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The role of the ICT teacher in e-learning-based teaching

Fetri Sukisworo¹, Marsono², Widiyanti³

^{1,2,3} Universitas Negeri Malang

turmudzi@stieken.ac.id

Abstract. The Covid-19 pandemic has had a fundamental impact on various aspects of humanity. Starting from attacking health, this pandemic has hit the education sector which is quite influential on human life. Enforcement of regulations while maintaining a distance of about one meter has implications for the education process in Indonesia. Therefore, the educational element must encourage the distance learning process. The term arises because it sees distance learning as an alternative to face-to-face methods so that education can always be held without controversy under any circumstances. This activity raises the use of technology that is used as teaching material for distance education. Distance learning techniques allow users to take advantage of technologies such as online learning. Teachers will be required to abandon using traditional techniques whose methods are somewhat indifferent. Online learning creates internet connectivity and the use of information technology in helping the teaching and learning process that can be applied in Google Classroom. In this article, researchers focus on using Google Classroom in the context of implementing distance learning during the Covid-19 pandemic.

Keywords. Teacher, E-Learning, Google Classroom

Preliminary

In mid-March 2020, the world health organization or the World Health Organization (WHO) declared the Covid-19 coronavirus outbreak a global pandemic (Aji, 2020), which must be considered by various parties in all countries to prevent its wider spread. The Indonesian government has appealed to the public to carry out restrictions, both physical distance and also an appeal to work from home and avoid crowds. This appeal cannot be separated from its application to teaching and learning activities or in the education system. To prevent this pandemic, governments and health officials around the world have issued stay-at-home instructions to millions of people, while social distancing – the act of placing no less than 2 meters of physical space between people – is also a key measure in limiting the spread of Covid-19.

All this to say that this pandemic - mainly because of its infectivity and the little we know about it - has been enforced changing billions of lives. Education is one of the areas experiencing major challenges, to address these challenges, the United Nations Educational, Scientific and Cultural Organization (UNESCO) provides a detailed list of digital platforms, applications, and tools to help parents and educators facilitate effective and safe learning and teaching (UNESCO.org, 2020).

Education systems around the world have been hit by the Covid-19 virus pandemic, which has resulted in the closure of all educational institutions, especially schools and

universities. Most governments around the world have temporarily closed educational institutions to curb the spread of Covid19, requiring all elements of education to adapt and continue teaching and learning. The distance restriction policy is set by the Indonesian government using the Distance Learning System (PJJ), which uses online learning on various appropriate platforms. This is an effective solution to revitalize classrooms for learning during school holidays to reduce the Covid19 epidemic (Irhandayaningsih, 2020; WHO, 2020).

Some learning activities can be used by various platforms in various interactions, information, and communication. Some of them are via Whatsapp, via Zoom video conference calls, or other online learning platforms (Wingo et al., 2017). There are so many virtual digital classes that are targeted and used in the teaching and learning process such as Rumah Belajar, Ruang Guru, Microsoft Teams, Edmodo, Kahoot, and one of the most popular learning platforms today is Google Classroom (Danny, 2017).

Google Classroom is a Learning Management System (LMS) through a free web service developed by Google for schools that aims at implementing distance learning to simplify the creation, distribution, and assessment of assignments, in addition to delivering learning materials (Mulyatiningsih, 2010; Teo & Zhou, 2014). The main goal of Google Classroom is to simplify the process of sharing files between teachers and students, in a global pandemic enabling teachers to create online classrooms where they can manage all the documents their students need to have and work on. In Google Classroom, teachers freely and easily share scientific assessments and provide self-assessments for students (Irhandayaningsih, 2020). Google Classroom also minimizes the costs incurred due to the use of more affordable stationery and other materials and can also minimize the energy time-released (Daryanto, 2013).

Effectiveness refers to the results achieved by students and perceived by teachers in providing learning so that learning programs and their benefits for the community can be achieved, and efficiency can be in the form of saving the use of costs, energy, time, and other resources by taking advantage of the advantages of existing things. , because the application is very easy to use, has a large number of users and the Google Classroom application has many other advantages over other class applications (Rohman et al., 2020). This application can be said to be able to shift the role of live teachers who are replaced by technology. The teacher who plays the most role in the use of this application is the ICT teacher because the mastery of information technology for ICT teachers must be more advanced than other subject teachers. Lack of ability of teachers to integrate ICT into educational practice, because teachers do not have the knowledge and skills to use computers and are not interested in changing and integrating with computer learning in the classroom.

Literature Review

Educators and Educator Competencies

Educators and education personnel are required by Law Number 20 of 2003 to create a comfortable learning environment, behave well and professionally, and have good role models. Additional abilities that must be possessed by teachers, such as educational, personal, social, and professional abilities, are regulated in Law Number 14 of 2005. Learning then follows the lessons made, assessment of learning outcomes, student guidance, and student training, as well as the implementation of additional tasks (Aji, 2020). The teacher's task is not maximal if it is done alone without following the applicable curriculum rules. As technology develops, so does the curriculum (Sanchez-Gordon & Lujan-Mora, 2018).

