work load compounded the matter, rendering them passive in the online activities.

As Kirmizi and Kirac (2018) found, even distance learning students feel that teachers' role in explanation and supervision is vital in maintaining the motivation for such a mode of learning. In the case of our findings, the subjects may not have felt a strong presence of those teacher-related aspects and thus failed to perform more autonomously.

The statistical analysis shows a correlation between autonomy and academic achievement. However, it does not demonstrate a cause-effect relationship. The correlation could mean that autonomy results in better academic achievement. Yet, Dincer, Yesilyurt and Takkac (2012) mention that there is significant and positive correlation between autonomy-supportive climates and learners' achievement. In autonomy-supportive climate, students have a positive feeling in themselves as competent individuals (Rita, 2011). The feeling of self-confidence in these students creates motivation to learn and train the material provided. As a result they become skillful.

However, the opposite is also worth noticing: autonomy resulting in better academic achievement could also mean that students are more autonomous if they find the course easy and less autonomous if they find the course difficult. In short, the achievement made by an autonomous group of participants can be influenced by various factors such as no intention to complete, course difficulty and lack of support, bad experiences, starting late, expectations, peer review, level of difficulty, timing and lack of digital and learning skills (Sinclair and Boyatt, 2014). In other words, autonomous participants who have this achievement are those who are ready in terms of learning skills, digital literacy skills compared to those from the non-autonomous groups.

This study evidenced that only a relatively small percentage of students was genuinely autonomous. This shows that most participants of this study are not fully prepared by autonomous learning. These problems are more acute when MOOCs are intended as a replacement for traditional teaching.

5. Limitations of the current study and final conclusions

The polarization pattern, where scales of achievement and autonomy both had few students in the medium classification, is as yet unexplained. In a normal group, it would be most natural for scores to follow a normal curve but exactly the opposite occurred. A sliding scale could have been expected if the MOOC had experienced the same very high dropout rates of other MOOCs. Further research with a larger population of students might explore the reasons.

Moreover, English proficiency acted as an intervening variable. Students' academic results tended to follow their ACTFL proficiency level; students with better English tended to

do better than less proficient students. This suggests the hypothesis that, in a course on teaching English, better English causes students to be more autonomous and to attain higher academic achievement. For example, one could hypothesize that students with lower English proficiency find it more difficult to assess, select and allocate information (digital literacy), post complex comments in a discussion forum (active participation), or complete well-done assignments on time (self-management). They might also experience language fatigue; that is, they might have difficulty engaging in English for long periods (commitment/time spent online). Consequently, time commitment might not be a suitable measure of motivation.

Motivation is another intervening variable. Students were found to be driven by a mix of extrinsic and intrinsic motives. It is implied that intrinsic motivation was stronger and more determinative of MOOC success, but this is not completely clear. It is possible that students with high levels of intrinsic motivation found the course difficult and did not do well.

To sum up, there are a few points that encapsulate the essence of this report. First is the role of culture. Learner autonomy is shaped by the culture in which the students live. In the case of Indonesian students, teachers are still seen as dominant figures who determine the mode, the materials, the pace of learning and the evaluation. Students' degree of autonomy hinges more or less on the roles that their teachers play. Secondly, motivation plays a significant role in shaping learner autonomy. In the spirit of fostering learner independence, educators should strive to create a learning climate that is conducive to motivation.

Another factor with potential influence is the course difficulty. It was conjectured that the more the students had to struggle in doing their tasks, the less motivated they become, let alone be autonomous in their learning. Course difficulty and other potentially stifling hindrances such as busy schedule and high workload call for students who are good at managing their energy and establishing priorities in their daily schedule. Educators may consider some non-academic instructional programs aimed to strengthen these soft skills in their students. It is also implied in the report that the downside of MOOC is that it deprives the learners of healthy social interaction with their peers and helpful direct guidance from their teachers. In short, students cannot be left alone in their efforts to learn. Blended learning, which combines online session and face-to-face interactions, may be considered as a solution to this problem. Taken as a whole, the study has sketched the potential areas of MOOC as well as some influencing factors that should be taken care of in the efforts to promote learning autonomy.

References

Baker, K. (1986). Dilemmas at a distance. *Assessment & Evaluation in Higher Education*, *11*(2), 219-230.

Belawati, T. (2019). Massive Open Online Courses. The state of practice in Indonesia. In: K. Zhang, C. J. Bonk, T. C. Reeves, T. H. Reynolds (eds.), *MOOCs and Open Education in the Global South: Challenges, Successes, and Opportunities* (pp. 2017-2023). New York: Routledge.

