

CHAPTER II

LITERATURE REVIEW

A. E – Learning

1. The Definition of E - Learning

Purbo (2002) asserts that the abbreviation "e"—short for electronic—in e-learning is used to refer to any technology utilized to support instructional initiatives through electronic technology. As opposed to this, C. Koran (2002) defines E-learning as any form of instruction or learning that makes use of electronic circuits (LAN, WAN, or internet) to deliver learning, interaction, or advice. Some people consider e-learning to be a type of distance education delivered via online resources.

The following is how Cisco (2001) explains philosophical e-learning. E-learning is first and foremost the online transmission of information, communication, education, and training. In order to address the developmental issues posed by globalization, e-learning offers a collection of technologies that can enhance the value of learning conventional learning models (studying from textbooks, CD-ROMs, and computer-based training). Third, e-learning strengthens learning through content augmentation and advancements in educational technology rather than replacing traditional classroom learning paradigms. Fourthly, depending on the format of the content and the method of delivery, student capacity varies substantially. The capacity of the pupils will increase, which will lead to better results, the better the alignment of the information, the conveying mechanism, and the learning style. From some of the definitions above, E-learning is a distance learning process that requires technology.

2. E-learning System Development

According to Haughey (1998), there are three ways that internet-based learning systems might be developed: online courses, web centered courses, and web augmented courses.

The term "**web course**" refers to the use of the internet for educational purposes where there is no requirement for face-to-face interaction between students and teachers. The entirety of all educational activities, including discussions, consultations, assignments, exercises, tests, and other assessments, is supplied online. Or to put it another way, this model employs a remote system.

A **web-centric course** blends online and in-person (traditional) learning methods through the use of the internet. There are both online and in-person presentations of some of the content. The roles are mutually supportive. Teachers can give their pupils instructions on how to learn content using the web he has made using this methodology. Students are also instructed to look up additional sources on pertinent websites. Participant's students and teachers talk more about the results of the internet-researched materials when they are in person.

Web-enhanced learning is when the internet is used to improve the standard of in-person instruction. The purpose of the internet is to facilitate communication and learning between students and other students, teachers, group members, and other resources. Therefore, it is essential for teachers in this situation to be adept at information-seeking strategies, assist students in searching for and discovering websites that are relevant to their course materials, present materials online that are engaging and interesting, and possess other necessary skills.

3. **The Benefits of E – Learning**

Some of the benefits that can be enjoyed from the learning process with e-learning, among them:

1) Flexibility.

If conventional learning in the classroom requires students to attend the class certain hours (often these hours clash with students' routine activities), so e-learning provides flexibility in choosing the time and place to access the lesson. Students do not need to travel to the lesson site e-learning can be accessed from anywhere that has access to the

Internet. In fact, with the development of mobile technology (with palmtops, even mobile phones certain types of mobile devices), the easier it is to access e-learning. Various places have also been provided free internet connection (at selected international airports and cafes), thus on the way or at the time of lunch break while waiting for the dish to be served, you can make the most of the time to access the e-learning.

2) Independent Learning

E-learning provides learners with the opportunity to take control of success of each learning, meaning that learners are given the freedom to determine when to start, when to complete, and which parts in one module that he wants to learn first. It can start from topics or page that interests him first, or can pass through the section that he assumes he's already mastered. If he has difficulty understanding a part, he or she can repeat again until he feels able to understand. If only, after there are still things that he does not understand, the learner can contact the instructor, speakers via email or participate in interactive dialogues at certain times. If he did not have time to follow the interactive dialogue, he could read the results of the discussion on the message board available in the (on the management website). Many people feel the way to learn such an independent method is more effective than other learning methods that impose it on to learn in a predetermined order.

3) Cost

There are many costs that can be saved from learning with e-learning. Cost not only financially but also in terms of non-financial. Financially costs that can be saved, including transportation costs to study and accommodation during study (especially if the place of study is in another city and other countries).