Learning Innovation

Learning implementation innovation is part of learning development (Gupta & Pathania, 2021). Learning innovation is an effort that is focused on improving the quality of learning so that learning activities can help improve the quality of learning for students (Susanti & Arista, 2019). In addition, it is necessary to create learning innovations so that students can learn well and teachers can teach well. (Gupta & Pathania, 2021). The learning model is designed to be used in developing curriculum, making learning materials, and guiding learning activities inside and outside the classroom (Mustari, 2015). The curriculum must be able to be understood by all teachers so that it can be applied inside and outside the classroom by using various innovative learning methods.

Online Learning

During the pandemic, online learning is more familiar with the word e-learning. In other words, it is a teaching and learning process that takes place online at home rather than face to face. (Ambarita, 2016). A variety of applications are used, including email, Word documents, WhatsApp, Google Classroom, Facebook, Zoom Meeting Cloud, and more. To avoid copying and pasting, many teachers require their children to consciously teach them through video recordings and video calls. Learn to handwrite and send photos to teachers of writing. The online learning process was first realized when an electronic-based learning model (e-learning) was initiated by the University of Illinois through computer-based learning (Aji, 2020). By using online learning, students can learn more broadly and diversely. By studying online, students can take advantage of the features provided by the application. Students can study anytime, anywhere at the specified time. Today's online learning materials are not only verbal but vary from visual, audio, and movement (Lassoued et al., 2020). To be able to provide quality learning, the use of information and communication technology in the education and learning process needs to be properly controlled. (Zahroh, 2015). Therefore, learning methods, communication, and interaction between students and teachers need to be improved collectively so that learning resources and discussion activities can be shared without being disturbed by space and time. More and more students feel comfortable using technology to expand their knowledge through the application of the learning process. In essence, learning through online media is very different from conventional learning. Online or online learning uses the role of technology in its teaching system (Dewi, 2020; Luongo, 2018). Online or online learning relies on computers or mobile phones as screen-to-screen media. This learning model combines abilities with learning techniques (Simmons, 2002). This online learning has certain characteristics. The characteristics of online learning are as follows: (a) The use of learning plans which are self-study materials and can be viewed online at any time through the website, (b) Electronic technology services, and (c) Use of networked computers.

Google Classroom

The use of Google Classroom as a tool to facilitate and accelerate learning activities with an online system (Mahardini, 2020; Phan, 2015). Google Classroom reaches all communication devices such as laptops and smartphones with an internet connection. Other applications that can be used to perform tasks such as Duolingo, Workspace, and TED. The use of applications to facilitate online learning to do assignments that are also online. Google Classroom is classified as the most widely used learning application in education (Phan, 2015; Sinclair, 1995). This technology can be used in e-learning or online learning methods. Students who use this learning application will have the opportunity to study together in a class or room that has been set by the teacher. Students are also allowed to interact between friends or directly

with the teacher even through virtual media. Google Classroom is considered to have a positive effect because it can be used as a new option for the development of science (Mahardini, 2020). Google Classroom users can make the most of their Internet tools and equipment and use an endless variety of sources of information to choose which sources to use. Applying this technology can help students become more proficient and enhance learning.

Research Methods

In this study, qualitative methods are used to follow various theoretical studies compared to the situation in the field and use the nature of the problem-solving flow to approach the focus of the problem under study. The main phenomenon in this research is the role of ICT guidance teachers in online learning which is then examined for its implementation using qualitative descriptive methods; In other words, the phenomenon is attempted to be described by the researcher, then the findings of the phenomenon in the field are associated with various related theories to conclude the results. The type of research used in this research is case study research. The location of the research was carried out in selected secondary schools including SMA Negeri 1 Boyolangu, SMA Negeri 1 Kedungwaru, SMA Negeri 1 Rejotangan, Tulungagung Regency. The three schools were chosen because they have implemented ICT service guidance according to the implementation of the 2013 Curriculum.

Research Results and Discussion

Utilization of Learning Technology

Interview Results with Teachers *"My preparation for online learning as a result of the Covid-19 is not optimal. Because I have to re-disassemble the lesson plans that I made earlier to become an online learning plan"* (Teacher Respondent).

"The impact is very big for us (teachers). We are required to be able to do online learning, even though some of us are foreign to information technology so that the learning process is not optimal" (Teacher Respondent).

"This Covid-19 pandemic actually does not only have a negative impact, but also has a positive impact, where there are demands for teachers to be even more creative in conveying learning." (Teacher's Respondent).

Based on the results of this study, both through interviews and questionnaires that have been conducted, it can be seen that some teachers consider using technology to facilitate the learning process in the current pandemic era, but also not a few teachers who think that the use of technology in terms of developing student teaching materials still feels good. difficult, especially in terms of presenting interesting and not boring material on video-based teaching materials.

Training in the manufacture of interactive teaching materials through videos so that learning materials can be easily understood by students by considering when the implementation of learning needs to be carried out by teachers. Other obstacles are also felt by the teachers, including the limited facilities they have that do not support the teachers in the process of teaching and learning activities. The required facilities are cameras, internet networks, laptops, and other supporting networks needed in making teaching materials more interesting and interactive.

