Making Most of Eldiru as Learning Media in The Pandemic Era

Eka Dyah Puspita Sari[1], Ummi Nurjamil Baiti Lapiana[2]
{eka.dyah@unsoed.ac.id[1], ummi.nurjamil@unsoed.ac.id[2]}

Jenderal Soedirman University, Jl. DR. Soeparno No.60, Karangwangkal, Kec. Purwokerto Utara, Kabupaten Banyumas, Jawa Tengah 53122[1,2]

Abstract. Pandemic condition drastically changes the world system. All universities close their face-to-face learning process. They change their learning activity into an online one. Learning management system (LMS) is developed in most universities to deal with the condition. Universitas Jenderal Soedirman as one of universities in Indonesia also develops its LMS to facilitate the learning process, called eLDirU (e-Learning Jenderal Soedirman University). eLDirU is an online learning platform functioned as a digital literacy learning innovation for native digital generation. It has many features that, indeed, can make the learning process easier. It has quite complete menus, such as assignment for comprehending the material, attendance for checking students' attendance, BigBlueButton for video conferencing, forum for chatting and having question-and-answer section for lecturers and students, Google Meet for Moodle for ease access in synchronous class, URL for linking more medias in helping students learn more, quiz for recording students' mastery about the topic in form of test, and others. It is also handy because both students and lecturers can download it in their smartphones and reach their learning classes wherever they are. eLDirU can be applied both for synchronous and asynchronous classes. It also make lecturers feel easy in handling many classes.

Keywords: Learning management system; learning media; online learning

1 Introduction

Pandemic condition in 2020 emerges due to Corona Virus Diseases-19 (Covid-19). It drastically changes the world system. Almost all aspects in life get affected to this condition. The drastic change in all aspects in life causes confusion. In education aspect, the condition urges universities around the world to close their face-to-face learning process. They change their learning process into entirely online learning. To accommodate online learning system, several universities have implemented and made most of the latest technology to support online learning. Learning management system (LMS) is developed in most universities to deal with the condition. Learning Management System (LMS) is defined as online learning technologies for the creation, management and delivery of course material [1], [2].Utilizing LMS in learning elevates learning process to higher level and develops digital literacy for both students and lecturers at the same time.

The trend of learning in pandemic condition makes LMS play important role in bridging the constraint found to make learning process work well. It does not only enable the delivery of instructions and electronic resources to improve and augment student learning in a collaborative environment, but also allow instructors to focus on designing meaningful pedagogical activities [3]. It can be stated that LMS does help learning process flow smooth in universities during the pandemic condition as if it runs in conventional learning process. Moreover, LMS gives freedom for students to learn autonomously. It is also strengthened with the application of the Act of the Minister of Education and Culture No. 109 Year 2013 which aims to provide higher educational services to society who cannot study directly. The Directorate General of Higher Education (DIKTI) has a strong belief that by implementing LMS in the teaching learning process, number of Indonesian university students is going to increase rapidly. Numerous studies report positive outcome of implementation of LMS, in which it provides students with "friendly" environment which reduces anxiety or fear in making mistakes in front of lecturer or classmates; moreover, students are able to study at their own pace which are suitable to students' own abilities. One states that LMS are used as supplementary equipment to promote autonomous learning [4].

Universitas Jenderal Soedirman (Unsoed) as one of universities in Indonesia also develops its own LMS to facilitate the online learning process. The LMS is called eLDirU (e-Learning Jenderal Soedirman University). eLDirU is an online learning platform functioned as a digital literacy learning innovation for native digital generation. Students and lecturer interact in many activities of learning process through eLDirU. They utilize eLDirU as synchronous and asynchronous learning media. Synchronous learning means that both students and lecturer set a scheduled direct online learning. It lets students and lecturer interact directly on virtual media as if they are in real condition in classroom or in conventional learning process. While, asynchronous learning means that the students make the most of the themselves by an independent online learning, in which it is not scheduled, and the content is available on the learning media. This way lets students explore themselves more in their autonomous learning. Regarding the urgency of LMS utilization, a question comes up as the focus of this research, i.e., "How to make most of eLDirU as learning media in the pandemic era?" The objective of the research is to describe all the features on eLDiru as learning media in the pandemic era.

