Analysis of the Effectiveness of Online Learning in the Middle of the Covid-19 Outbreak

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Abstract: The Covid-19 pandemic has disrupted the conventional learning process, thus affecting the world of education in Indonesia, including the implementation of lectures at the Biology Education Study Program at UIN Sunan Kalijaga Yogyakarta, so a solution is needed to answer these problems. Online learning is an alternative that can overcome this problem in an effort to reduce the spread of Covid-19 in the campus environment. The purpose of this study was to obtain an overview of online learning in the Biology Education Study Program at UIN Sunan Kalijaga Yogyakarta during the Covid-19 pandemic. Data were collected by interview via zoom cloud meeting. Data analysis was performed using interactive analysis techniques Miles & Huberman. The results showed that: (1) online learning has flexibility in its implementation and is able to encourage independent learning and motivation to be more active in learning; (2) students already have the basic facilities needed to take part in online learning; and (3) distance learning encourages the emergence of social distancing behavior and minimizes the appearance of student crowds so that it is considered to reduce the potential for the spread of Covid-19 in tertiary institutions. Weak supervision of students, lack of strong signals in remote areas, and high quota fees are some of the challenges in online learning. Increasing independent learning, interest and motivation, courage to express ideas and questions are other advantages of online learning.

Keywords: Distance learning, Biology Learning, Covid-19 Pandemic, Social distancing

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INTRODUCTION

The outbreak of the Covid-19 case in Indonesia has had a huge impact, both in terms of the economy, industry and education. This virus outbreak has spread very quickly to various countries in the world. The covid-19 pandemic has brought big changes to the world, including Indonesia. The spread of the corona virus is the cause of the highest death rate for now (Rahcmat, 2020). The corona virus which is spreading every day has made the government decide several new regulations and policies to the public. These policies include the social distancing movement, the work from home movement, online learning, and the PSBB (large-scale social restrictions) which are currently being promoted. Various countries have implemented social distancing (social distancing) which is designed to reduce interactions between people in the wider community, where individuals may be infected but have not been identified so that they have not been isolated (Darmalaksana, 2020). This has a major impact on all sectors of life. This has resulted in the closure of many educational facilities, shopping centers, places of worship and so on (Hasanah, 2020).

One of the sectors affected by the Covid-19 pandemic is the education sector which causes so many routine physical activities, such as face-to-face meetings in class, the process of academic guidance,

formal meetings in seminar forums and so on to be undisturbed. However, these routine activities were hampered because to minimize the spread of Covid-19, the government had implemented a physical distancing policy. Seeing these various facts, the application of online learning methods (e-learning) is the best choice for the world of education. Various streams of education are currently starting to take advantage of information technology and implement online learning systems to support learning activities.

So that it causes a combination of the use of traditional (offline) and online learning resources is a democratic decision to bridge the rapid flow of electronic learning resources (e-learning) and the difficulty of breaking away from the use of learning resources used in classrooms. That is, e-learning, no matter how sophisticated the technology used, has not been able to replace the implementation of face-to-face learning because conventional face-to-face interaction methods are still much more effective than online learning or e-learning. In addition, limitations in Internet accessibility, hardware (hardware) and software (software), as well as financing often become obstacles in maximizing online learning resources (Yaumi, 2018).

Not a few universities quickly responded to government instructions, including the University of Indonesia (UI) by issuing a letter of instruction on preventing the spread of the corona virus diesease

(Covid-19) within the University of Indonesia. In the circular there are 10 points and one of them is a recommendation to implement online learning (Yandwiputra, 2020). There are around 65 universities in Indonesia that have implemented online learning in anticipation of the spread of Covid-19 (CNNIndonesia, 2020). Jamaluddin, D., Ratnasih, T., Gunawan, H., & Paujiah, E. (2020) stated that online learning has its own strengths, challenges and obstacles.

