UNIVERSITAS INDONESIA SYSTEM SUPPORT IN ACCELERATING LECTURERS TO IMPLEMENT ODEL FACILITIES

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Abstracts

Directorate of Academic Advancement and Learning Resources of Universitas Indonesia (DPASDP UI) is established in 2020One of sub-directorate of the unit is Learning Resources. the role of this sub directoreate is to support learning activities in UI by managing learning facilities such as learning management system (EMAS), computer laboratory, video conference room, and production house. The covid-19 pandemic forced all learning to be held at a distance and fully online, which was only 20% of courses using LMS before the pandemic. Thousands of classes need to be opened in EMAS, so non-eLearning teachers face confusing situations. Several support-system efforts have been opened and revitalized, such as providing migrate-to-online learning guidelines, organizing more teacher training, upgrading the LMS, and establishing a fully online helpdesk. Moreover, the UI strategic plan year 2022 revision has mandated UI to be more implementing technology and increase the number of MOOCs opened, so more facilities development is certainly needed. This paper elaborates on UI strategies and lesson-learned in facing the situations and some effort to keep relevant.

Keywords: learning resources, learning management system, production houses, MOOCs

1   INTRODUCTION

Chapter 01 states that Distance Education (DE) is a process of teaching and learning that is carried out remotely using various communication media, according to Permendikbud No. 109 of 2013. In Universitas Indonesia, DE began in 2004. before the pandemic, less than 20% of regular courses were held in e-learning mode (using LMS). These e-learning courses had two main objectives, which is to increase the efficiency and effectiveness of learning for students by utilizing information and communication technology and also can minimize time, distance, and space constraints, formalized in a UI Rector Decree. This Decree became a strong basis for continuous development on various aspects of E-Learning, such as learning delivery design, capacity building of lecturers and students, quality assurance, facilities development, supporting unit, and governance. Later, UI e-Learning took shape into what the UI academic community knows as blended learning, joint courses, credit-earning courses, open courseware, open contents, and MOOCs.

Next, Rector UI issued Decree number 6 of 2016 on Organizing Distance Education (DE). Since UI is not an open university, this Regulation is only applied as a basis for credit-earning programs and distance study programs that are attended by participants from other institutions. When the Covid-19 pandemic was announced, the education sector was obliged to continue without 100% face-to-face sessions. This makes UI view PJJ as the only mode of learning that can be implemented to keep the class going. Therefore, it is difficult for teachers who are experienced only in traditional classes. Universitas Indonesia through the Learning Resources unit (under DPASDP), , strengthen the support system so that civitas in the short term can go through the adaptation process in a pandemic. This pandemic also becomes good momentum for DPASDP to increase the learning support system to achieve one of UI strategic goals "to achieve high-quality education and anticipates future needs" by adopting MOOCs technology (massive open online courses).

2 METHODOLOGY

The paper is divided into introductions, methodology, studies, findings and discussions, lesson learned, and conclusions. The introduction section explains the rationales. The methodology section explains the structure of paper writing and defines two paper questions. The studies section quotes relevant references. The findings section elaborates PQ1 and PQ2. The discussion section describes some lesson learned.

1. Paper Question 1: What are the efforts on providing an adequate online learning support system while pandemic?
2. Paper Question 2: What are the learning facilities development strategies for increasing the number of MOOCs held?

Studies

One of UI main performance indicators (Indikator Kinerja Utama- IKU) Strategic Planning for 2022-2024 that related to open and distance learning (ODEL) is the "number of Massive Open Online Courses MOOCs organized". This IKU is Vice Rector 1 responsibilities dan also being cascaded for each of faculties and schools. As a directorate that manages academic advancement and learning resources, DPASDP got three breakdown indicators:

1. The number of MOOCs development facilitated
2. The number of Open Content Production facilitated
3. The number of learning facilities innovation

The determination of these 3 indicators is inseparable from the context of the development of e-learning and distance learning at the Universitas Indonesia which had been running since 2010. In the 2020-2024 period, there were two major contexts that determine the choice of strategy: 1). how to provide a learning support system in a pandemic for lecturers and 2). how to develop more advanced open and distance learning facilities. A search was carried out from several of the references below.