4. Advantages and Disadvantages of E-Learning

The use of the internet has several benefits, particularly in open and distance learning (Elangoan, 1999; Soekartawi, 2002; Mulvihill, 1997;

Utarini, 1997), among other things. The first is the provision of e-moderating capabilities, which allow teachers and students to readily connect via internet services on a regular basis or when communication activities are conducted without being constrained by distance, place, or time. Second, so that they can gauge how thoroughly the instructional contents have been absorbed, teachers and students can use structured and scheduled learning through the internet. Third, if necessary, students can review or study lesson plans stored on the computer at any time and from any location. **Fourth**, it is simpler for students to use the internet if they need more information about the things they have learned. **Fifth**, exchanges between instructors and students that are broadcast online can be viewed by a large audience, advancing science and providing deeper understanding. The students' shift from a typically passive to an active role is the **sixth**. **Seventh**, comparatively more effective. For those who don't reside close to a school, as an example.

But there are other drawbacks to using the internet or other forms of e-learning as well. including, but not limited to, a number of criticisms (Bullen, 2001; Beam, 1997). **First**, there is a lack of connection between students and teachers or even just amongst students. This lack of interaction may even hinder the development of values in learning. Second, the propensity to overlook intellectual or other qualities while actively promoting corporate or commercial ones. Third, training rather than education is the predominant outcome of the learning and teaching process. Fourth, as a result of the shift in the role of teachers from those who initially learned conventional learning techniques to those who are now expected to be familiar with ICT-based learning approaches (Information and Communication Technology). Fifth, students who lack a strong motivation to learn frequently struggle. Sixth, not all locations have internet access. Lack of knowledge and computer skills is the seventh issue. Eighth, inadequate knowledge of computer languages.

B. Learning Management System (LMS)

1. The Definition of Learning Management System

The development of computer technology presents opportunities for learning innovation, including learning can be done more flexibly, where and whenever (Yustiqvar, et al., 2019). According to Garrison & Vaughan (2008), computer technology allows for a combination of face to face with online learning. Some things to consider include possible approaches, strategies, techniques, and equipment. Computer technology can be adapted into an active learning approach. One of them is Learning Management System (LMS) based on Moodle. Learning Management System is used as the most effective approach in learning (Kakasevski et al, 2008). The success of Learning Management System as an environment for learning and teaching encourages an increased need to integrate it (Livingstone & Kemp, 2008).

A learning management system is 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 online. The Learning Management System may also provide students with the ability to use interactive features such as threaded discussions, video conferencing, and discussion forums.

The development of information technology also provides opportunities to build and use computer programs for learning oriented to improve students' argument skills. Argumentation abilities cannot develop automatically, but require stimulation from the environment. Kandiko (2012) explained in order to support and improve these abilities can begin by exploring how the relationship between sciences that have many features such as argumentation, understood and taught in higher education.

In his perspective, the ability of argumentation can be developed. However, generally the student's argumentation skills are still low. This is supported by Faiqoh opinion, et al., (2019) stating that low student argumentation skills have an impact on learning outcomes. The low ability of

argumentation of students is one of the causes of low critical thinking ability of students. The fact of the survey results shows that critical thinking ability is still low. This is evident from several indicators, among others: students have difficulty in asking questions and defining problems, literacy of actual problems is still lacking, analytical and evaluative problem solving is still low, skills of identifying, analysing, and evaluating selective arguments are still low. Students with low argumentation skills will not be able to compete in an increasingly advanced life and lose good job opportunities (Hasnunidah, et al., 2015). This indicates that a change in educational patterns is needed. Argumentation skills are used by a person to analyse information on a topic, then the results of analysis are communicated to others, thus the use of argumentation in science learning is part of the development of high-level thinking skills (Sumarni, et al., 2017).

2. Kinds of Learning Management System

There are several kinds of learning management system is

a. Moodle

a). Definition

Moodle stands for Modular Object-Oriented Dynamic Learning Environment which is a platform that is used as a means of media learning management systems online and using computer devices. Moodle is also included in web-based applications. Which, for each learning activity related to access to material, discussion, Q&A, to evaluation of what is done through the appearance of the website using the help of a browser.

b). Function

The function of this platform is to make it easy to make the appearance of a web-based online learning management application system. In addition, this platform is useful for distance and online learning that can be accessed by teachers, students, and all stakeholders in the Education process.

c). Features

According to M. Robith Adani in his article explained there are 6 important features in the Moodle platform.

