The Effectiveness of Using E-Learning as an Online Learning Media at Polytechnic Indonusa Surakarta

Suci Purwandari[1,*], Edy Susena[2]
[1]D3 Automotive Technology, [2]information Systems
[1,2]Polytechnic Indonusa Surakarta
[1,2]Street. K.H Samanhudi No. 31, Surakarta, Indonesia
[1]suci@poltekindonusa.ac.id, [2]edysusena@poltekindonusa.ac.id

Abstract— The Covid-19 outbreak has had a tremendous effect in no time. The Minister of Education and Culture of the Republic of Indonesia has adopted a policy to protect the nation's children from studying at home by means of distance education. Various technology platforms can be used to assist in the learning process. PJJ is e-learning-based learning. Indonusa Surakarta Polytechnic seeks to improve campus e-learning performance. To increase the use of e-learning, it is necessary to evaluate the use of campus E-Learning as an online learning medium at the Polytechnic Indonusa Surakarta. For a good evaluation, researchers conduct research in order to get feedback from users. The intended users are lecturers and students. The researcher used a qualitative descriptive method and the collection was done by means of a literature study and a questionnaire. The questionnaire used a linkert 4 scale, namely a 4 linkert scale questionnaire, namely Strongly Agree (Score 4), Agree (Score 3), Disagree (Score 2) and Disagree (Score 1). The methodology carried out begins with the formulation of the problem, data collection. The results of data collection were carried out by descriptive analysis so as to produce accurate conclusions. The conclusions of this study are: 67.2% of respondents agree during the pandemic and future online learning, 68.6% of respondents agree that lectures use the campus e-learning platform, 71.4% of respondents agree that campus e-learning is easy to use, 65 % of respondents agree that campus e-learning can facilitate learning between lecturers and students, 58.9% of respondents agree that campus e-learning can improve student competence, 90.2% of respondents agree that lectures use books/modules as lecture references, references in the form of printed books (59.4%) and E-Books (56.7%), The use of online learning platforms other than Campus E-Learning include: Zoom (56.3%), Gmeet (86.5%), Google Classroom (82, 5%), WhatsApp Group (71.9%), E-mail (36.5%) and others (9.4%).

Keywords— Covid-19, effectiveness, learning, e-learning

I.   INTRODUCTION

The Covid-19 outbreak appeared at the end of December 2019. Covid-19 originated in the city of Wuhan, China. Based on the online media TEMPO.CO, Jakarta on Wednesday, March 11, 2020 on the website https://tekno.tempo.co/read/1318504/who-virus-corona-covid-19-resmi-pandemi/full&view=ok, *World Health Organization* (WHO) announced that the Covid-19 disease had hit at least 114 countries and had killed more than 4,000 people officially became an international pandemic. WHO ordered all countries to fight and break the chain of spread of Cocid-19. Almost all sectors have been affected by the spread of Covid-19[1].

Indonesia is one of the countries that has been affected by the Covid-19 outbreak. Based on the official Corona information website (https://covid19.go.id/peta-sebaran) owned by the National Disaster Management Agency (BNPB) as of April 6, 2020. Meanwhile, globally, the Covid-19 outbreak has spread to 209 countries, 1,136,851 confirmed cases, and 62,955 deaths (data taken on January 1, 2022). The above conditions are predicted to increase day by day. With such conditions, the Indonesian government took a policy to unite against Covid-19. The government and the Minister of Education and Culture of the Republic of Indonesia have taken a policy to protect the children of the nation and the people of Indonesia to study at home and work at home and stay read at home. This is to stop the spread of the Covid-19 outbreak. Based on the Minister of Education and Culture Press Release, March 16, 2020, the Ministry of Education and Culture encourages Online Learning for Campuses in Areas Affected by the Covid-19 Outbreak[2]

Because the distribution had arrived in Surakarta City, Surakarta City on March 14, 2020, the Mayor of Surakarta decided an Extraordinary Event (KLB) for Surakarta City. Thus, the ranks of education, from Kindergarten to Higher Education levels, took steps to eliminate learning activities in schools. The head of the University of the former Surakarta residency took steps to urge all students to return to their respective areas, while those who were unable to return had to stay in their boarding houses and be monitored by the campus. Learning is carried out online by utilizing the E-Learning of each campus. Likewise, educators are also expected to be able to carry out online lectures. Educational staff are required to take turns on campus, others continue to work from home.