2   Literature Review

2.1 Policy and Development of Online Learning

Before online learning emerges in current term, it was known as remote or distance learning. Online learning as teaching and learning process that uses technology, information, and communication warfare and networks that provide flexibility for students to learn anytime, anywhere, and with anyone [5]. The drastic education change in the pandemic era has enforced the implementation of online learning intensively. There are several rules need to be underlined in conducting online learning in the pandemic era. They are (1) learning method may be carried out in two ways, online learning (using gadgets and laptops through several platforms and online learning applications) and offline learning (using television, radio, self-study module and worksheet, printed teaching materials, teaching aids and learning media from surrounding environment); (2) putting positive interaction and communication patterns between lecturers and students into ultimate priority; (3) varying activities and assignments during online learning according to individual interests and conditions, including considering

the gap in facilities access; (4) making the learning material in accordance with the level of education, cultural context, character, and type of students; and (5) learning focuses on life-skill education, providing meaningful learning experience without being burdened with the demands of completing all curriculum achievement [5]. It can be concluded that online learning considers ease of communication and access to education.

2.2 Learning Management System

Learning management system (LMS) provides the platform for the web-based learning environment by enabling the management, delivery, and tracking of learning. LMS is often viewed as being the starting point of any web-based learning program. A good LMS should be 100% web-deployable, requiring no additional client applications. It is also important that LMS should support various sources from different manufacturers and it should be based on open industry standards for web deployments [6]. LMS is defined as a software application for the administration, documentation, tracking, and reporting of training programs, classroom and online events, e-learning programs, and training content. It is also a software application or web-based technology used to plan, implement, and assess a specific learning process. Typically, a learning management system provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. LMS may also provide students with the ability to use interactive features, such as threaded discussion, video conferencing, and discussion forum [7]. The Advanced Distance Learning group, sponsored by the United States Department of Defence, has created a set of specifications called Shareable Content Object Reference Model (SCORM) to encourage the standardization of learning management system [8]. It can be said that LMS should provide complete features as learning media, so it does not need any additional tool for users to operate it. It should cover content and class management, students' administration, and way to assess students' participation and performance.

3   Method

This study was qualitative study by using descriptive qualitative method in analyzing the data. Qualitative study is a research procedure that produce descriptive data in forms of written or spoken text from people or attitude [9]. Qualitative study put emphasis on natural background in holistic and human as research tool, analysed the data inductively, and made process more important than the result. Descriptive method was chosen because this study put emphasis on the analysis of each feature on eLDirU as learning media. It was then analysed and elaborated as learning media in the pandemic era. Descriptive method is one of study methods in analysing status of a human group, a subject, a set of condition, a thinking system, or incident class in the present time [9]. The aim of this descriptive study was to describe or to draw a systematic way and to show correlation between each phenomenon. The phenomenon in this study was the learning process in the pandemic era that still faced some problems, both in synchronous and asynchronous classes. This study tried to elaborate the function of each feature on eLDirU to make online learning process work smooth.

