

Indonesian MOOCs Experiences

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Presented at the Asia Regional MOOC Stakeholders Summit, Meiji University Global Front, Tokyo, Japan, 4 March 2015

ABSTRACT

Massive Open Online Courses (MOOCs) in Indonesia have now grown quite significantly. Support for MOOCs in Indonesia comes from several universities and is also provided by the Government through the Directorate General of Higher Education. MOOCs in Indonesia was first organized by Ciputra University in 2013. As a business-oriented university, Ciputra University delivers MOOCs in the field of entrepreneurship. Then in 2014, Universitas Terbuka launched MOOCs which are part of the Community Services Program. In 2015, the Directorate General Higher Education offered 30 online courses through the collaboration of six universities in Indonesia. In the same year, Indonesian-X, a private NGO, also offered MOOCs in collaboration with several institutions in Indonesia that offered MOOCs. MOOCs at Universitas Terbuka (UT) are designed with a duration of 4-6 weeks and use the MOODLE 2.8 LMS. Because the concept of MOOCs is still new at this time, the number of MOOCs-UT participants is not too high, which is only around 3476 and 283 per semester. This paper discusses the development of MOOCs in Indonesia. It also presents research results related to the experience of the Universitas Terbuka MOOCs. The research results refer to the development, design, learning process of MOOCs, various obstacles, and the next step for MOOCs.

Keywords: *Online learning, Indonesian MOOCs, MOOCs improvement*

INTRODUCTION

Indonesia is one of the countries in Southeast Asia that supports massive open online courses (MOOCs), which continue to grow significantly. According to statistical data, Indonesia is one of the most populous countries in the world with 254.9 million people. Indonesia is located in Southeast Asia, with over 17.000 islands, and about 9.000 of those are inhabited. However, the majority of its population is concentrated on only 5 big islands. Indonesia covers a wide region with diversities in terms of infrastructure, facilities, and natural resources. Internet penetration currently is still relatively low, at only 34.9%. This is still far behind if we compare it to some countries in South-East Asia, such as Singapore with 99%, Vietnam with 70.4%, and Malaysia with 43.8%. When it comes into education system, primary level has the highest participation rate, the primary education level is the most significant, at 97.31%. Meanwhile, secondary education has a similar percentage as kindergarten, at 68%. However, only 26.86% of them have a higher education. One of the key government objectives in trying to increase participation rates in higher education is addressing the lack of infrastructure and the absence of access to higher education in remote areas, as well as access to internet facilities in remote areas. With that, expanding access to higher education became one of the ministers of higher

education's missions, alongside quality and relevance. One promising way to increase participation in higher education is through Massive Open Online Courses (MOOCs).

MOOCs DEVELOPMENT IN INDONESIA

MOOCs is a new learning method that's having high growth of adoption. This chart shows the development of MOOCs in Indonesia.

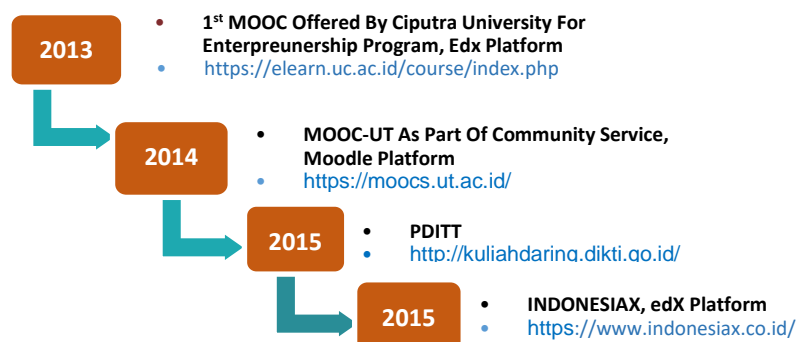


Figure 1. The availability of MOOC programs in Indonesia

Compared to other countries that have advanced in the implementation of MOOCs, records and information about MOOCs in Indonesia is still limited. The availability of MOOC courses is not yet well established. But the number is increasing year on year.