With this sudden policy, it requires educators, education staff and students to be able to work and study from home. This will cause serious problems in choosing a good learning method. Therefore, researchers will find out how far the Effectiveness of Using E-Learning as an Online Learning Media at Polytechnic Indonusa Surakarta. Information and communication technology (ICT) is developing from time to time. One of the positive impacts of the development of ICT is helping humans in carrying out various fields of work. One of them is the world of education. ICT supports the work of actors in the field of education. Technology is a messenger that can be used for learning purposes. UNESCO states that there are three goals in integrating telecommunications and information technology for learning, namely building knowledge based society habits, developing skills in using technology (ICT literacy), and increasing the

effectiveness and efficiency of the learning process. Technology has an important role in learning. One of them is the use of computer-based learning media. One of the media that utilizes the massive development of ICT applied in learning today is e-learning-based learning [3].

The application of a learning model has one component that needs to be considered so that a learning model can be sustainable and have an impact on its implementation. These components are design, application/implementation, and management or maintenance. In relation to learning, the use of information technology in this case e-learning is needed not only by skilled educators in using technology and technology for the manufacture of teaching materials, but a design is needed to be able to carry out learning effectively. In a learning design (instructional design) there is a process to guide actors (actors) to design, develop, implement e-learning content by utilizing the available e-learning infrastructure and applications. At the next stage in the implementation of e-learning there is an evaluation stage which is used to revise or adjust to the previous stages. Instructional design is a dynamic process that can change according to the information and evaluations received with the aim of improving student learning outcomes so that learning objectives can be achieved[4].

In the last ten years the Internet has become an available resource for research and learning for teachers and students to share and obtain information. There is considerable debate about the definition of the term E-Learning according to Dublin which tends to reveal the specialties and interests of researchers. E-Learning as a concept includes various applications, methods and learning processes. It is therefore difficult to find a generally accepted definition for the term E-Learning, in fact there is not even a common definition for the term. Also, the European Commission defines, E-Learning as the use of new multimedia technologies and the Internet to improve the quality of learning by facilitating access to facilities and services as well as remote exchange and collaboration. E-Learning is widely used all over the world for desired educational outcomes in different educational conditions[5].

E-learning as any teaching and learning that uses electronic circuits (LAN, WAN, or internet) to deliver learning content, interaction, or guidance. There are also those who interpret e-learning as a form of distance education conducted through the internet. E-learning can also be defined as asynchronous learning activities through computer electronic devices that obtain learning materials that suit their needs[6].

The total number of potentially at-risk students from pre-primary to high school education is 577,305,660. On the other hand, the number of students who are potentially at risk from higher education is 86,034,287 people (Nugroho, 2020). Currently in Indonesia, several universities are starting to implement policies for teaching and learning activities remotely or online lectures. This is actually not a problem for universities that already have an online academic system. However, it will be a problem for universities that do not yet have an online academic system. The Ministry of Education and Culture (Kemdikbud) is currently ready with all scenarios including the implementation of working together to encourage online learning for students. In an effort to keep students studying at home, the Ministry of Education and Culture has prepared a number of supports for the smooth running of the process. They developed an android-based distance learning application: the "Learning Home portal" (Kemdikbud, 2020). This portal can be accessed at learning.kemdikbud.go.id. Some excellent features that can be accessed by students and teachers include learning resources, digital classes, virtual laboratories, and question banks. The learning center can be used by students and teachers of PAUD, Elementary School, Junior High School, Senior High School or Vocational High School or equivalent.[7]

The aims of this research are: 1). To find out future learning methods, 2). to find out what percentage of lecturers and students use the campus e-learning platform, 3). To find out the ease of using campus e-learning, 4). To determine the effectiveness of learning between lecturers and students, 5). To determine the effectiveness of improving student competence, 6). To find out the lecture references that will be used, 7). To find out the form of lecture references, 8). To find out other online learning platforms used by lecturers and students

