THE EFFECTIVENESS OF ONLINE LEARNING USING GOOGLE CLASSROOM FOR EDUCATION STUDENTS DURING THE COVID-19 PANDEMIC

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Article Information

Abstract

The google classroom application as a form of learning management system application is chosen by the most Mathematics education students because it is easy to use. The Covid-19 pandemic has forced the learning system on campus to change drastically from face-to-face meetings to online learning. Many campuses that do not yet have online learning infrastructure are forced to conduct lectures online. This study aims to analyze the effectiveness of online learning during the Covid-19 Pandemic using Google Classroom. This study uses a descriptive research method using a survey technique using a questionnaire conducted online. The research used was in the form of an online questionnaire given to 100 mathematics education students consisting of 3 batches in the even semester. The results showed that as many as 51% of students agreed and were included in the effective category, this meant that students could access Google Classroom very easily, 43% of students stated that they quite agreed, so that Google Classroom was said to be effective enough to be a learning medium so that students understood mathematical material, and as many as 41.80% of students stated that they quite agreed about the effectiveness of using Google Classroom for online learning. After calculating the average of the three indicators, it was concluded that the use of Google Classroom in online learning in mathematics education study programs was categorized as quite effective, with an average yield of 44.23%. It can be concluded that the use of the Google Classroom application in online learning during the Covid-19 outbreak was quite good and effective, it's just that it would be better if it was combined with other online platforms.

Keywords: Covid, Technology, Google, Classroom, LMS

1. Introduction

The Covid-19 pandemic has affected all levels of the education system in Indonesia, starting from elementary to tertiary levels. Since the emergence of cases of positive Covid-19 patients in Indonesia, the Government through the Ministry of Education, Culture, Research and Technology (Kemendikbudristek) has implemented a study and work from home policy since mid-March 2020. STKIP Muhammadiyah Sungai Full which is under the Ministry of Education, Culture, Research and Technology (Kemendikbudristek), responded to this policy by implementing learning and working from home through a circular issued on 15, 26 and 30 March 2020 (Jamaludin et al., 2020).

Online or online learning (in the network) is carried out through various applications that can support the learning process starting from face-to-face applications such as zoom, google meet, and other online media platforms such as google classroom, whatsapp group, etc. The Google Classroom application was chosen to help students and lecturers as teachers conduct lectures online. Google Classroom is an application in the form of a learning management system provided by Google and can be linked by email, making it easy to access. Google classroom is an application that allows the creation of online classrooms. Google classroom can be a means of distributing assignments, collecting assignments, and even evaluating assignments that have been collected. In addition, Google Classroom provides a discussion forum feature so that lecturers can open a class discussion that can be responded to and commented on such as commenting activities on Facebook (Kusuma and Astuti, 2019).

Many campuses, including STKIP Muhammadiyah Sungai Full, which were not used to conducting lectures online, were forced to change the face-to-face system to online distance lectures due to the Covid-19 pandemic that hit Indonesia amid the limited existing infrastructure. This causes learning to be less efficient, students find it more difficult to understand the material provided by the lecturer, the lack of interaction between lecturers and students makes it difficult for them to understand the material provided, students find it more difficult to ask questions about material they do not understand and lack of student concentration when learning is done online (Mastuti et al., 2020; Limbong & Simarmata, 2020). In accordance with the curriculum reference, courses consist of various types, namely theoretical courses, practicum courses, theory and practicum courses, as well as field work practice courses (Dikti, 2014; Rusdiana & Nasihudin, 2018). The latest meta-analysis of online learning (Bernard, et al., 2014; Means et al., 2013; Oftedal et al., 2015; Vo et al., 2017; Winarno, 2017) found that online learning is more effective than meetings face to face. Effectiveness in general shows how far the predetermined learning objectives have been achieved (Müller et al., 2018). Effectiveness is a measure that states how far the target (quantity, quality and time) has been achieved, or the greater the percentage of the target achieved, the higher the effectiveness (Watkins et al., 2007; Rohmawati, 2015).