Learning in Pandemic

B definition, Distance Learning can be held in various forms, modes, and scopes supported by learning facilities and services as well as an assessment system that guarantees the quality of graduates in accordance with the National Higher Education Standards. In UI, a course is categorized as an online course if the online session is higher than 75% from the whole semester. However, during the pandemic, all sessions must be done 100% online.. Tanis (2020), finds that to be most effective, the online instructor must be energetic, organized, and communicative with students and have a consistent presence in the online classroom to provide an active, quality learning experience through faculty, student, and content engagement.

Pushkar Dubey and Deepak Pandey (2020) recommend some measures on the pandemic situation: 1). Strengthen the IT platform by making necessary changes with respect to its continued availability and uninterrupted services. 2). More of IT-enabled persons in educational institutions. 3). Preparedness of teachers. 4). Some of the institutions preferably with higher resources should take the initiative to communicate plans and policies, and provide adequate training to the faculties in relation to the online platforms.

Merely, Cereneo S. Santiago Jr. et al, concludes their recommendations with 1). Online courses should be designed by teachers in such a way that is creative, relevant, and student-centered, encourage group collaboration, and must have an authentic method of assessment, and technology used that their students' and teachers' computers are capable of, for instance, Zoom, and Google+ (Google Meet). 2). Students shall respond proactively to the call for a change of learning in the new normal. The use of smartphones as learning tools improves remote education in teaching and learning. Hisyam Athaya (2021) noted for the implementation of e-learning using Moodle during the Covid-19 pandemic, a stable, simple, and user-friendly system are necessary to support the partially or fully online learning system, enhanced with interactive plugins to facilitate better communication.

MOOCs Facilities Advancement

On DPASDP's Learning Resources sub-directorate (SDP), there are two section-division: 1). e-learning applications and facilities, 2). content production facilities. These divisions play each different roles and need to keep relevant in every situation.

LMS Facilities

UI manages two kind of LMS, EMAS (emas.ui.ac.id) for blended-learning courses and IDOLS (idols.ui.ac.id) for MOOCs . Both use LMS are in Moodle. While Moodle has got quite a long story and reputation, we must focus on some aspects that determine smooth and successful experiences. A study by Tatiana Yu. Aikina, et.al (2020) concluded that the most powerful factors that increase their motivation in teaching via Moodle are: the automatic checking of tests, the opportunities to post news and additional learning materials, setting individual assignments, organizing collaborative learning online, and having analytics for monitoring student behaviour in Moodle. Gamage, et al (2022) point out some threats in learning and online LMSs, numerous fundamental gaps/drawbacks still exist, with the majority on technical issues, such as server/browser response times, the lag time in resolving technical issues, lack of equipment available to students and the possible high cost associated with the initial development of programs. And non-technical factors like lecturers perceived the effort expectancy and social influence as irrelevant variables that could affect their intention to adopt the Moodle platform, a study by Taamneh (2022).

Content Production Facilities

While so many aspects and processes in content production facilities, we point out references that we adopted in our released guidance for teachers. Guo et al. (2014) recommend some important points in MOOCS video production, 1). Invest heavily in pre-production lesson planning to segment videos into chunks shorter than 6 minutes. 2). Introduce motion and continuous visual flow into engaging PowerPoint slides or code screencasts 3). Introduce motion and continuous visual flow into tutorials, along with extemporaneous speaking. platforms is with 74% Talking head. The highest use of a Talking head can be found on Iversity with 91%, whereas Coursera has with still 68% the least. High contrast between the video styles on edX (26%), Coursera (46%), and Iversity (36%) compared to Futurelearn (3%) also is in Slides with a visible speaker.

3   FINDINGS

PQ1: What are the efforts on providing an adequate online learning support system while the pandemic?

At the beginning of the lockdown, DPASDP analyzes what efforts will be needed first. It turnout that the most important need is adequate online learning spaces that can host civitas, on the asynchronous session (using LMS) and synchronous session (using video calling services like Zoom, Google Meet, Microsoft Teams). We set plans and phases while assuming this pandemic will be not a short run. A the pandemic did not start in the budgeting period of the year, the early phase has been supported with all the resources we got in hand until the budget revision period decided to be open. In first phase, we prioritized efforts on critical points. On the second phase, we improved and innovate new facilities.