1). Personalized Dashboard

The contents are in the form of special lists, activity calendars, general announcements, to lists of active users who are online.

2). Progress Tracking

This feature serves to supervise and provide an evaluation of learning activities carried out. So that you can provide a good assessment or assessment results based on valid and quality data. In this feature there are course completion, grades, badges, activity completion, competencies.

3). File Management

This feature is used to add a new file that is named after the subject of each user.

4). Peer Assessment

This feature is used for teachers to ask participants to give value to friends or other participants.

5). Inline Feedback

This feature makes it easier for teachers, because in this platform there are all evaluation results can be directly displayed in the browser.

6). Multimedia Integration

This feature is useful for adding multimedia files such as audio, video, and images, and can be done manually or embedding.

d. Advantages

1). Open Source

2). Flexible and Easy to Use

3). Safe and Integrated

4). Get Plug in Support and Easily Co-ordinate

5). Mobile Friendly Support

b. Schoology

a). Definition

Schoology is a web-based social network dedicated to K-12 (schools and higher education institutions) focused on cooperation, to enable users to create, manage, and interact with each other as well as share academic content. This e-learning also provides access to teachers and students for presence, assignment collection, problem training and learning resource media that can be accessed anytime and anywhere and also provides access to parents to monitor the development of students' learning in school. (Farmington, Schoology 2014).

b). Advantages of Schoology

1) Stay Connected

Teachers can send updates to courses, groups as well as private messages and provide feedback to students, and organize events with Schoology's intuitive interface on their mobile devices.

2) Extend Class Time

Students can view lessons online, collaborate with their peers and can learn independently through their mobile devices which can be done whenever and wherever they want.

3) Manage on the Go

Through Schoology teachers can easily license, make assignments, discuss, examine the results of student homework and assess the results of the work. In addition, through Schoology teachers can provide feedback on students through their mobile devices.

4) Leverage iOS and Android Devices

Schoology is a free mobile app that can be downloaded from all iOS and Android-based mobile devices. This application also has a knowledge if there are updates (updates) or recent submissions from the application, so users can easily update this application at any time.

c). Features

- 1). Assignments, used to collect tasks (file upload)
- 2). Tests/Quizzes, used to view available quizzes
- 3). Files/Links contain material in the form of files or to certain links
- 4). Discussions, where to discuss together in one course
- 5). Albums, a collection of uploaded photos

c. Edmodo

a). Definition

Edmodo is one of the results of an information technology development that helps and welcomes 21st century education which is a company that provides social media services to support online learning systems for education activists, such as teachers, students, students, lecturers. In this Edmodo platform both teachers and students can interact with each other easily. Of course, this will facilitate learning activities such as assignments, doing exams, quizzes, and much more.

b). Features

Edmodo has a very effective feature to the development of information technology for the world of education. Edmodo provides learning system management services through the online world. Management in Edmodo is also very easy which will be very suitable for educational institutions who want to use Edmodo. These advantages exist because of the features that have been created by Edmodo. Below is an explanation of the excellent features owned by Edmodo.

1). Parent Code

Edmodo not only facilitates students in the learning process and also Teachers in managing the learning system. However, parents can also take a role through this Edmodo platform and in order to play a role in this platform parents must register their account into the Edmodo application or website.

2). Award Badge

As a form of appreciation and appreciation for his students in Edmodo teachers can give an Award Badge. Students who are able to complete quizzes, exams, and assignments well and get good grades are entitled to receive an award badge from their teacher. This feature provides benefits that are not playful for students. Students will be more motivated in their next learning activities. This appreciative form will encourage students to be more diligent and strive in every task and exam given. In this feature the teacher can give a Badge at once to his students.

3). Polling

Judging from the name alone it can be guessed that the voting feature relates to the name of the vote. This feature helps teachers in using Edmodo to find out the response of their students. For example, when students have completed a task or quiz. The feature can be used to quickly find out the student's response about the completion of the task and also the quiz. However, the use of this feature is limited to only teachers.

