

# The Exposure Of MOOC Usage In Indonesia

Andre Hasudungan Lubis, Syed Zulkarnain Syed Idrus, Salleh Abd Rashid

**Abstract:** Modernity of education is currently proven by the emergence of MOOC. As the regenerate version of E-learning, MOOC offers vast and free of facility for numerous participants to get educated. The technology has been touched both developed and developing nations, especially the world's 4th most populous country i.e. Indonesia. The article reviews the phenomenon of MOOC in Indonesia, including historical development, numbers of participants and platforms, and courses distribution by subjects. Through reviewing several studies and observing the sites of online learning, the paper pointed out a surprisingly findings. There are only six popular platforms of MOOC with total users approximately 695,000 from 2017 to 2019. The total percentage of 0.4% shows poor condition of MOOC in Indonesia and it is important to be concerned. Finally, the theoretical and practical implications are presented and discussed, and suggestions for future research are provided.

**Index Terms:** MOOC, Usage, Education, MOOC Platforms, Indonesia.

## 1. INTRODUCTION

As a fundamental asset for every line change, education brings a significant investment in human resources [1]. Nowadays, the education system has been transformed into a new method with a real-time and broadly covered the participants called E-learning [2]. MOOC (Massive Open Online Courses) as part of E-Learning, arise in 2012 to provide a broadly learning appliance in the name of education [3]. FutureLearn, Udacity, XuetangX, edX, and Coursera are such as applications that usually picked by learners to endorse their academic means. They cooperated to several high-rank universities to conduct the low cost or sometimes free small online courses [4]. MOOC is a combination of ICT (Information and Communications Technology) applications and education system, which is using the Internet to present global connectivity, give chances of education towards societies in urban and rural areas [5]. MOOC provides a modern environment of the online learning system in higher education with a large number of students but the lower cost [6]. Video component learning material, e-books, online forums, sectional projects, and online examination are some features that MOOC brings to enhance qualified learning means in higher education [6], [7]. The emergence of MOOC is claimed as the latest online learning technology development. In the term of higher education, MOOC shifted the traditional procedure in three points of view, namely: economic, technology, and organization [3]. Firstly, MOOC reduces the cost required for the public to obtain the finest education for them including fewer classes needed, no transportation cost, and less learning equipment. Then, technology is the most prominent sector to be transformed by MOOC. The utilization of the Internet and digital technologies provide a large capacity of the higher education needed for the program. Hence, MOOC is able to organize plenty of students to get education facilities at a lower cost. Thirdly, for the organizational sector MOOC give chances open access for the public to affiliate. To

sum up, MOOC and higher education were dominantly diverse in terms of practice and mechanism. In Southeast Asia, MOOC has been spreading and attract the society to take the enrollment. Nevertheless, there is no actual data of MOOC usage percentage in recent studies. Since the most appear of study in MOOC are participation patterns and instructional design [8], there is no collection of MOOC user data in Indonesia by reviewing previous researches. Thus, the paper conduct a review of MOOCs utilization in Indonesia including history and development, numbers of participants and platforms, and courses distribution by subjects.

## 2 MOOC IN INDONESIA

MOOC stands for four words, namely Massive, Open, Online, and Course. The first word refers to a broad participation of a heterogeneous spectrum users with various background and demography which runs globally. The Open word is interpreted as the connectives and freedom of involvement and access for the learning material, syllabi, and learning environments. Online defines as a Internet-based medium for the learner, educator and courses. Lastly, Course is the lecture offers to the participant which presented pedagogically designed to online learning [9],[10],[11],[12], [13]. Southeast Asia is the sub region of Asia which has eleven countries involved in it, namely Brunei Darussalam, Cambodia, East Timor, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam. The areas are approximately 4,500,000 square kilometers, which is indicates a vast region for 642 million inhabitants to live. The broad area and the large number of population make a great opportunity for MOOC usage [14]. Indonesia is the largest country in Southeast Asia with the nearly 2 million square kilometers area and more than 260 million inhabitants. The total of the population make this country to be the 4th most populous country in the world.