II. RESEARCH METHODS

The researcher used a qualitative descriptive method. As has been done by previous researchers, in taking steps to take qualitative research, there are several options, including using a descriptive analytical approach, as well as case studies. Due to the unfavorable situation due to COVID-19, steps were taken as written. The first thing to do is to find out in advance what is the problem that will be discussed in the article. After that, the data collection is done online and the search for sources that will be a reference in writing articles. After the data is collected, do a study of the data and explore these problems, which are supported by several theories.[8]

According to Bimo Walgito, the definition of a research questionnaire is a list of questions in research that must be answered by respondents. After the respondents' answers are collected, the answers will be studied and analyzed[9]

The following is the research methodology carried out by the author, starting with the formulation of the problem, then collecting data. Collecting data using literature study techniques and questionnaires. Then the results of the literature study and questionnaire were analyzed using a qualitative descriptive method. The following is the flow of the research methodology:
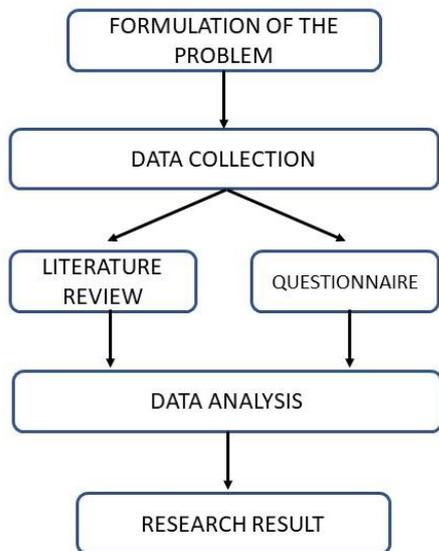
Figure 1. Research Methodology

Data collection is done by using the method of literature study and. Meanwhile, the data analysis used was a questionnaire analysis with a linkert scale of 4, namely Strongly Agree (Score 4), Agree (Score 3), Disagree (Score 2) and Disagree (Score 1) with qualitative descriptive. Bulaeng stated that the research determines whether the observational data is in accordance with the research statement or hypothesis, and whether the researcher formulates the theoretical framework appropriately. This data analysis will bring the researcher to the conceptual stage of the research, where the research process is continued by formulating a problem statement. After the questionnaires were collected from the respondents, the answers were then coded.[10].

The statements in the questionnaire used in this research are:

1. During the pandemic and future online learning? Answer: a. Strongly Agree, b. Agree, c. Disagree, d. Do not agree
2. Do you agree that lectures use the campus e-learning platform? Answer: a. Strongly Agree, b. Agree, c. Disagree, d. Do not agree
3. Do you agree that campus e-learning is easy to use? Answer: a. Strongly Agree, b. Agree, c. Disagree, d. Do not agree
4. Do you agree that campus e-learning can facilitate learning between lecturers and students? Answer: a. Strongly Agree, b. Agree, c. Disagree, d. Do not agree
5. Do you agree that campus e-learning can improve student competence? Answer: a. Strongly Agree, b. Agree, c. Disagree, d. Do not agree
6. Do you agree that lectures use books/modules as lecture references? Answer: a. Strongly Agree, b. Agree, c. Disagree, d. Do not agree
7. What form of reference do you want? Answer: a. Printed Books, b. E-Book
8. Apart from using campus e-Learning, what online learning platforms have you used? Answer: a. Zoom, b. Gmeet, c. Google Classroom, d. WhatsApp Groups, e. E-mail

III.   RESULT AND ANALYSIS

3.1. Number of Respondents

The number of respondents who have filled out the questionnaire are 51 permanent lecturers and 638 students, the total respondents are 689 respondents. This shows that the level of effectiveness in filling out the questionnaire is very high. Respondents who have filled out the data questionnaire are 95.8% students and 4.2% which are described as follows:
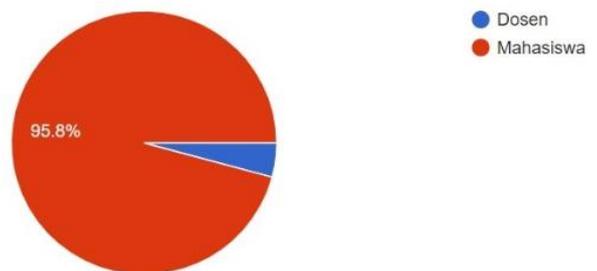