The form of lectures that can be used as a solution during the Covid-19 pandemic is online learning. According to Moore, Dickson-Deane, & Galyen (2011) Online learning is learning that uses internet networks with accessibility, connectivity, flexibility, and the ability to generate various types of learning interactions. Research stated by Zhang et al., (2004) shows that the use of the internet and multimedia technology is able to change the way of conveying knowledge and can be an alternative to learning carried out in traditional classrooms. Online learning is learning that is able to bring together students and lecturers to carry out learning interactions with the help of the internet (Kuntarto, E. (2017).

Various media can also be used to support the implementation of online learning. For example, virtual classes use Google Classroom, Edmodo, and Schoology services (Enriquez, 2014; Sicat, 2015; Iftakhar, 2016), and instant messaging applications such as WhatsApp (So, 2016). Online learning can even be done through social media such as Facebook and Instagram (Kumar & Nanda, 2018). Online learning connects students with learning resources (databases, experts / instructors, libraries) that are physically separated or even far apart but can communicate, interact or collaborate (directly / synchronously and indirectly / asynchronously).

Online learning is a form of distance learning that utilizes telecommunications and information technology, for example the internet, CD-ROOM (Molinda, 2005). The purpose of this study was to obtain an overview of online learning in the biology education program of the Faculty of Teacher Training and Education, Sunan Kalijaga State Islamic University, Yogyakarta during the Covid-19 pandemic.

MATERIALS AND METHODS

This type of research is qualitative research. The purpose of this study was to describe online learning held in the Biology Education Study Program, Faculty of Tarbiyah and Teacher Training, UIN Sunan Kalijaga Yogyakarta as an effort to suppress the chain of Covid-19 spread in the college environment. Online learning referred to in this study is learning that uses learning media that can be accessed using internet services. The research was conducted by first conducting a survey to students regarding the application of online learning. The survey is distributed using a google form given to students via WhatsApp messages. There are 96 subjects who have responded to the distributed survey. The survey results were then grouped into three categories of student responses: (1) Agree with the application of online learning; (2) Disagree with the application of online learning; (3) Doubt about the implementation of online learning.

The research subjects were students of the Biology Education Study Program of the FITK UIN Sunan Kalijaga Yogyakarta who had implemented online learning, and were grouped based on the response of the research subject. There were 21 research subjects, 7 students of class 2017, 7 students of class 2018, and 7 students of class 2019, 5 male students and 15 female students. The data was collected through telephone interviews and / or zoom cloud meetings. The aspects that are asked in the interview are: (1) the facilities and infrastructure owned by students to carry out online learning; (2) Student responses regarding the effectiveness of online learning; (3) Implementation of online learning in breaking the chain of Covid-19 spread in tertiary institutions. Analysis of the research data was carried out using the analysis model of Miles & Huberman (1994) which consists of three stages, namely data reduction, data display, and conclusion drawing and verification.

Analysis of research data, the data reduction stage is the stage of collecting all the information needed from the interview results and then grouping the data. The data display stage is the exposure of data that is needed in research and that does not need to be discarded. The withdrawal and conclusion verification stage is the stage of interpreting research data to draw conclusions based on the phenomena obtained (Miles, M. B., & Huberman, M., 1994).

RESULTS AND DISCUSSION

E- learning is an internet-based learning method or online learning that all students and students in Indonesia and even all regions of the world who are exposed to the Covid-19 pandemic must undergo face-to-face learning which are constrained due to social distancing or not crowding to help prevent the spread of Covid-19. Basically, e-learning has two types, namely synchronous and asynchronous. Synchronous means at the same time. The learning process occurs at the same time between educators and students. This allows direct interaction between educators and students online. In its implementation, synchronous training requires

educators and students to access the internet simultaneously.

Educators provide learning material in the form of papers or presentation slides and students can listen to presentations directly via the internet. Students can also ask questions or comments directly or via the chat window. Synchronous training is a description of a real class, but is virtual (virtual) and all students are connected via the internet. Synchronous training is often referred to as virtual classroom (Hartanto, 2016).

