Learning effectiveness improvement through mobile learning

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Abstract.
This research was conducted to identify the ulitization of mobile learning in making learning effective during the pandemic at SMK Nurul Jadid Paiton Probolinggo, East Java, Indonesia. This research used a qualitative method approach with case study. The results showed that; the use of mobile learning in making learning effective during this pandemic is carried out through several stages, that is; planning, which includes the preparation of materials, methods, media, and evaluation techniques that will be used in learning activities. Furthermore, the results of the planning are implemented in mobile learning activities and evaluated according to the planned expectations.

1. Introduction

Coronavirus (COVID-19) is an infectious disease caused by a new version of the coronavirus that was discovered at the end of 2019[1]. types of coronavirus are known to cause diseases that can cause severe symptoms such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). Coronavirus Disease 2019 (COVID-19) is a new type of disease that has never been previously identified in humans[2].

With the current development of the COVID-19 virus in Indonesia, it has a large enough impact on all levels of society. The impact of the COVID-19 virus occurs in various fields such as social, economic, political, tourism, and education[3]. In anticipating and reducing the number of coronavirus sufferers in Indonesia, the Government provides a policy by limiting activities outside the home, home school activities, working from home (WFH), even house worshiping activities[4] [5].

In the educational aspect, the impact of COVID-19 is very much felt by educational institutions [6], especially in educational and learning activities that require following government recommendations, namely using physical distancing, so that educational institutions, especially SMK Nurul Jadid Paiton Probolinggo, East Java Indonesia, must design their learning online. Learning activities are carried out in the homes of each student by utilizing technological devices [7] [8].

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The use of information and communication technology in education continues to develop in various strategies and patterns, which basically can be grouped into the e-Learning system as a form of learning that utilizes electronic devices and digital media, as well as mobile learning (m-learning) as a form of learning which specifically utilizes mobile communication devices and technologies [5].

Even during the pandemic period, learning must still be carried out in an orientation to effective learning . For this, the learning media is considered very important to be used by teachers and students to streamline the learning process through the use of mobile learning media, as a medium to motivate students to learn independently, creatively, effectively, and efficiently [6] [11].

The key to the effectiveness of the mobile learning-based online learning system at SMK Nurul Jadid is how teachers can stay creative in presenting online learning so that it is not boring and remains productive. In this case, teachers are required to utilize technology media with zoom presentations, assignments via google classroom, pre-test, and so on. Besides, learning carried out online also has its challenges. The location of the teacher and students who are separated when carrying out learning makes the teacher unable to directly monitor student activities during the teaching and learning process. There is no guarantee that students pay attention to the explanation given by the teacher.

Learning that uses technology and mobile devices are called mobile learning (m-learning)[7]. Mobile learning is understood as an alternative that learning services must be implemented anywhere and anytime[8]. It is felt that the use of Mobile Learning to support the teaching and learning process can increase flexibility in teaching and learning activities at SMK Nurul Jadid, Paiton, Probolinggo, East Java. The mobile learning model can focus attention on students (student-centered learning) through the teacher as a facilitator and providing learning media so that it can present learning content in the form of text, video, animation, and multimedia[9].

The advantages of mobile learning in terms of time and place provide opportunities for students to be able to access material and information anytime and everywhere[10], so it is very suitable to be applied in the pandemic season. Because one of the ways to break the chain of spreading Covid-19 is by limiting community interaction which is applied with the term physical distancing.

Departing from the above, this research focuses on the use of mobile learning in making learning effective during the Covid-19 pandemic at SMK Nurul Jadid Paiton Probolinggo, East Java, Indonesia. So that the use of mobile learning as an alternative learning model is expected to increase student interest and abilities, so that learning becomes something that is fun for them.

2. Mobile learning as a tool for effective learning

In this day and age, human daily activities cannot be separated from technology, starting from work, play, and even in education. Teknologi dapat memudahkan pekerjaan manusia, dan lebih efektif [11]. Thus, humans who live in this era must be able to apply the sophistication of this technology to make it easier in various sectors of life. The rapid development of e-learning has not killed the creation and innovation of the use of information technology and telecommunications in education[12], So that mobile learning can be used as an alternative to solve problems. The purpose of the mobile learning program is to simplify the process of teaching and learning activities for teachers and students wherever and whenever they want. Because mobile learning has practical characteristics and can be carried anywhere.

Learning media can be made and designed by current technological developments, including collaboration by using a smartphone or what is known as mobile learning (m-Learning)[13]. The purpose of developing mobile learning itself is the learning process all the time, students can be more active in the learning process, save time, because if it is applied in the learning process, students do not need to write a lot of assignments that will be collected back to the teacher, just send the assignment via the application. on a mobile phone which will indirectly improve the quality of the learning process itself.

The presence of mobile learning can support the concept of lifelong education (long-life education). The nature of open source-based mobile learning allows everyone to develop and use it according to their learning needs and wants[14]. Mobile learning is an alternative development of learning media. Besides, the development of mobile learning content/applications must be able to stimulate (stimulate) and trigger (grow) students to learn. Therefore, learning media must be used to improve the quality of teaching and learning. Thus the more attractive the learning media used by educators, the higher the level of learning motivation of students [15].