1. The earliest university that offered MOOCs was the University of Ciputra in 2013. Being a university of business, this university primarily offers MOOCs in entrepreneurship. Ciputra University is one of the biggest holding companies in Indonesia and most of their business is in the field of property. As a business school, Ciputra University delivers MOOCs that are oriented toward the public's need for entrepreneurship, such as marketing, export-import, management, etc. Until February 2016 they had released 9 MOOC courses. They use the Open EdX platform to deliver their MOOCs. Since it opened in 2013, it has attracted more than 85.000 participants with a completion rate of 4.1%. These high participants were a result of their promotion through digital marketing on social media regularly, such as Facebook, Twitter, and their website, and email to the industry as well. They got funding for the development of MOOCs from the Ciputra Group as part of their CSR. MOOCs were not something that Ciputra University could do easily. However, they still face challenges in implementation, especially the dependence on outsourcing IT resources.
2. In 2014, Universitas Terbuka launched the MOOCs Program, which included courses on management, public speaking, MOODLE, parenting, etc. The MOOC courses at Universitas Terbuka were introduced as part of the Community Services Program. Since November 2014, Universitas Terbuka has launched its own MOOCs course, UT-MOOCs. It is a short course program for a period of 4 to 6 weeks. The 1st batch of MOOCs started in September 2014, we offered 5 MOOC courses. The second batch was in May 2015 where we offered 13 MOOCs. For several reasons that I will explain on the next slide, for the third batch we reduced our MOOCs to 7 courses. Universitas Terbuka uses MOODLE 2.8 as a platform for all activities including communication forums and assessments. Several courses are now converted to the Open EdX platform, with more video content. The hope

is that if everything is already in open EdX, it will be easier for tutors to manage because all the materials are already available on the platform. This year we will try to use learning analytics as well, to know more about our students.

3. By 2015, MOOCs had been acknowledged and in some cases supported by the government, and the Directorate General of Higher Education (DGHE) partnered with 6 universities in Indonesia to offer online learning courses. The program is still in the initial stage as it is not yet open to the public and is limited to students from the university only. In Indonesia, online learning has become the focus of the DGHE. The government supports and encourages the development of various online courses. For this reason, in 2015 the DGHE through lecturers' partnership offered 30 online courses provided through the collaboration of 6 universities in the Indonesian Open and Integrated Online Learning Courses (PDITT). The program involves sharing courses across higher education institutions. Inspired by online learning and MOOCs, the initiative was designed to offer flexible learning opportunities to promote participation in quality higher education. For this program, the universities developed their own platform for the course. PDITT faces many challenges to achieving its goals, according to Pannen (2014), the program's responsible. These include the ICT literacy of students and lecturers. The upcoming paradigm of teaching and learning has not been well-understood, so the majority of students are mostly passive and lack direction. The decrease in participation ranged from 30-70% during the course. And we can see here that the completion rate is 29.7% from 3.396 participant.
4. In August 2015, another MOOC Provider, Indonesia-X, a private NGO offered MOOCs in collaboration with some of the institutions in Indonesia, including 3 big Universities in Indonesia. They use the Open EdX platform for learning delivery. The number of participants has significantly increased since Indonesi-X started offering MOOCs. More than 20.000 participants were enrolled at that time. Through Indonesia-X, the number of MOOC participants in Indonesia has been rapidly growing. More than 20.000 people have enrolled since the program opened in August 2015. Universitas Terbuka is also going to offer a MOOC on Public Speaking through Indonesia-X, and the first course started on 14 February 2016, with around 5.000 participants.

MOOCs Reception in Indonesia

The Development of MOOCs, focusing on our experience at Universitas Terbuka; including the Strategy of development, implementation, and collaboration we have made to increase the wide range of participants. This will be followed by an initial survey regarding the characteristics of participants from the standpoint of UT-MOOCs.

UT MOOCs are part of our Community Services on a large scale. At this time our community service activities were conducted face to face, but as a university that is committed to driving quality education through a distance learning program, we also would like to dedicate community services through an online program accessible to everyone. We use MOODLE 2.8 as a platform for interfacing with participants, which is capable of handling thousands of participants. MOODLE was chosen because academic staff members are already familiar with it in their online tutorial activities.