Figure 2. Number of Respondents

3.2. Questionnaire results

The results of the questionnaire used in this research are:
1. During the pandemic and future online learning? Answer: a. Strongly Agree (17.8%), b. Agree (49.4%), c. Disagree (26.6%), d. Disagree (7.2%).
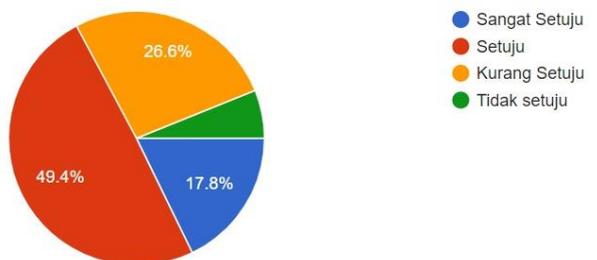

Figure 3. Respondents' Opinion on Learning during the pandemic and future online learning

2. Do you agree that lectures use the campus e-learning platform? Answer: a. Strongly Agree (8.8%), b. Agree (59.7%), c. Disagree (27.1%), d. Disagree (4.4%)
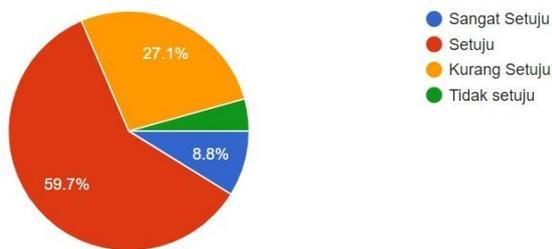
Figure 4. Number of respondents who choose
Lectures Using Campus E-Learning

3. Do you agree that campus e-learning is easy to use?
    Answer: a. Strongly Agree (10.5%), b. Agree
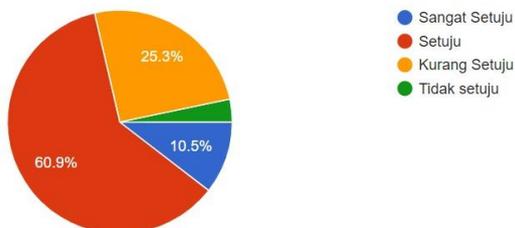   (60.9%), c. Disagree (25.3%), d. Disagree (3.3%)

Figure 5. Number of Respondents Who Say Campus
E-Learning is Easy to Use

4. Do you agree that campus e-learning can facilitate
    learning between lecturers and students? Answer: a.
    Strongly Agree (8.7%), b. Agree (56.9%), c. Disagree
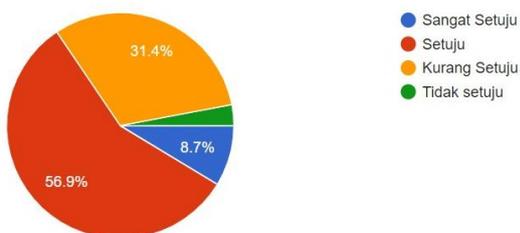   31.4%), d. Disagree (3%)

Figure 6. Number of Respondents Saying Campus
E-Learning Facilitates Learning between Lecturers
and Students

5. Do you agree that campus e-learning can improve
    student competence? Answer: a. Strongly Agree
    (4.3%), b. Agree (54.6%), c. Disagree (37.1%), d.
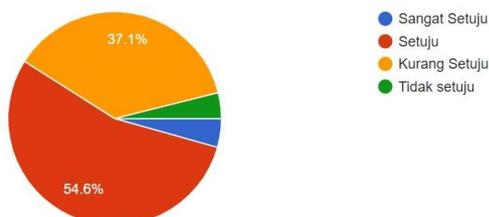   Disagree (4%)