### 2.1 Historical Development of MOOC in Indonesia

The first distance education in Indonesia was emerged in September 1984 called as Universitas Terbuka or The Open University of Indonesia. As the public university, U Universitas Terbuka has the largest number of students spread throughout Indonesia [15]. Then, in March 2014, MOOC of Universitas Terbuka was firstly opened and in the form of OER (Open Educational Resources) which can be accessed free of charge by the community. A system resembling MOOC method has been adopted by Zenius which disseminates subject matter through CDs and the Internet in 2004. Zenius is one of the startups with the first educational platform that focusing on education-based services [16]. Zenius provides access to

- Andre Hasudungan Lubis is currently pursuing PhD degree program in Communication and Information Technology in University Malaysia Perlis, Malaysia.  
Lecturer in Faculty of Engineering, Universitas Medan Area, Indonesia.  
E-mail: andrelubis2201@gmail.com
- Syed Zulkarnain Syed Idrus is currently an Associate Professor of Computer Science at University Malaysia Perlis.  
E-mail: syzul@unimap.edu.my
- Salleh Abd. Rashid is currently a Professor at University Malaysia Perlis.  
E-mail: salleh@unimap.edu.my

teaching for all subjects from elementary school to high school. To date Zenius has successfully documented more than 80,000 videos of 15 subjects from elementary to high school level. Zenius initially used the class offer system, but later it was changed to a recommendation system. So, Zenius was started from a physical tutoring which then began to attract the teaching staff and prepare the recordings and CDs. And until finally in 2011 Zenius began to make lessons online [17]. Then, HarukaEDU was firstly founded in 2013 as one of the online learning site platform. For universities, HarukaEDU provides the developing IT systems, online content, help centers, operations, and the recruitment of students and lecturers [18]. Additionally, CodeSaya as the one of web-based coding learning platform emerged in the same year. The year 2014 is the rising of online learning site in Indonesia. There are many platforms of MOOC were founded throughout 2014. In January 2014, a system called as SekolahPintar emerged to give a positive impact on Indonesia's education [19]. Then, in June 2014, the beta version of Kelase was launched to become one of the platforms [20]. In 2014 also, RuangGuru was founded to providing various technology-based learning services, including virtual classroom services, online exam platforms, subscription learning videos, private tutoring markets, and other educational content that can be accessed through the web and RuangGuru applications [21]. Then again, in October 2014, the Directorate of Learning and Student Affairs, the Directorate General of Higher Education of Indonesia developed the Indonesian Open and Integrated Online Learning Program or Pembelajaran Daring Indonesia Terbuka dan Terpadu (PDITT) and later changed its name to Online Learning System or Sistem Pembelajaran Daring (SPADA). Moreover, KelasKita as the online media of education was emerged in December 2014. The application facilitates students in attending online learning classes with students, friends, teams or communities [22]. Then, in the next year Dicoding.com was firstly going online in January followed by IndonesiaX in August 2015.

## 2.2 Online Learning Site Platforms in Indonesia

Nowadays, Indonesia has several online learning site platforms which are running optimally. RuangGuru is an education based technology company which is committed to being a partner for governments to improve education quality through the Learning Management System (LMS). As the most popular online learning site platform, the courses are priced annually for the user. Subsequently, Zenius is an online learning website that providing bunch of videos regarding school materials, practice questions, and evaluate the discussion of questions. Zenius scopes are students from elementary school to high school. Zenius also presents learning CDs and DVDs other than videos. Nevertheless, users have to spend some cash for the membership to consume the application's features. Furthermore, Dicoding is a startup company which runs for software application developers in Indonesia with a variety of classes that can be studied online. The platform offer plenty courses related to programming and has 2000 alumni which currently working in various technology companies or as co-founders of digital startups. At present, users who wish to take part in Dicoding Academy are required to pay a deposit point requirement. But, the payment nevertheless will later be returned upon graduation from the Academy. Then, CodeSaya also is a platform for learning in programming and IT things with a

structured learning concept with an arrangement of chapters and sub-chapters. In addition to material, CodeSaya also presents quizzes or questions. CodeSaya is free of charge. Users can use the facilities without issued any expense. The other online learning site platform is called as KelasKita, which is engaged in educational technology, provides online and interactive learning and teaching tools with students, friends and communities. KelasKita requires the students to purchase once for the course can access it at any time. Moreover, Kelase is a surefire breakthrough of a social media mobile learning that can be independently for to improve the education quality learning. Kelase is dedicated to formal and non-formal educational institutions to easily have their own online learning services by free. Both of the platform categorized as SOOC (Social Open Online Course) due to the users are able to become participants and also able to make courses. HarukaEdu is an educational startup that provides a complete and integrated solution to assist universities in offering quality online lecture programs with minimum investment and risk. The platform offers the online classes that can be followed for free. Then, SekolahPintar is another platform of online learning site comes in two versions, free and paid. For the free version colleagues can directly access it after the registration process. And for premium material, it presents a more detailed discussion complete with achievement targets that we can achieve after completing the course material. All the mentors are experts and professionals in their fields such as IT, design, business and language. The next online learning site platform is SPADA, which is a online learning system established by Indonesian government. SPADA provides opportunities for students from one particular tertiary institution to be able to take a certain quality course from another tertiary institution. The learning outcomes can be recognized equally by the tertiary institution where the student is enrolled. Students were openly to access the courses without any cost. Universitas Terbuka is the pioneer of Indonesian public university which implements open and distance learning systems. Even there are payments for the non-MOOC program, but participants do not need to pay any fee to get the learning courses nonetheless. The availability of MOOC in Universitas Terbuka presented to all levels of society can get educated for free although not become UT students. IndonesiaX is an online education platform that offers online courses from universities, institutions and practitioners in various subjects. Users are able to obtain the material for free, anywhere and anytime while connected to the Internet.