4). Assignment

This feature plays the most role to help the task of a teacher towards his students. With this Assignment feature, teachers are provided with services by Edmodo to be more effective and efficient in providing tasks to their students. In giving assignments teachers can list files, documents, links, and whatever resources you want to provide. The collection of students to the task in this feature is also easy just by uploading the completion document, press this turn, then the task has been collected. This given task can later be reused by teachers and will be stored automatically in the library feature that will be explained in the next section.

5). Gradebook

After the teacher gives the task through the assignment feature and the student has collected it, this next feature will help the teacher in managing the results of the task from his students. This feature is named

by Edmodo which is gradebook. This gradebook feature provides convenience for teachers to do value management both manually and automatically. With the Gradebook feature data from a value will be collected neatly and teachers can get file output with .csv format from this data. This Gradebook feature is fully controlled by the teacher and students can only see the data.

6) Quiz

This all-digital era makes various activities can also be done through the internet. In the past to carry out an exam activity, quizzes, and other learning evaluation activities must be needed paper questions and answers, now it can be more efficiency with the help of NGO features. In this Edmodo there is a Quiz feature that can help teachers to give exams online be it quiz, exam, replay, and other things. This quiz will also be stored in the library feature so that in the future if needed this quiz can be used again.

7) Files and Links

If in the past a teacher in giving lessons in the classroom usually only uses whiteboard media, in Edmodo this media can be developed more effectively using a file and link feature. This feature helps teachers provide a note in the form of document files, text, audio, video, and others. The formats of the file that teachers can use to help in the learning process are doc, ppt, xls, and pdf. With the help of this feature the teacher will be more able to explain a material to his students because it is supported by complete material sources.

8). Library

As is generally a library that stores various documents important for learning be it books, exam questions last year, journal references, and others, in the Edmodo platform there are also these features. The difference between library features in Edmodo and the real world is more about effectiveness and effectiveness. efficiency in its management. This feature can accommodate a wide variety of files and links that teachers

use as teaching materials for their students. So, you could say this feature as a place for students to learn the material provided by their teachers and this library is also a storage of learning materials. Edmodo provides unlimited storage services for teachers so that teachers can easily organize, manage, sort, and even share the source of their subject matter.

d. Google Classroom

a). Definition

Google Classroom is part of G Suite for Education which also comes in the mobile app version. To use it, teachers and students must have a Google account to connect. In addition to being more effective and communicative, this platform is also very easy for teachers and students to use. There are many benefits of using Google Classroom as an online learning medium, including being able to ask questions and answers interactively, hold exams, and others.

b). Benefits

Using Google Classroom, teachers can create tasks, send announcements, and start class discussions in person. In addition, students can share material with each other and interact in the stream via email. Some other benefits of Google Classroom include the following:

- Share subject matter/syllabus
- Delivering/sending tasks
- Hold exams/quizzes
- Interactive Q&A
- View upcoming tasks through Google Calendar.

3. Learning Management System Features That Support Online Learning

Abror (2020) explains suggested that there are several features that can support the online learning process and find some advantages and disadvantages.

Licensed Learning Management System apps usually have some excellent features, including:

a. Easy-to-Use User Interface

A good Learning Management System will definitely present an attractive, accessible, and easy-to-understand interface for its users. Learning Management System users won't get confused when using it. For Learning Management System providers, attractive interface features can also add to the aesthetics of Learning Management System web pages so that they can attract many new potential users.

b. Online Registration

The sign-up feature is a must-have feature for a Learning Management System. Through this feature students can register themselves online through the Learning Management System page and can see the syllabus that the teachers have prepared. This sign-up feature should also be easy to use as it relates to payment of courses through several available payment methods.

c. Virtual Classes

As a digital learning medium, Learning Management System certainly has virtual classroom features. What is a virtual class or online class, is a class that presents the teaching-learning process without requiring physical contact? This online class can present a variety of digital learning materials, such as video or learning animations, teacher voice recordings of learning materials, and learning material documents (articles or e-books) for students to learn independently. In addition, a good Learning Management System should certainly have a video conference feature that can be used for students to learn online face-to-face remotely with their teachers.