Google classroom aims to make it easy to create and give assignments to students that are paperless. Assignments in Google Classroom are in the form of documents or videos and discussions. Apart from that, you can also do online tests using the Google Form format with various types of questions. To log in to Google Classroom, Gmail account users only need to search for and click on the Google Classroom menu which is already available in the relevant Gmail account (Muslik, 2019). Some views of the author's google classroom are presented as follows:
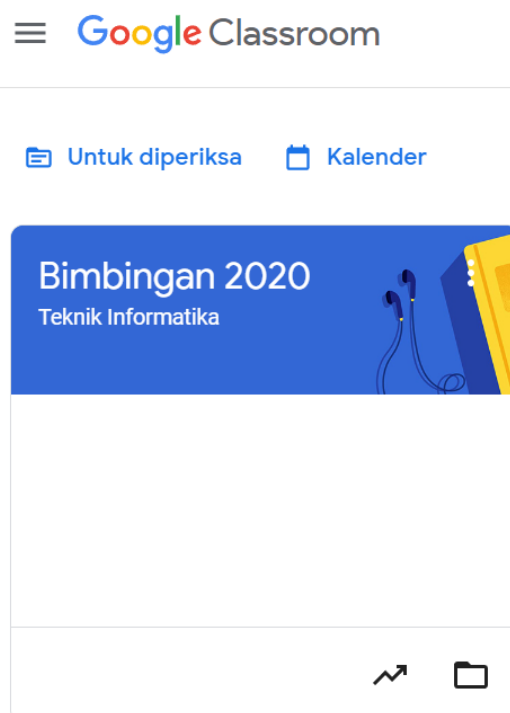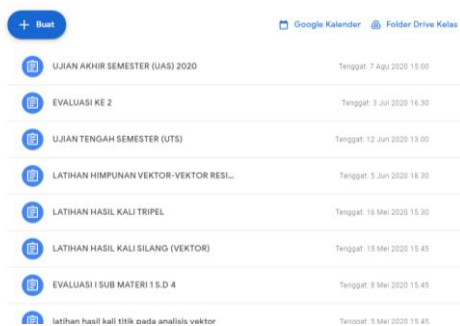

Figure 1. Sample Of Classroom

Figure 2. Classroom Files

From Figures 1 and 2 we can see the form of the Google Classroom application, the features in it such as: Streaming, class assignments, people, and grades. In the Streaming feature, lecturers and students can conduct question and answer/discussion sessions regarding the material being taught by the lecturer, in the assignment feature: the lecturer can upload assignments for his students and students can download the assignment, for the people (student) feature: the lecturer can see the number of students and can send emails and control student attendance, as well as grade features: lecturers can give grades online and students can see the grades they get directly.

In the context of learning activities, it is necessary to consider effectiveness, meaning the extent to which the goals set can be achieved as expected. The characteristics of the effectiveness of learning programs are successful in delivering students to achieve predetermined instructional goals, providing attractive learning experiences, actively involving students so as to support the achievement of instructional goals and having facilities that support the teaching and learning process (Rohmawati, 2015). The effectiveness of learning programs is not only in terms of the level of learning achievement, but also in terms of processes and supporting facilities. The effectiveness of the learning method is a measure related to the level of success of a learning process. Effectiveness can be measured by looking at student interest in learning activities (Nguyen, 2015).

2. METHOD

This research is a quantitative descriptive study using a survey method which is conducted online (Sugiyono, 2017; Groves et al., 2011; Suryana & Priatna, 2008; Gunawan, 2017). The research instruments used were questionnaires and online interviews in google form format to 100 respondents consisting of students who took Theory, Practicum, Field Work Practice (PKL) courses. In addition, secondary data collection is carried out through literature studies to find documents, articles, news and others related to the effectiveness of online learning.

The samples taken were Informatics Engineering students from three batches, namely semester 3 (26 students), semester 5 (42 students) and semester 7 (32 students) with a total of 100 students. The questionnaire was given to students who were doing online learning. The questionnaire provided consisted of 15 statements with the answer options strongly disagree, disagree, disagree, agree, and strongly agree. The categories of the online learning effectiveness questionnaire using Google Classroom for Data Science education students are presented in Table 1.