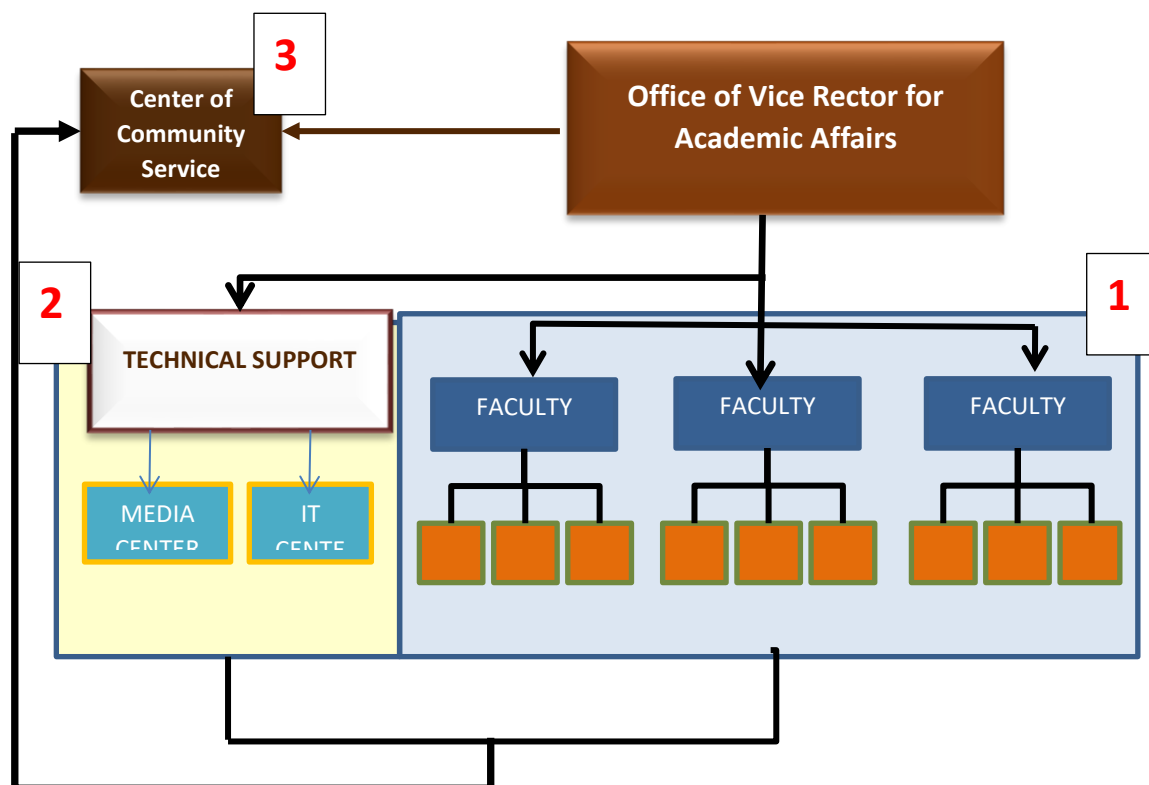


Figure 2. The series of activities how UT-MOOCs were developed.

There are three components involved in the development of UT's MOOCs. All three components play different roles that are interdependent.

1. *The Faculty, With Study Program and Faculty Member.*

The faculty member is responsible for the overall quality of MOOCs. They develop the course for MOOCs; this includes choosing the topic and choosing the structure of the learning delivery method. The MOOC Course was developed by selecting a topic from existing regular courses, then the tutors modified the content based on the competency level aimed at by the participant. As MOOC courses are being offered online, the number of students participating in online tutorials of regular courses also became one of our considerations in selecting the topics. Faculty members are also responsible for the syllabus, the presentations in each session, the media used, communication and discussion forums, and assessment.

2. *The technical support units,*

The Media Center and Computer Center are functions of the technical support unit. Each of these units has appointed a person to liaise with the Course Team. The Media Center Unit is responsible for giving advice on media used in MOOCs and video production. The Computer Center has a staff of IT specialists who can assist tutors with various aspects, especially technological issues during courses. The IT staff were also provided with training on the MOODLE platform and gave technical guidance to the course teams before MOOCs started.