4   Result and Discussion

After analyzing the features on eLDirU, the answer to the question on "How to make most of eLDirU as learning media in the pandemic era?" was solved. eLDirU as learning management system developed by Jenderal Soedirman University was proven to be beneficial in learning activity during the pandemic era. eLDirU could be accessed in the link https://eldiru.unsoed.ac.id. The computer display of eLDirU was shown in figure 1.
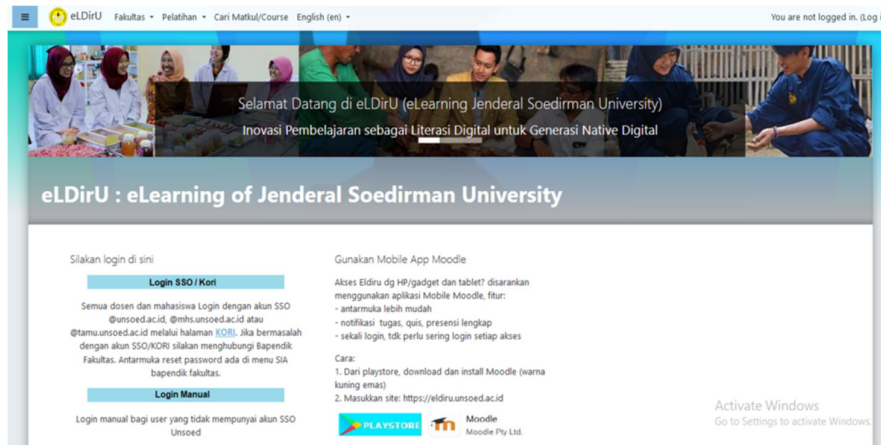

Fig. 1. Computer display of eLDirU

Besides that, eLDirU could also be accessed on smartphones. Users should install the Mobile Moodle application on Playstore on Android phones. The interface view on Mobile Moodle application easier. The task notifications, quizzes, and attendance are complete and only required one login to the application.
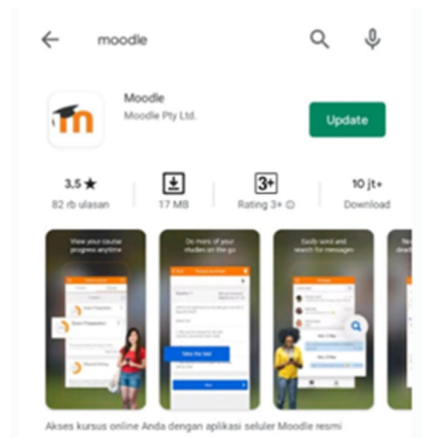

Fig. 2. Moodle Mobile Application display of eLDirU

After logging in eLDirU, users could see the dashboard menu, calendar, badges, courses, and users on the homepage. When lecturers clicked on a course or class, they could arrange

meetings of the entire semester and upload their materials in it. eLDirU provided quite complete features to make online learning flow smooth. It showed some activities and resources that lecturers might find them helpful in their teaching process. The display of activities and resources were shown in figure 3.
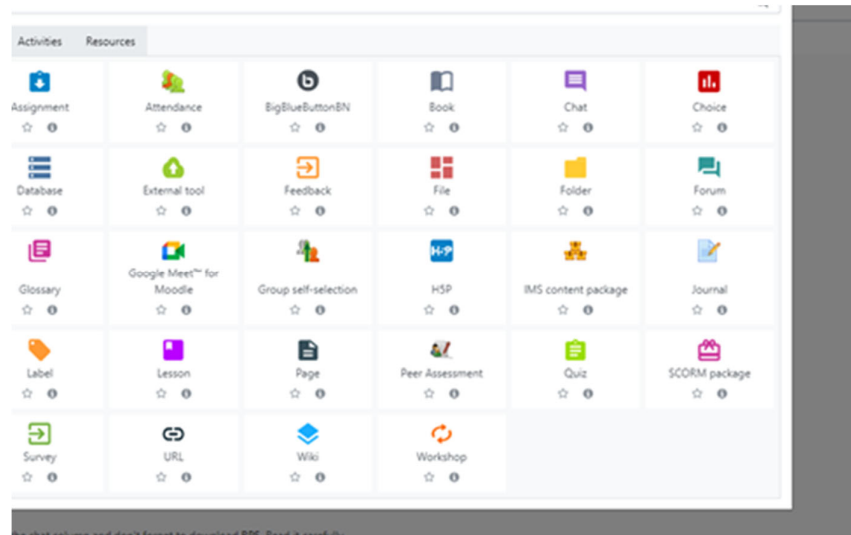

Fig. 3. Activities and resources in eLDirU

The elaboration of each eLDirU feature to make most of it as learning media was described in this section.