## 2.3 Online Learning Site Users by Numbers

APJII as the Indonesian Internet Providers Association stated that 171 million people, or 64.8 percent of the total population of 260 million Indonesians, were already connected to the internet in 2018. It is illustrated that a numerous of Indonesian Internet user. The potential numbers of user should be offer an opportunity for a better utilization of MOOC in this country. As the first online learning site, Zenius website has been visited 11 million times in 2018 even there are only videos and no courses available. Meanwhile, until April 2018, there were about 155,000 peoples studying in IndonesiaX. According to researcher [23], the total users of SekolahPintar in 2017 are about 15,000 students. In 2018, HarukaEdu has about 8,000 of total students cited from its website. On the other hand, KelasKita already have more than 500,000 register users as of the end of February 2018. Based on the website of Codesaya,

there are 81,000 members are joining and learn together. According to the website, MOOC of Universitas Terbuka has the total students that have been registered in June 2019 as much as 293,000. The students come from various occupation, age, educational level, etc. In line with this, Kelase has about 250,000 users. Then, in early 2019, Dicoding has a total of 140,000 participants comes from hundreds cities in Indonesia. Then, SPADA has a total of 11,000 members in 2019. In contrast, RuangGuru has a total of 13 million users comes from various junior and high school in Indonesia. Figure 1 and Table 1 show the resume of MOOC users from different platform in Indonesia.

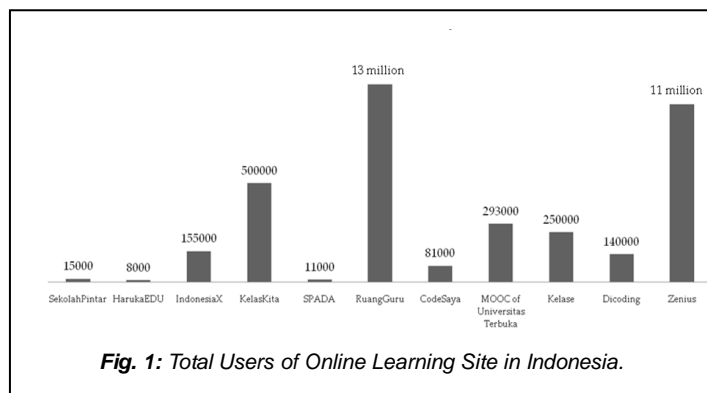


Fig. 1: Total Users of Online Learning Site in Indonesia.

TABLE 1

INDONESIAN ONLINE LEARNING SITE USERS BY NUMBERS

No.	Platform	Year	Total Users
1.	SekolahPintar	2017	15,000
2.	HarukaEDU	2018	8,000
3.	IndonesiaX	2018	155,000
4.	KelasKita	2018	500,000
5.	SPADA	2019	11,000
6.	RuangGuru	2019	13 million
7.	CodeSaya	2019	81,000
8.	MOOC of Universitas Terbuka	2019	293,000
9.	Kelase	2019	250,000
10.	Dicoding	2019	140,000
11.	Zenius	2019	11 million
Total			25,453,000

As seen in Table 1 and Figure 1, RuangGuru is the most popular among Indonesian society, especially students with total users about 13 million. Then, it is followed by Zenius with the total watched video about 11 million. Table 1 also presents the total of online learning site users in Indonesia which is approximately about 25 million from 2017-2019. Therefore, there are only 14.8% from total Indonesian Internet users are use online learning site, the most popular platform in particular. Hence, it indicates the low use of online learning site in Indonesia.