3. *Center of Community Services Unit.*

It is the responsibility of this unit to supervise MOOC implementations after they have been launched. It is also important to keep in touch with the course teams and keep track of relevant dates, such as the start and deadline of MOOCs registration. We monitor participants' registrations and completion of MOOCs and prepare online certificates of completion. All these processes are supervised regularly by The Office Of Vice Rectors For Academic Affairs to ensure that all the procedures are being followed. As part of its responsibility, the Office of Vice-Rector prepares a report and assesses all the programs related to all of the activities for future analysis and decision-making.

Each course team was asked to develop a 4 to 6-week MOOC, with 8 initiations, including text or video lectures, discussion forums, and assignments. Tutors post the initiation here. It may be in the form of a concept or idea of a course, or it may be in the form of a video. This will initiate discussion among participants or tutors. During the course, tutors will learn how to manage the forums and ensure they match the competence of the courses. Activity, tutors post the assignment at the end of each initiation. The assignment can be in the form of essays or portfolios. A final assessment is posted after the last session of MOOC courses so that the learning objective can be assessed. The tutor has the right to decide which approach the assessment will take. As an example, one of our MOOCs is here. This MOODLE course is not designed to have a final test. Participant competencies are measured by how the participant can complete the tasks assigned by the tutor in the form of a portfolio at each initiation.

To get a MOOC certificate, the student must complete all the courses and all the tasks assigned by tutors. The final grade of MOOCs is determined by two factors: 1) the quality of the discussion forum (30%) and 2). The assessments include an assessment at each initiation and the final assessment score, which contributes 70% to the final grade.

As part of the program, we administered a survey to participants using a questionnaire. Participants in the survey were asked several significant questions, such as demographics, accessibility, the number of registrations and completion rates, and the engagement of participants in MOOCs as well. The characteristics of UT-MOOCs participants in regards to where and how they were accessing the program. As a result of our survey, we found that 74% of participants lived in a district, and 26% lived in a province. It indicates that internet connections and facilities for internet access are becoming widely available, especially in the district area. But it does not show exactly where the participants' island is located, so we've added that information to the next batch of MOOCs questionnaires.

Most of our participants accessed MOOCs from home (66%), followed by offices (18%) and internet kiosks (14%). Concerning the devices used by the participants, the majority (53%) of MOOC participants accessed their courses from PC, followed by laptops or gadgets 35%, and smartphones 12%. We realize that our MOOCs have not yet reached smartphone users. However, we know that our participants are working adults. They are busy and have very limited time to find MOOCs materials and they need a simple way to access our MOOCs. In the meantime, the penetration of smartphones is increasing rapidly, as the number of smartphone users in Indonesia is over 281 million this year, higher than the population, and most users are aged 18-25. To reach out to the 18-25-year-old participants and to simplify the way participants can access MOOCs, starting this year we are planning to develop an app for MOOCs and our tutorials as well.

The UT-MOOCs started registering participants for the 1st batch in October 2014, with 5 courses and 3,476 participants. In the first and second batches, we surveyed the number of enrolments and completions. As a result of the success of the 1st batch, faculty members are more enthusiastic about offering MOOC courses. The number of MOOC courses increased to 13 in the second batch. But in the second batch, which started in May 2015, the number of participants dropped significantly. We identified some contributing factors that led to the declining number of participants. These factors included low promotion and the short time for preparation of learning materials for upcoming MOOC courses. As we can see from the chart, almost all the newly launched MOOCs have a maximum of 12 participants, and even 7 participants do not take the assessment. We learned a valuable lesson from this picture for future MOOCs. Meanwhile, for the completion rate of participants, the average participant getting a certificate is 12.2% in batch 1 and 15.5% in batch 2.