4.1 Assignment

The first feature was assignment. It enabled lecturers to communicate tasks, collect work and provide grades and feedback to the students. Students could submit any digital content (files), such as word-processed documents, spread sheets, images, or audio and video clips. Alternatively, or in addition, the assignment might require students to type text directly into the text editor. It could also be used to remind students of 'real-world' assignments they needed to complete offline, such as art work, and thus not require any digital content. Students could submit work individually or as a member of a group. When reviewing assignments, lecturers could leave feedback comments and upload files, such as marked-up student submissions, documents with comments or spoken audio feedback. It could be graded using a numerical or custom scale or an advanced grading method, such as a rubric. Final grades were recorded in the grade book.

4.2 Attendance

Next feature was attendance. It enabled lecturers to take attendance during class and students could view their own attendance record. Lecturers could create multiple sessions and mark the attendance status as "Present", "Absent", "Late", or "Excused" or modify the statuses

to suit their needs. But, this thing was not preferable in practice because it sometimes did not match.

4.3 BigBlueButton

BigBlueButton was the next feature to describe. It let lecturers create from within Moodle links to real-time on-line classrooms. It was an open source web conferencing system for distance education in nature. Using it, lecturers could specify for the title, description, calendar entry (which gave a date range for joining the session), groups, and details about the recording of the on-line session. In practice, most lecturers rarely utilize it because it still did not accommodate heavy traffic synchronous class at one time.

4.4 Book

Book feature enabled lecturers to create a multi-page resource in a book-like format, with chapters and subchapters. It could contain media files as well as text and are useful for displaying lengthy passages of information which could be broken down into sections. This feature might be used to display reading material for individual modules of study, as a staff departmental handbook, and as a showcase portfolio of student work.

4.5 File

File feature enabled lecturers to provide a file as a course resource. Where possible, the file was displayed within the course interface; otherwise students were prompted to download it. The file might include supporting files, for example an HTML page might have embedded images. It might be used to share presentations given in class, to include a mini website as a course resource, and to provide draft files of software programs so students could edit and submit them for assessment.

4.6 Forum

Forum feature enabled lecturers and students to have asynchronous discussions, i.e. discussions that took place over an extended period of time. There were several forum types to choose from, such as a standard forum where anyone could start a new discussion at any time; a forum where each student could post exactly one discussion; or a question and answer forum where students had to first post before being able to view other students' posts. Lecturers could also allow files to be attached to forum posts. Attached images could be added and displayed in the forum post. Both lecturers and students could subscribe to a forum to receive notifications of new forum posts. Lecturers could set the subscription mode to optional, forced or auto, or prevent subscription completely. If required, students could be blocked from posting more than a given number of posts in a given time period; this way could prevent individuals from dominating discussions. There were several uses of this feature, such as a social space for students to get to know each other, for course announcements (using a news forum with forced subscription), for discussing course content or reading materials, for continuing online an issue raised previously in a face-to-face session, for teacher-only discussions (using a hidden forum), a help centre where tutors and students can give advice, a one-on-one support area for private student-teacher communications (using a forum with

separate groups and with one student per group), and for extension activities, for example 'brain teasers' for students to ponder and suggest solutions to.

4.7 Google Meet™ for Moodle

Google Meet™ for Moodle feature let lecturers create a Google Meet room as a course resource and after the meetings make available to the students the recordings, saved in Google Drive. This feature worked best for synchronous class. It made synchronous class easy for both lecturers and students.

4.8 Group Self-Selection

Group self-selection let lecturers and students create and select groups. In this feature, participants could create, select, and join groups.

4.9 Journal

Journal feature enabled lecturers to obtain students feedback about a specific topic. It was also beneficial for asynchronous class since students could send their feedback at their pace.