First Phase (2020)

1. As EMAS UI was originally only used by a maximum of 20% of total courses, the online visitor server capacity is also not designed for all the courses hosted there and is still not scalable. We decided to build a new server environment that is scalable also in the on-premises data centre, but it needs 2-3 months to get it ready. In the first months, existing EMAS (named EMAS1) visitor experience several downtimes when peak capacity is reached, and not much can be done as the design is a bare-metal environment. The new EMAS, named EMAS2 (emas2.ui.ac.id) is based on Proxmox clustering technology so when peak visitors are reached, more computer power is added. But this process is not too smooth because the server guy is not too familiar with clustering technology. EMAS1 also keeps available to distribute loads evenly.

2. UI has got membership of Microsoft Office 365 and Google Suite for education so MS Teams and Google Hangout (rebranded as Google Meet) really help many teachers use them for their virtual face-to-face sessions, while Zoom adoption gets increased too.

3. We built a website (pjj.ui.ac.id) for a one-stop reference website explaining steps for traditional teachers and e-learning teachers for organizing online courses. There is one landing page pjj.ui.ac.id/panduan-pemula/ and formatted as question-answer, covering topics on LMS choices (EMAS, Google Classroom, MS Teams), online course paradigm, online activities, and we update it regularly.
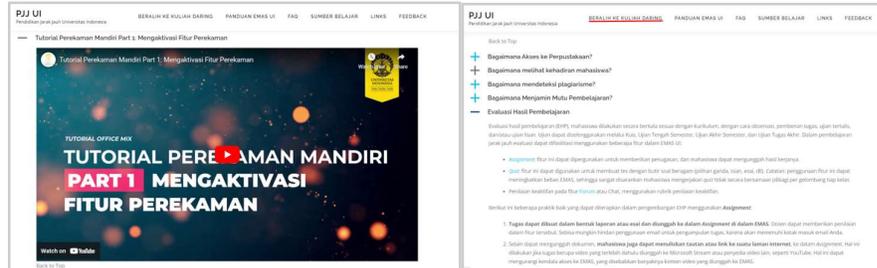
Figure 01. Sample of tutorial in pjj.ui.ac.id (left) and pjj.ui.ac.id's website (right)

4. We also organized three serial webinars on these topics: PJJ on UI series, Edutech Talk series, and EMAS Features series. Recorded videos are available on OVIS UI Channel on YouTube.

5. EMAS tutorial video is the most requested by teachers, so we produce 20's step-by-step videos on various EMAS activities and put it on PJJ site.

6. In 2020, new student orientation week (OBM) first held in fully online settings and EMAS how-to-use lesson getting prioritized.

7. Since 2010, E-Learning and PJJ training for teachers was a regular event at UI but held in offline classes. On the pandemic, this training also keeps held, in more than 20 batches and 30-100 participants per batch, thanks to online Zoom capabilities.

Figure 02. Conducting online training to lecturers about the usage of LMS EMAS

8. Before the pandemic, lecturers or students get EMAS troubleshooting by phone call or come visit the helpdesk room at the SDP office. On pandemic, this was no longer allowed. We shift to an online helpdesk available using Purechat.com live chat on the EMAS1 dan EMAS2 website. This is quite a good solution because if lecturers and students have problems right away, they can chat immediately with a helpdesk agent and resolve the problem. The number of agents also adds 2, becoming 4 people in total. Here are the performance reports.

Figure 03. Statistics of Purechat.com (March 2020 - Nov 2022)

Second Phase (2021 - 2022)

1. On 2020, EMAS2 as the new LMS still getting up and downs as UI data centre guy do trial on multiple configurations. Finally, in mid-2022 a new stable design is getting shape, with multi load-balancer, proper caching, and asymmetric database read-write model, resulting quick-loading site with relatively low downtime, powered by 60's CPU core and 100GB+ RAM.

2. In 2021, a new EMAS know-how is made as an EMAS class so teachers and students can grasp real experiences while learning EMAS there in self-paced mode. Still, the live chat support team is always available during service hours ready to help.