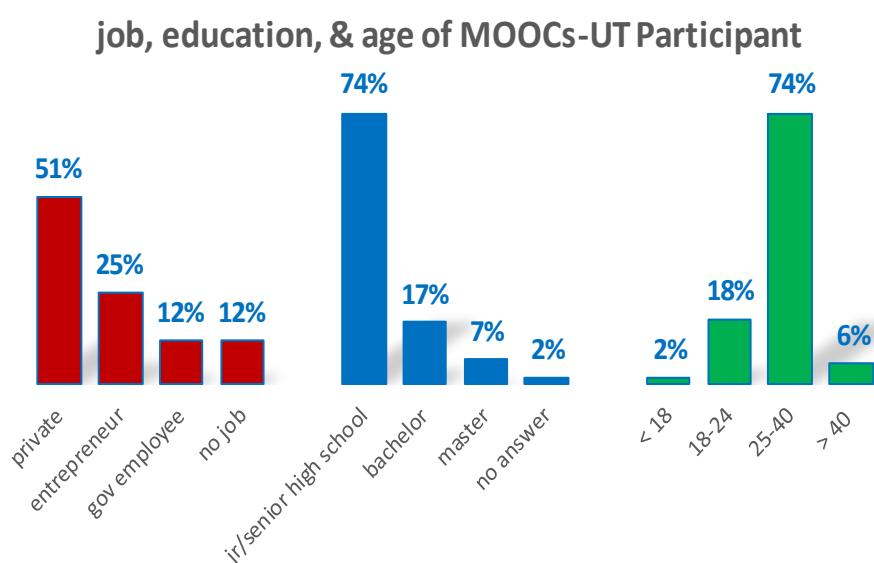


Figure 3. Characteristic of UT-MOOCs participant

Additionally, we were interested in gathering information about the participants in our MOOCs. Our survey on education shows that most of the MOOC participants, 74%, graduated from junior and senior high school and 24% graduated from college. 88% of MOOC participants were employed regardless of their educational background. Only 12% were categorized as “no job” (it didn’t mention whether they were a student or real no job). UT-MOOCs were used by working people in a wide range of professions to further their professional development.

Our survey shows that 71% of participants mention it as relevant to their careers. Meanwhile 27% and 2% mention half relevant and not relevant. This will be our challenge to bring more relevance to public needs. Most of our MOOCs are text-based. Enriching or integrating appropriate media and innovation during the learning process can help to achieve skill competence. On the other hand, we will convert some of our courses to the Open EdX platform starting this year, which uses video-based content delivery. Concerning recognition, it’s not mentioned here, but our survey mentions that even though the participant is not necessarily interested in receiving formal certification, more than 90% of participants agree that the

program could be recognized as a degree program. We are now trying to identify a few courses and try to develop 3 - 4 MOOCs that could be recognized as 1 course later