Figure 7. Number of Respondents Who Say Campus
E-Learning can Improve Student Competence

6. Do you agree that lectures use books/modules as
    lecture references? Answer: a. Strongly Agree
    (20.4%), b. Agree (69.8%), c. Disagree (8.4%), d.
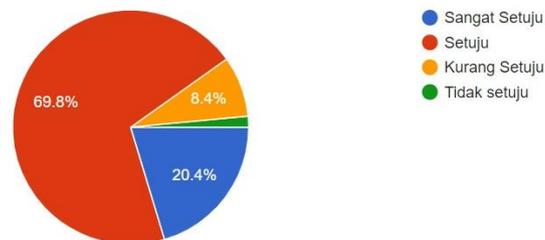   Disagree (1.4%)

Figure 8. Number of Respondents Who Say Lectures
Use References in the Form of Modules/Books

7. What form of reference do you want? Answer: a.
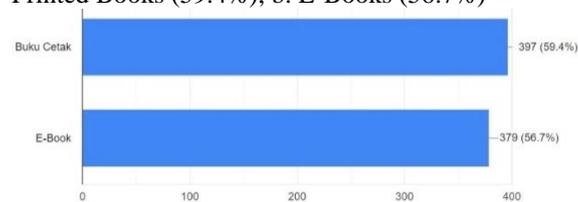   Printed Books (59.4%), b. E-Books (56.7%)

Figure 9. Lecture Reference Form

8. Apart from using campus e-Learning, what online
    learning platforms have you used? Answer: a. Zoom
    (56.3%), b. Gmeet (86.5%), c. Google Classroom
    (82.5%), d. WhatsApp Groups (71.9%), e. E-mail
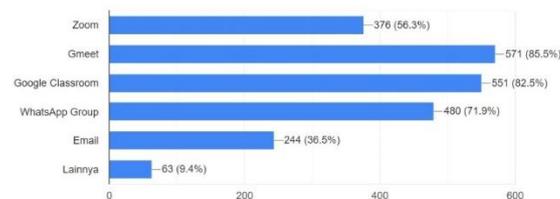   (36.5%) and f. Others (9.4%)

Figure 10. Lecture Reference Form

IV. CONCLUSION
4.1. Conclusion
Based on the discussion above, it can be concluded that:
1. 67.2% of respondents agree during the pandemic and
    future learning online
2. 68.6% of respondents agree that lectures use the
    campus e-learning platform
3. 71.4% of respondents agree that campus e-learning is
    easy to use
4. 65% of respondents agree that campus e-learning can
    facilitate learning between lecturers and students
5. 58.9% of respondents agree that campus e-learning
    can improve student competence
6. 90.2% of respondents agree that lectures use
    books/modules as lecture references

7. References in the form of Printed Books (59.4%) and E-Books (56.7%)
8. The use of online learning platforms other than Campus E-Learning include: Zoom (56.3%), Gmeet (86.5%), Google Classroom (82.5%), WhatsApp Group (71.9%), E-Learning mail (36.5%) and others (9.4%)

4.2. Nest
1. Lectures can be carried out online, but practical activities should be carried out on campus
2. During this pandemic, it is better to hold lectures online
3. Please increase the size of the assignment file in E-Learning so you don't have to compress it again when you want to collect
4. If you are required to study online, it is better to learn through gmeet and e-learning
5. Using Classroom is easier than e-learning
6. For the next semester, it will be carried out in a hybrid manner (online and offline) because in online lectures, understanding of the material is less than when offline.
7. During a pandemic, it's better to reduce contact with outsiders, it's better to do online learning
8. It is easier to use google classroom and use book references, it is easy to use printed books.
9. Each practicum course is given a module in the form of a printed book
10. The implementation of practicum lectures can be carried out 100% offline.
11. Improve the e-learning system because if it is used by students simultaneously and has reached the maximum limit, it cannot be opened
12. Keep face-to-face learning while still implementing health protocols. and enter the campus on a schedule like at the beginning of the semester learning time

THANK-YOU NOTE

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