#### 2.4 Courses Distribution by Subjects

MOOC usually offers vary and numerous subjects. According to The Class Central portal website, Technology is the most popular courses to be selected among users with total percentage of 20.4%, followed by Business with the percentage of 18.2%. Then, Social Sciences about 11.5%, while Education and Teaching about 8.6%. Indonesian online learning site platform also have many courses. IndonesiaX offers 35 subject areas, SekolahPintar has total 58 courses and Dicoding with 26 courses related to IT and Programming. MOOC of Universitas Terbuka has total 23 courses and

SPADA offers 86 courses. Meanwhile, KelasKita has a bunch of courses with total of 240 classes. On the other hand, CodeSaya has 3 main subjects, namely Python programming (7 courses), PHP programming (5 courses), and Git programming (4 courses). Lastly, RuangGuru provides 100 courses. Table 2 illustrates the resume of total courses of Indonesian online learning site platform.

TABLE 2

TOTAL COURSES OF INDONESIAN ONLINE LEARNING SITE PLATFORM

No.	Platform	Total Courses
1.	SekolahPintar	58
2.	HarukaEDU	N/A
3.	IndonesiaX	35
4.	KelasKita	240
5.	SPADA	86
6.	RuangGuru	100
7.	CodeSaya	16
8.	MOOC of Universitas Terbuka	23
9.	Kelase	N/A
10.	Dicoding	26
11.	Zenius	N/A

### 3 DISCUSSIONS

The educational model of MOOC offers a robust, wide, and structured. Participants are unlimited to enroll to the system, usually free of charge and join the scholarship anywhere they want [24],[25],[26]. Besides, there are several mandatory in determining whether the online learning site is MOOC that it should follow the definition of MOOC itself. A MOOC platforms should have: (1) Unlimited number of course registrants from any place; (2) There is no fee to participate; (3) All the activities are performed online, there are learning notices via email, even there is a forum for participants; (4) The learning process starts with the registration, then complying the scheduled period of learning, and assessment for students performance. RuangGuru requires annually cost for the user, also Zenius users are needed to pay for the membership to use the system. Both platforms are performed the learning activities in online and offering structured schedules of learning to numerous users, yet they are not able to classified as MOOC platform. This is due to the payments that should be fulfilled by the participants. KelasKita and Kelase are meeting as the MOOC platform requirement, but both of the platforms categorized as SOOC (Social Open Online Course) due to the users are able to become participants and can make courses. Hence, the sites are not able to be called as MOOC platform [23]. Furthermore, Dicoding and CodeSaya as the IT-themed online learning site are able to categorize as MOOC platform. Users are exempt from fees, even there are numerous of registrants who have impulse to join. In contrast, HarukaEdu is defined as a non-MOOC platform. Even though the online classes can be followed for free, HarukaEdu is not offering an extend user to be participated [23]. On the other hand, SekolahPintar is classified as MOOC platform. The site offers two versions, free and paid courses mentored by experts and professionals from various fields. Then, SPADA, MOOC of Universitas Terbuka, and IndonesiaX are fulfilled the criteria and able to be denoted as the MOOC platform. According to the review, there are only 6 platforms can be classified as MOOC platform, namely Dicoding, CodeSaya, SekolahPintar, SPADA, MOOC of Universitas Terbuka, and IndonesiaX which they are most popular online learning site. The statement has a similarity to researcher [23], and it indicates a low number of MOOC platforms in Indonesia. Table 3 shows the summary of

MOOC platform in Indonesia.

**TABLE 3**  
**SUMMARY OF MOOC PLATFORM IN INDONESIA**

Platform	Year Founded	Total Users	Total Courses	MOOC Criteria		
				Massive	Open	Online
SekolahPintar	2014	15,000	58	√	√	√
IndonesiaX	2015	155,000	35	√	√	√
SPADA	2014	11,000	86	√	√	√
CodeSaya	2013	81,000	16	√	√	√
MOOC of Universitas Terbuka	2014	293,000	23	√	√	√
Dicoding	2015	140,000	26	√	√	√

Based on the Table 3, there are approximately 695,000 of MOOC users in Indonesia or there are only 0.4% from total Indonesian Internet users are use MOOC. The surprisingly result is indicated that Indonesia is at the low level of MOOC usage.

#### 4 CONCLUSION

SekolahPintar, IndonesiaX, SPADA, CodeSaya, MOOC of Universitas Terbuka, and Dicoding are the sites which can be categorized as the MOOC platform. The sites are run in online; and provide the opportunity for a great quantity of user to be participated. Furthermore, the sites are offering the non-payment courses to be followed the users with the structured learning process. However, the poor percentage of MOOC users in Indonesia is important to be alarmed. The total percentage of 0.4% shows a low level of MOOC in Indonesia. Considering that MOOC have a great impact towards education, especially higher education [6], [7], [27],[28],[29], government should take part in improving the MOOC implementation in Indonesia. Besides, several studies are needed to be conduct to scrutinize the successful MOOC usage, particularly in Indonesia.

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