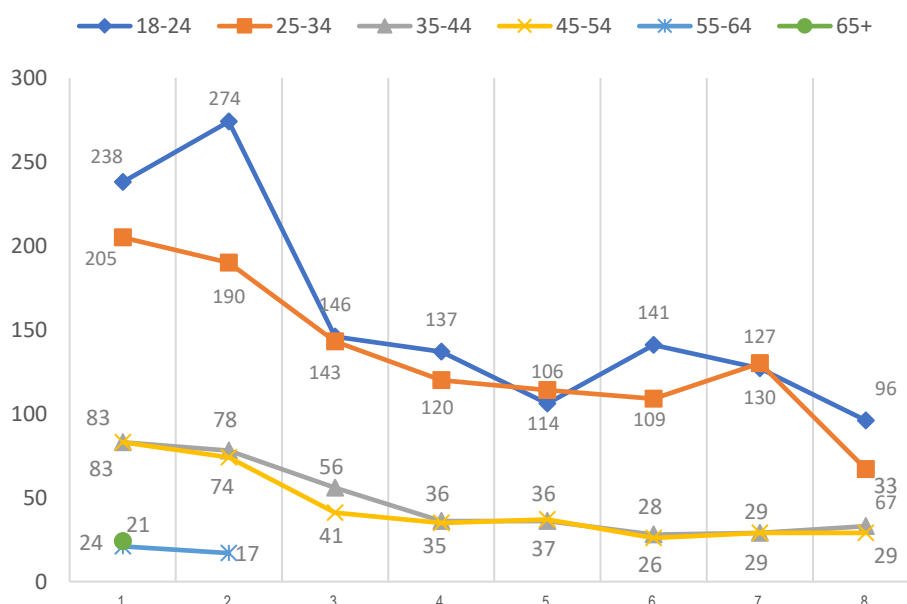


Figure 4. Activities of UT-MOOC participants

We also observed the engagement of participants as you can see in this graphic. Participant engagement in each MOOC is directly related to age. We divided their age into 6 categories: 18-24, 25-34, 35-44, 45-54, 55-64, and over 65. Overall, the first three initiations, the number of participants of all ages dropped significantly. Participants over 55 can only participate until the 2nd session. It seems that MOOCs are not really interesting for this age group. Engagement in an online course is determined by many factors. According to Lehman (2014), one key to success in online courses is the interactions and feedback throughout the course by the tutors, which create a sense of the presence of tutors and help students stay motivated throughout the course. Since our participants have very heterogeneous backgrounds and characteristics, such as age, education, and knowledge. In this case, the tutor's role in directing the discussion in order to keep the material interesting for all participants is very helpful. This is because it does not become boring for those who already have sufficient knowledge.

Furthermore, we want to know more about the quality of forum interaction, such as the interest of the participants in the topics in each initiation. We also want to know how well the participants engaged with the video lecture, the kind of skills they need, etc. This semester we will start to integrate learning analytics into MOOC courses to increase the quality of delivery. UT has actively promoted its programs to increase participation. One of our programs is to establish partnerships with various agencies and organizations. In 2015 we started a collaboration with Indonesia-X. As mentioned earlier, we offer a MOOC on "Public Speaking". We already had 5.000 participants at the opening of the conference. UT also made a collaboration with UNESCO in 2013 for a MOOC on ASEAN studies. The program is part of

our International Advance Courses Program, but we want to maintain it as a community service. Then we will offer 2-3 units as a MOOC with the topic “Challenges and Opportunities for ASEAN Integration”. Funded by UNESCO, this program will be offered in 2016 and launched by UNESCO.

Next Improvement and Conclusion

A holistic approach is needed in order to improve the learning process and the quality of MOOCs. Reflecting on the MOOC implementation issues, we focused on some areas for improvement. There are 6 potential areas for improvement, such as:

1. Prepare all the materials as early as possible before the commencement of the MOOCs, at least 2 weeks prior to offering. In this step, the academic staff or tutors ensure that all MOOC content including consistency of topics, objectives, and media requirements is uploaded to MOODLE. Team members will be able to review each aspect in detail before the MOOC starts.
2. Furthermore, the announcement and promotion of UT-MOOCs could be done as soon as possible, so that information about MOOCs can be more widely known by the public through various channels. Public awareness is also needed, to give a general understanding of MOOCs and guidance on how the public can access MOOC, etc.
3. Media and tutors are also key components of engaging participants. The use of video or other media in learning activities should be carefully planned and in accordance with the competencies. According to our survey, MOOCs are needed to improve skills and competencies. These formats need to be enhanced by practice materials or multimedia to help participants improve their skills. The other challenge to enhancing the quality of learning is the responsiveness of tutors. Tutors have an important role in the engagement of participants.
4. The next challenge is how MOOC materials will be delivered in accordance with the competencies required. Again, at this point, the role of tutors is very significant. Tutors must be able to create a learning environment that is skill-oriented during the learning process. For these purposes, we need to benchmark with other universities using the same platforms and train tutors regularly in order to enhance their skills.
5. Another critical point to consider is the schedule, including the provision of certificates for those taking the MOOC. This process of course depends on the previous process, the final grade from the tutors. The role of tutors in this process is very critical. Certificates are provided online and will be downloadable after the final grades from tutors are available
6. it's important to acknowledge those who have completed the MOOC. In the near future, we plan to give credit recognition to degree programs from MOOCs. In the future, we would like to break down some courses into several MOOCs. Maybe 3-4 MOOCs can be credited toward 1 course in the degree program.

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