Percent	Note	
	Def	Expression
81-100%	Strongly Agree	Very Effective
61-80%	Agree	Effective
41-60%	Enough	Enough
21-40%	Don't agree	Ineffective
0-20%	Strongly Disagree	Very Ineffective

Table 1. Categories Of The Online Learning Effectiveness Questionnaire

3. RESULT

The majority of lecturers, especially in the Informatics Engineering Study Program, chose the Google Classroom application as a face-to-face learning medium and the WhatsApp application as a medium for sharing tutorials and assignments. With the use of this application, it is necessary to adapt it to the needs of theoretical, practicum, theory and practicum courses as well as practical field work courses so that online learning activities can run effectively. To see the effectiveness of online lectures using Google Classroom and

WhatsApp media, researchers conducted a survey of 100 students and will be analyzed.

To find out the effectiveness of this Google classroom, a survey was conducted using a questionnaire in the form of a google form which consisted of three indicators. The indicators from the questionnaire consisted of four indicators, namely as follows; 1) student responses in the ease of accessing the google classroom application, 2) understanding of the material in learning using google classroom, 3) the effectiveness of using the google classroom application in online learning.

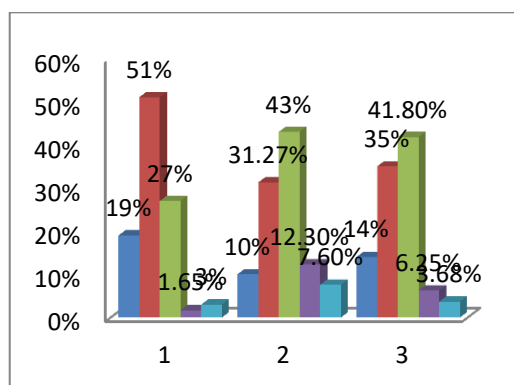From the survey that has been carried out, the results are shown in the form of a graph in Figure 1.

Figure 1. Graph of Online Learning Using Google Classroom

Based on Figure 1, it is known that there were 51% of students who agreed to the first indicator, the first indicator was stated to be quite effective. This means that students can access the Google Classroom application very easily. Then for the second indicator, as many as 43% of students were included in the category of quite agreeing on understanding the material in learning using Google Classroom. So it can be interpreted that the second indicator is categorized as quite effective. As for the third category, it is known that there were 41.80% of students who stated that they quite agreed and were declared quite effective, so this means that the use of Google Classroom in online learning is quite effective.

The results of the percentage test show that all indicators in online learning using Google Classroom are categorized as quite effective with an average result of 44.23%. This means that the use of Google Classroom is quite helpful for teachers and students in carrying out the online learning process. Because basically Google Classroom does have facilities that support online learning, such as class arrangements, discussion forums, pinning assignments by lecturers, collecting student assignments, creating folders for storing attendance and assignments, and using accounts that are already integrated with other Google accounts. , such as Gmail, Google Meet, Google Forms, Google Drive, and more. The results of the study showed that students got an average score of reasoning abilities greater than 75. Based on the one sample t-test, the sig. (2-tailed) = 0.005 <0.05 = ∝, so that it can be said that learning using Google Classroom is effective for students' mathematical reasoning abilities. In addition, another study entitled "Learners' Perceptions of the Blended Learning Method with Google Classroom" also states that through Google Classroom it makes the learning process interesting, effective, fosters motivation, fosters an attitude of independent, active, and creative learning (Endah Wulantina, 2019).

4. Conclusion

Based on the results of the research that has been done, the first indicator shows that 51% of students agree and are included in the effective category, this means that students can access Google Classroom very easily. Then in the second indicator there were 43% of students who stated that they quite agreed, so that Google Classroom was said to be quite effective as a learning medium so that students understood mathematics material. Furthermore, for the third indicator, 41.80% of students stated that they quite agreed about the effectiveness of using Google Classroom for online learning. After calculating the average of the three indicators, it was concluded that the use of Google Classroom in online learning in mathematics education study programs was categorized as quite effective, with an average yield of 44.23%. It can be concluded that the use of the Google Classroom application in online learning during the Covid-19 outbreak was quite good and effective, it's just that it would be better if it was combined with other online platforms.

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