Benson, P. (2006). Autonomy in language teaching and learning. *Language Teaching*, *40*(1), 21-40.

Bonk, C. J., & Dennen, V. (2003). Frameworks for research, design, benchmarks, training and pedagogy in Web-based distance education. In: M. G. Moore & W. G. Anderson (eds.), *Handbook of Distance Education* (pp. 331–348). Mahwah: Lawrence Erlbaum Associates, Inc.

Carini, R. M., Kuh, G. D., & Klein, S. P. (2006). Student engagement and student learning: Testing the linkages. *Research in Higher Education*, *47*(1), 1-32.

Daniel, J. (2012). Making sense of MOOCs: Musings in a maze of myth, paradox and possibility. *Journal of Interactive Media in Education*, *2012*(3), 18-38. https://doi.org/10.5334/2012-18

Dörnyei, Z. (2001). *Teaching and Researching Motivation.* Harlow, England: Longman.

Dweck, C. S. (1986). Motivational processes affecting learning. *American Psychologist*, *41*(10), 1040-1048.

Holec, H. (1981). *Autonomy in Foreign Language Learning.* Oxford: Pergamon.

Holec, H. (2001). *Autonomy in Foreign Language Learning*. Oxford: Pergamon.

Khalil, H. & Ebner, M. (2014). MOOCs completion rates and possible methods to improve retention. A literature review. Learning & Technology Library (LearnTechLib). *Proceedings of EdMedia 2014--World Conference on Educational Media and Technology*, 1305-1313. Retrieved from https://www.learntechlib.org/primary/p/147656/

Kirmizi, O., & Kirac, K. (2018). A comparative study of learner autonomy in terms of gender and learning contexts. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi Aralık*, *22*(1), 2955-2967.

Kobelera, P., & Strongman, L. (2011). *Research, Teaching, and Learning: Pedagogy of Practice in the Open and Distance Learning Paradigm.* Florida: Brown Walker Press.

Little, D. (2009). Language learner autonomy and the European Language Portfolio: Two L2 English examples. *Language Learning*, *42*(1), 222-233.

Lo, Y. F. (2010). Implementing reflective portfolios for promoting autonomous learning among EFL college students in Taiwan. Language. *Teaching Research*, *14*(1), 77-95.

Mackness, J., Waite, M., Roberts, G., & Lovegrove, E. (2013). Learning in a small, task-oriented, connectivist MOOC: Pedagogical issues and implications for higher education. *International Review of Research in Open and Distance Learning*, *14*(4), 140-159. https://doi.org/10.19173/irrodl.v14i4.1548

Masgoret, A. M., & Gardner, R. C. (2003). Attitudes, motivation, and second language learning: A meta-analysis of studies conducted by Gardner and associates. *Language Learning*, *23*(1), 123-163.

Morgan, L. (2012). Generation Y, learner autonomy and the potential of Web 2.0 tools for language learning and teaching. *Campus-Wide Information Systems*, *29*(3), 166-176.

Petra, S. F., Jaidin, J. H., Perera, J. S. H. Q, & Linn, M. (2016). Supporting students to become autonomous learners: the role of web-based learning. *The International Journal of Information and Learning Technology*, *33*(4), 263-275.

Rabe-Hemp, C., Woolen, S., & Humiston, G. S. (2009). A comparative analysis of student engagement, learning,

and satisfaction in lecture hall and online learning settings. *Quarterly Review of Distance Education*, *10*(2), 207-215.

Reich, J. (n.d.). Reconsidering MOOC completion rates. Retrieved June 6, 2018, from https://harvardx.harvard.edu/reich_12814 %0A

Rita, K. (2011). The challenges to connectivist learning on open online networks: Learning experiences during a massive open online course. *International Review of Research in Open and Distance Learning*, *12*, 19-38.

Siemens, G., & Downes, S. (2008). Connectivism & Connected Knowledge. Retrieved June 10, 2018, from http://nsuworks.nova.edu/innovate/vol5/iss1/6

Singh, K., Granville, M., & Dika, S. (2002). Mathematics and science achievement: Effects of motivation, interest, and academic engagement. *Journal of Educational Research*, *95*(6), 323-332.

Swan, K. (2005). A constructivist model for thinking about learning online. *Elements of Quality Online Education: Engaging Communities*, *13*(1), 31-45. https://doi.org/10.3998/jsais.11880084.0001.104