3. In 2021 and 2022, OBM held fully in EMAS class, in self-paced mode.

4. The number of PJJ site content is still updated and improved, resulting in three more categories in ask-and-answer format, whitepapers, more tutorial videos, and quality-checking forms, strengthening the PJJ site brand as "UI PJJ knowledge-base centre".

5. UI Smart Class Room (CSR) has been planned and designed since 2018, as collaborative islands desks plus video conference equipment, but still not fully implemented. In 2022, UI starts to do trial adaptation to a hybrid campus (students attend in offline-online proportion) and CSR design slightly modified with additional equipment, like smart board and auto-tracking camera. UI run procurement on 20 sets of SCR equipment for 17 faculties and schools and 3 units. There is two model, hybrid smart class and collaborative hybrid smart class.
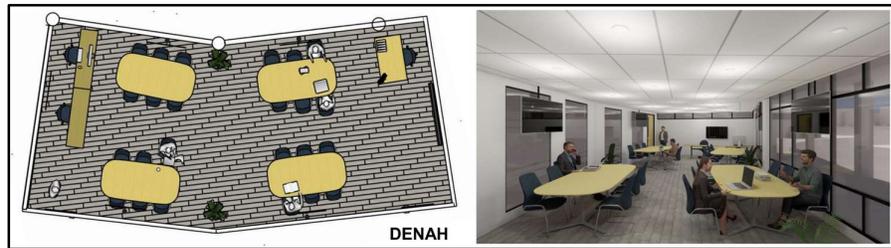
Figure 04. Hybrid Smart Classroom in Faculties

Figure 05. Collaborative Smart Classroom Design

PQ2: What are the learning facilities development strategies for increasing the number of MOOCs held?

In the end of Year 2023, the number of UI MOOCs held targeted is 575, cumulatively from 2020. This quite a number, so efficient and effective course development strategies need to be determined, especially on time-consuming like LMS-related works and video productions works. Generally, a full-semester length MOOCs can contain at least 14 weeks, so it's common to have 14 videos in it or an estimated 8000 videos in total, what a big number. Here are the supports provided by DPASDP, especially by the Learning Resources sub-directorate (SDP):

1. LMS for MOOCs (IDOLS) are made separately from blended-learning LMS (EMAS) to be easier managed because there is some notable characteristics differentiation between regular courses and MOOCs. In 2023, we plan to upgrade it, with newer Moodle, better server environment, and add some needed features.
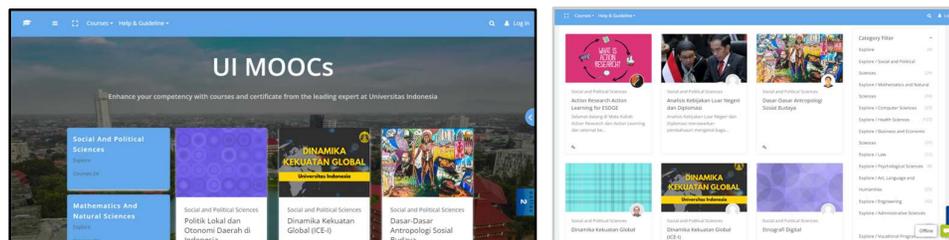

Figure 06. MOOCs UI Website (idols.ui.ac.id)

2. The Academic Reputation Advancement sub-directorate (PRA) arranges budget to give course development financial grants for teachers that have accepted proposals. One of grant main compositions is to financially support video production costs. Teachers could arrange whether to rent vendors, do it individually, or request production help from DPASDSP's Content Production Division. Teachers must follow this timeline:

proposal submission and review, technical training (Bimtek), LMS and video development, monitoring-evaluation, and content submission to LMS (idols.ui.ac.id).

3. Develop tutorials and guidance series on MOOCs development. This tutorial covers IDOLS LMS how-to-use, video production steps, and online delivery program designs. MOOCs Development Class also be made on IDOLS so lecturers can learn and experience LMS directly at each pace (self-paced).