4.10 Lesson

Lesson feature enabled lecturers to deliver content and/or practice activities in interesting and flexible ways. Lecturers could utilize this feature to create a linear set of content pages or instructional activities that offered a variety of paths or options for the students. In either case, lecturers could choose to increase engagement and ensure understanding by including a variety of questions, such as multiple choice, matching and short answer. This feature was functioned for self-directed learning of a new topic, scenarios or simulations/decision-making exercises, and for differentiated revision, with different sets of revision questions depending upon answers given to initial questions.

4.11 Quiz

Quiz feature enabled lecturers to create quizzes comprising questions of various types, including multiple choice, matching, short-answer and numerical. They could allow the quiz to be attempted multiple times, with the questions shuffled or randomly selected from the question bank. A time limit could be set in this feature. It was highly functioned as course exams, as mini tests for reading assignments or at the end of a topic, as exam practice using questions from past exams, to deliver immediate feedback about performance, and for self-assessment.

4.12 URL

URL stood for a Uniform Resource Locator. It enabled lecturers to provide a web link as a course resource. Anything that was freely available online, such as documents or images, could be linked to; the URL did not have to be the home page of a website. The URL of a particular web page could be copied and pasted or lecturers could use the file picker and choose a link from a repository, such as Flickr, YouTube or Wikimedia.

4.13 SCORM Package

The Advanced Distance Learning group, sponsored by the United States Department of Defence, has created a set of specifications called Shareable Content Object Reference Model (SCORM) to encourage the standardization of learning management system [8]. A SCORM package was a collection of files which were packaged according to an agreed standard for learning objects. It let SCORM or AICC packages to be uploaded as a zip file and added to a course. Content was usually displayed over several pages, with navigation between the pages. There were various options for displaying content in a pop-up window, with a table of contents, with navigation buttons etc. This kind of activity included questions, with grades being recorded in the grade book. It was functioned most for presenting multimedia content and animations, as an assessment tool.

4.14 Page

Page feature let lecturers create a web page resource using the text editor. A page could display text, images, sound, video, web links and embedded code, such as Google maps. Advantages of using page feature rather than the file feature was the resource in page was more accessible and easier to update. Another beneficial use of page feature was to present the terms and conditions of a course or a summary of the course syllabus and to embed several videos or sound files together with some explanatory text.

After elaborating the features on eLDirU, eLDirU also accommodated other benefits in online learning. It could work for both synchronous and asynchronous classes. Synchronous class means that students are required to log in and participate in class at a specific time each week, while asynchronous class allows students to view instructional materials each week at any time they choose and does not include a live video lecture component [2]. The difference on synchronous and asynchronous classes also further describes in table 2.

Table 1. Difference between synchronous and synchronous classes [3]

	Synchronous	Asynchronous
Time	Real time	Without real time interaction
Study	Surfing the internet, accessing website to obtain information	Stand-alone courseware, downloaded materials for study
Media of communication	Chat room, conferencing, net meeting	By email, no real time communication, students are able to put their comment in column provided

Regarding those differences between synchronous and synchronous classes, eLDirU facilitated them in its features. eLDirU provides BigBlueButton, URL, lesson, and Google Meet for Moodle features to utilize synchronous class, while journal, assignment, file, and quiz was used to facilitate the asynchronous class. It showed that eLDirU played well in online learning, and making most of eLDirU in online class would be beneficial and fruitful to make the objective of the learning meet its goal.

5   Conclusion

eLDirU as learning management system developed by Universitas Jenderal Soedirman is proven good as learning media in the pandemic era. It can be seen by complete features that eLDirU offers. It has assignment for comprehending the material, attendance for checking students' attendance, BigBlueButton for video conferencing, forum for chatting and having question-and-answer section for lecturers and students, Google Meet for Moodle for ease access in synchronous class, URL for linking more medias in helping students learn more, quiz for recording students' mastery about the topic in form of test, and others. It is also handy because students and lecturers can download it in their smartphones and reach their learning classes wherever they are. eLDirU can be applied both for synchronous and asynchronous classes. It also make lecturers feel easy in handling many classes.

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