1. Advantages of Learning Management System

According to Abror (2020) Learning advantages of Learning Management System:

- a. The cost of using Learning Management System is cheaper than face-to-face learning.

- b. Make it easier for teachers to collect and analyse student learning outcome data in less time.
- c. Make it easier for teachers to find and organize learning materials for students
- d. Learning time is more efficient because online learning can be accessed anywhere and anytime.
- e. Learning Management System learning methods that use several information technologies such as images, sounds, animations, videos, and text make learning materials easier to understand and less boring.
- f. Encourage students to do self-learning.
- g. Learning content for students can be well documented.
- h. Facilitate interaction between teachers and students with chat and discussion group features.
- i. Alternative online learning during the COVID-19 pandemic.

2. Disadvantages of Learning Management System

According to Abror (2020) The Learning Management System also has shortcomings, including:

- a. To access the Learning Management System, a stable and good internet connection is required. Otherwise, the learning process through Learning Management System will also be hampered.
- b. Less able to implement real-time interactions between teachers and students. For example, if a student asks the teacher today, while the teacher is only online tomorrow, then the teacher's answer can only be received by the student the next day.
- c. Requires supporting devices, such as computers, laptops, and smartphones to be able to use Learning Management System.

3. Problem in Using LMS

According to Laras & Yeni (2020)

- a. There are problems in some LMS that we often use here are the problems: Only available in English making it difficult for students or teachers with low English skills
- b. Need a better understanding of the learning management system to be used
- c. Must use a good internet network, so that for low-area internet networks cannot use the learning management system

According to Aji (2020), there are still barriers to online learning in the learning management system, including: (1) Restrictions on teachers' and students' data technology capabilities; (2) Inadequate Facilities and Infrastructure; (3) Access Limited Internet; and (4) Inadequate Budget Provision.

C. Students Problem in LMS

Obstacles faced in the implementation of PJJ, among others, are related to resource readiness. Human beings, lacking the direction of local governments, the lack of a curriculum that appropriate, and limited facilities and infrastructure, especially technological support and internet network. Human resource readiness includes educators, learners, and parental support is the most important part of the implementation of PJJ (Arifa, 2020).

D. Previous Study

1. Zulfa istiqomah (2021) investigated online media in the COVID-19 science study in Madrasah Ibtidaiyah Negeri 1 Kota Bengkulu and using a qualitative method. The result of research: Factor's resistor the use of online media in the study of time Covid-19 in MI N 1 Kota Bengkulu has a lot of obstacles posed by the lack of an online learning system knowledge ability and the ways of technological science. As for the students of the student's preparedness in performing such vectors the problem with cell phones is that not all students have android phones. For students who don't have their android phones, they're left inside the

learning and information that teachers have been given to those efforts made for students without cell phones can be made there's a luring course by coming to school. Of the economic dimension is the limitation of the quotas that students have still there were so few quotas that learners could not engage in online study activities. And lack of time created by parents to guide children in home study. So, that learners also sometimes have deep difficulty understanding the learning materials.

2. Afip Miftahul Basar (2021) challenging remote learning during the covid-19 pandemic at Nurul Fajri's teachers west using qualitative research methods. The result of research: the process of remote learning that is carried out at present remains to be called ss ideal learning conditions, it is an emergency that must be implemented. There are still obstacles that make all learning optimal. The government cooperated with various parties involved in various efforts to could solve problems in distance education, both from the regulatory side, increases the readiness of the educator, as well as the expansion of the network and access of learning resources, to be able to run effectively and efficiently. Nevertheless, the effort needs to be constantly increased in order that optimize distance education not only for emergencies like today but also for is implemented in normal situations according to the need for learning. Government continues efforts to promote the synergy of the various related sectors so that quality improvement efforts education, both within the covid-19 emergency period and the education arrangement sustainability in the future is optimized.

E. Basic Assumption

This research has in accordance with the above problems. Many students who have difficulty accessing do not even know about learning management system. Lack of knowledge and lack of resources so that the process of teaching and learning activities with e-learning methods is currently less effective.

This research can help for teachers and students to sort out effective learning management for subjects. The researcher has high hopes that this research will be useful.