Effective learning is learning that provides learning opportunities on their own or for the widest possible activity for students to learn. Providing self-study opportunities and activities as widely as possible are expected to help students understand the concepts that are being studied [16]. Therefore, E-learning is an application created to overcome the limitations between educators and students, especially in terms of time and

space. With E-learning, teaching and learning activities do not have to be in one dimension of space and time, but learning can continue even though it is in a different place and time.

In this case, the effectiveness of learning can meet one of the education quality standards that refer to the National Education Standards (NES) which consists of eight standards, namely graduate competency standards, content standards, process standards, management standards [22], teachers and education staff standards, evaluation standards, the standard of financing, the standard of facilities and infrastructure [17]. It becomes a reference for every activity in the process of teaching and learning activities to achieve the goals of education or it can also be interpreted as the accuracy in managing a situation.

Several research results indicate that learning using online media has a positive influence in improving the learning process [24]. This positive influence is not only obtained by students but also on the teacher [18]. Effective learning is a combination composed of human beings, materials, facilities, equipment, and procedures directed to change student behavior in a positive direction and better per the potential and differences that students have to achieve predetermined learning goals. The use of mobile learning is a new trend in learning, which forms a learning communication paradigm that can be done anywhere and anytime [19].

3. Research Method

This research uses a qualitative approach with case study. The researcher collected some information obtained from interviews with several informants who had been determined, namely the principal, deputy principal, teachers, and students at SMK Nurul Jadid Paiton Probolinggo, East Java, Indonesia. Meanwhile, observation and documentation are carried out on learning activities carried out by the teacher by utilizing mobile learning. Data analysis was performed by presenting data, reducing data, and drawing conclusions.

4. Result and Discussion

The results showed that the use of mobile learning in making learning effectively during the Covid-19 pandemic at SMK Nurul Jadid Paiton Probolinggo, East Java Indonesia as follows:

Making lesson plans. Planning for mobile learning at SMK Nurul Jadid Paiton Probolinggo, East Java, Indonesia, was carried out because of the COVID-19 [8] which required students of SMK Nurul Jadid Paiton Probolinggo to carry out learning activities at their respective homes. In this case, the principal instructed the teacher to inform the students of SMK Nurul Jadid Paiton Probolinggo to carry out mobile learning activities.

Preparations made by the principal and teachers in the learning process during this pandemic, namely an internet connection that must be as stable, and the teacher must have prepared learning material according to the class and direction of each student. Furthermore, the mobile learning application used during online learning is using the WhatsApp application and zoom which is considered very effective for carrying out online learning activities.

Furthermore, the SMK Nurul Jadid Paiton Probolinggo institution provides all students with internet quota during this mobile learning activity, to minimize students who are unable so that all Nurul Jadid SMK students can take part in the learning process using mobile learning.

Implementation of learning. In implementing mobile learning at SMK Nurul Jadid Paiton Probolinggo, teachers carry out various learning activities, namely;

1) the initial mobile learning activities, namely: the teacher prepares the learning material which will be explained through the percentage method in the zoom application, then the teacher conditions the students to be ready for the lesson. 2) the teacher explains in general about the learning material according to each class and students are asked to listen and understand the material presented by the teacher. then the teacher appoints the students to practice or explain again what has been explained by the teacher, then if there are things that are not understood, students can ask the teacher. 3) and finally, namely: the teacher and the students conclude the material that has been discussed, the teacher provides instructions for students to do the assignments given to students at home using the WhatsApp application with a predetermined time limit, then the teacher closes the class/learning and say the final greetings.

Learning evaluation. The learning evaluation activity of SMK Nurul Jadid Paiton Probolinggo was carried out using several stages, one of which was; self-assessment or what is commonly called an independent test that must be carried out by students individually which are carried out after learning is complete. This technique is used to determine the results and effectiveness of mobile learning activities that have been carried out personally by the teacher. Students are given questions, either multiple choices or essays, which are taken from the material previously explained in each lesson.

Next is an assessment of learning outcomes in general, namely an assessment of student learning outcomes after they have completed one or more core competencies in the curriculum. This test is in the form of a structured weekly test or a midterm assessment to measure the success of learning based on the minimum completeness criteria (KKM) at SMK Nurul Jadid Paiton Probolinggo.

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5. Conclusion

Based on the results of the research above, it can be concluded that the use of mobile learning in making learning effective during the pandemic has greatly helped the teaching and learning process of students. Which is a suggestion from the government not to carry out activities in groups, to break the chain of spreading Covid-19. The results showed that the use of mobile learning in the learning process of SMK Nurul Jadid students can be said to be effective because learning during this pandemic was still carried out and students did not miss lessons.

The learning evaluation activity of SMK Nurul Jadid Paiton Probolinggo is carried out using the self-assessment stage or what is commonly called an independent test which must be carried out by students individually. Which is carried out after learning is complete, this technique is used to determine the results and effectiveness of mobile learning. Assessment in general, namely an assessment of student learning outcomes after they have completed one or more core competencies in the curriculum. This test is in the form of a structured weekly test or a midterm assessment to measure the success of learning based on the minimum completeness criteria (MCC) at SMK Nurul Jadid Paiton Probolinggo.

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