Figure 07. Development Guidance of MOOCs UI

4. Production house services on SDP have existed since 2016. It regularly increases production capacity by number and by quality by adding manpower and production types of equipment. There are also development of working procedures r of the broadcasting standard. Our production stages include pre-production, production/shooting, post-production, and publishing. Videos produced through these stages will be result in good standards since quality is maintained at each stage.

Figure 08. DPASDP Production House Services

5. In 2022, DPASDP ran a project to add 4 Micro Recording Rooms (MRR) and pieces of equipment inside. When MRR is ready to use later, it will support self-production by teachers/lecturers with high-quality equipment like a sound-proofed room, high-quality camera and audio, lighting, green screen, and fast-rendering PCs. This facility is an innovation to increase content production capacities amidst the increasing target number of blended-earning classes, MOOCs classes, and open contents. Teachers will do it by self-service so up to 4 parallel recordings can be run simultaneously without additional DPASDP staff needed.

Figure 09. Design of MRR & Renovation Progress per November 2022

9. SDP also manages the display network for all uploaded open-content video, located in the YouTube channel (youtube.com/@OVISUIchannel) and OVIS UI website (ovis.ui.ac.id). Number of published video is 710 (per 11 November 2022). Closed-captioning these videos is work in progress.
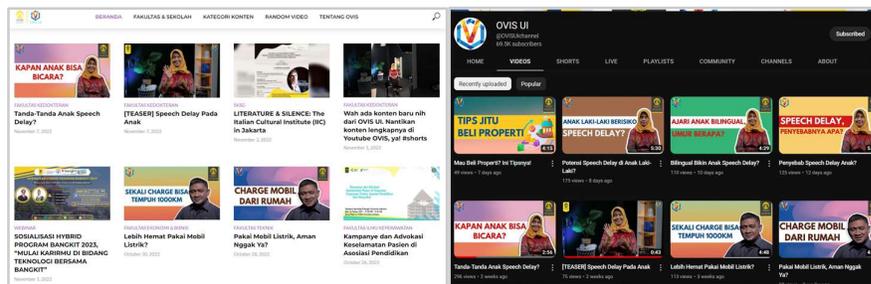

Figure 10. OVIS UI Website

4   DISCUSSIONS

- Nowadays, our world is getting more dynamic, and the education sector is also heavily influenced by global factors such as disease outbreaks, economic conditions, and technological trends, which can affect the teaching and learning processes. The covid pandemic has not been considered as a risk factor that might occur, so it is not mitigated. When pandemic happens, it instantly disables offline learning classrooms and forced us to adapt to existing LMS which has not been designed for both lecturers and students. Of course, several downtimes happened and made users feel frustrated. So, it is better to account for force majeure conditions like pandemics and natural disasters in our profile risk and choose proper mitigation plans.

- At the first months EMAS experienced some visitor spikes and resulting downtimes. By analysing the Google Analytics reports, it happened many courses held exam/quiz at the same times. By using the data recorded by the LMS we can study visitor patterns so that we can design better exam schedule policies. We choose to display the exam

schedule openly, so each lecturer can review which times are busy and which are not, so teachers become aware and can determine a more distributed exam schedule.

- Currently, the world's financial difficulties must also be considered as a major consideration in the budgeting process. It is very likely that there will be a reduction in the spending allocation and there must be a tight prioritization to gain additional equipment and manpower. A creative mind is needed for optimizing existing resources to achieve high efficiency and effectiveness on existing resources. High creativity can be honed and achieved by learning from various sources of knowledge that are now completer and more open.

5   CONCLUSION

DPASDP UI with all University elements has taken part in going through hard times such as the pandemic and climbing the stairs for a better world university ranking position, by choosing strategic steps and do efforts. DPASDP manages several learning facilities that can support UI blended learning and ODEL, such as Moodle-based LMS which has existed since 2008 along with helpdesk service; a content production house that has existed since 2015 to help lecturers make closed and open learning content; computer labs and training rooms, and several training programs. When Covid-19 begin and fully online learning was mandated by the Government, DPASDP measured what steps need to be done in the first phase (2020) and Second Phase (2021-2022). Also, DPASDP has developed learning facilities development strategies for increasing the number of MOOCs, as explained above. For 2023 development, we have proposed set of programs and still waiting for budget approval.

6   ACKNOWLEDGEMENTS

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