The most pronounced difficulty is for teachers in rural areas who are less skilled in utilizing technology and the lack of existing network signals are also factors that strongly support teacher competence in utilizing technology, especially in rural areas. Teacher competence in using technology in the implementation of this online method greatly affects the results and quality of learning received by students, thus participating in online learning training

is very necessary for preparation before starting online learning. The teachers certainly really feel the impact of what was originally learning done offline, now have to move to online learning. This of course makes teachers feel bored because they are not used to the conditions and situations that require teaching and learning activities from home. Conditions like this allow social distancing and meetings between other teachers so that teachers don't have entertainment to just unwind after doing learning activities. The school should pay more attention to this by motivating the teachers. Online learning will also be disrupted if there is no internet quota connected to the device, the need for this internet quota will affect the increase in spending that must be felt by teachers.

A large enough internet quota will be needed for online learning for one semester, in addition to the internet quota for learning, other communication costs such as credit are also needed to maintain the relationship between teachers and parents and teachers and principals. This communication must continue so that the online learning process can run well. Another expense that needs to be given is the very long time required by the teacher in the online learning process. (Zahroh, 2015) also suggests research that is in line with the facts in this study, where an important variable in achieving effective learning goals and learning interactions that connect directly between teachers and students is communication. Learning activities will be disrupted if communication between teachers and students is hampered and experiences inequalities. This inequality in communication between teachers and students will trigger losses and gains for one party caused by the covid-19 virus outbreak, where the quality of communication will decrease so that learning activities are not achieved optimally.

Effective communication is formed from the feedback given by the students after receiving the material presented by the teachers and the students understand the meaning of the material that has been conveyed by the teachers through good communication (Komalasari, 2020). Three main elements need to be done in achieving effective learning. First, the required element is a communicator, second, the message or content of the statement, and third, a communication partner or partner. These three elements are very important to be applied to learning activities, especially in secondary schools. Learning interactions should occur more inspiring, building ideas, meaningful and fun because at this time children prefer to explore and actively seek new experiences in the surrounding environment (Liu et al., 2019).

Communication barriers that occur in learning activities during this pandemic are a disruption to the learning climate of students in high schools which will affect the overall condition of student development. The surrounding environment, parenting patterns, and parental education are also influential, where parents are needed in helping students work on assignments at home as development activities. The existence of additional expenditures to purchase internet quota which burdens the economic condition of parents who are in the area so that it will be a factor inhibiting the establishment of good communication between teachers and students. Online technology that requires a quota and internet network connection will be an obstacle for parents to have additional costs to buy internet quota and will burden expenses.

Electronic Learning (E-Learning)

This online learning is aimed at a learning model that is often referred to as e-learning. E-learning makes face-to-face learning instantly turn into the same face-to-face learning using technology and the internet. The technology will connect several networks that can connect information from one user to another. Technology has a common application system called e-learning. E-learning helps students convey methodological knowledge online and creates an additional atmosphere so they don't get bored. E-learning is a learning activity that changes from a conventional system to a modern system.

The use of Google Classroom for e-learning has disadvantages such as costs when buying quota, the inadequate signal network that prevents students from running video conferencing, and resources large enough to fill mobile phone memory. This reason can be justified because current needs are limited by circumstances. Developing teaching materials in research requires informative and broad media and learning resources. Students can use e-learning to increase students' sources of information about the development of learning materials provided by the teacher. With e-learning, users consisting of students and teachers can get information in various formats, including written and unwritten information, verbal sources, and visible performance results.

Learning Innovation with Google Classroom

Since the onset of the pandemic emergency, opportunities to use technology-related teacher skills have been used. Innovation teachers are teachers who can offer new colors through the teaching and learning process about educational goals. Can't run if it doesn't include tech support. Technological developments provide learning opportunities to apply online learning in e-learning. Online face-to-face learning process. Some of the benefits of e-learning in education are:

- a. Too many sources and too big
- b. Improved access to learning
- c. Improving the quality of learning
- d. Allows users to quickly adopt new information and new programs.
- e. The learning process is more flexible and not bound by space or time.

The e-learning application can be seen from the simplicity of an application called Google Classroom. Because the look and feel of Google Classroom are easy to understand, use, learn, and access, Google Classroom is considered an effective way to learn computer and networking learning materials for SMK students. There are still obstacles in using Google Classroom from the start, and students do not understand the material shared by the teacher, especially how to practice. So this learning becomes less friendly. This happens when teaching materials, especially video materials, are distributed by the classroom teacher. Thus, the use of Google Classroom can ease the task of teachers in carrying out online learning activities. Applications that are relatively cheap and easy to use make it easier for teachers to make online teaching materials and also provide an assessment of student assignments. However, the period of this learning model that runs in the pandemic era has made teachers not equipped with competencies and readiness to use online learning media. Teacher skills are also required in making teaching materials that are interesting and easy to understand, even though face-to-face constraints.

Conclusion

Teachers can use the Google Classroom application and other online learning media to develop materials and apply them in schools. This online media training and learning aim to influence school development and facilitate the tasks of teachers and staff. Teachers and students can use Google Classroom to support the teaching and learning process during the Covid-19 pandemic.

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