The combination of the use of traditional (offline) and online learning resources is a democratic decision to bridge the rapid distribution of electronic learning resources (e-learning) and the difficulty of breaking away from the use of learning resources used in classrooms. That is, e-learning, no matter how sophisticated the technology used, has not been able to replace the implementation of face-to-face learning because the conventional face-to-face interaction method is still much more effective than online learning or e-learning (Yaumi, 2018).

Adequate Facilities to Carry out Online Learning

The increase in internet use in Indonesia is influenced by developments in information and communication technology (Rahadian, D., 2017). In 2018, 62.41% of Indonesians had cell phones and 20.05% of households had a computer at home. This data is relevant to the research results which show that even though there are students who do not have laptops, almost all students already have smartphones.

The use of smartphones and laptops in online learning can improve student learning outcomes (Anggrawan, A., 2019). Pangondian, R. A., Santosa, P. I., & Nugroho, E. (2019) stated that there are many advantages to the use of information and communication technology in implementing online learning, including that it is not bound by space and time. the challenge of online learning is the availability of internet services. Some students access the internet using cellular services, and a small proportion use WiFi services. When the online learning policy was implemented at UIN Sunan Kalijaga Yogyakarta, students returned to their hometowns. They experience cellular signal difficulties when in their respective areas, even if there is a signal they get is very weak. This is a challenge in itself in the application of online learning at UIN Sunan Kalijaga Yogyakarta . Online learning has weaknesses when internet services are weak, and lecturer instructions are poorly understood by students (Astuti, P., & Febrian, F., 2019).

Although the use of devices can support online learning, there are negative impacts that need attention and anticipated, namely excessive use of devices. They admit that in addition to learning, students also use devices for social media and watching YouTube. Social media has entered the realm of early adult life (Lau, 2017). Students access social media for self-expression, build networks of friends and opinions (Kim, Wang, & Oh, 2016). Unfortunately, many people are addicted to devices as a result of using them excessively.

The Effectiveness of Online Learning

Online learning carried out at the Biology Education Study Program of the FITK UIN Sunan Kalijaga Yogyakarta in an effort to break the chain of the spread of Covid-19 by using learning applications that can be accessed via the internet network. Overall, students are satisfied with flexible learning. With online learning, students are not constrained by time and place where they can attend lectures from their own homes or from anywhere. With online learning, lecturers provide lectures through virtual classes that can be accessed anywhere and anytime, regardless of time and space. This condition allows students to freely choose which courses to take and which assignments to do first. Research by Sun et al., (2008) informs that the flexibility of time, learning methods, and place in online learning has an effect on student satisfaction with learning.

Online learning also has the advantage of being able to foster self-regulated learning. The use of online applications is able to increase learning independence (Oknisih, N., & Suyoto, S., 2019). Kuo et al., (2014) stated that online learning is more student-centered which causes them to be able to bring up responsibility and autonomy in learning (learning autonomy). Learning online requires students to prepare their own learning, evaluate, organize and simultaneously maintain motivation in learning.

It was found that the unique research results from this study were that students felt more comfortable in putting forward ideas and questions in online learning. Taking part in learning from home made them less likely to feel the psychological pressure from the peers that they usually experience when taking face-to-face learning. The absence of the lecturer in person or physically also causes students to feel comfortable in expressing ideas. The absence of physical barriers as well as space and time limitations cause students to be more comfortable in communicating (Sun et al., 2008). Furthermore, online learning eliminates clumsiness which in turn makes students dare to express questions and express ideas and ideas freely.

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With various efforts to suppress the chain of spreading Covid-19 in the campus environment, UIN Sunan Kalijaga applies online learning rules. Lectures are conducted using the internet, making it easier for lecturers and students to interact online. Lecturers can make teaching materials that can be accessed by students anywhere and anytime. According to Bell et al., (2017) online learning allows interaction via the web even though they are in far and different places (Arzayeva, et al., 2015). The existence of lecturers and students who are in different places during learning eliminates physical contact and is able to encourage social distancing behavior. According to Stein (2020) conducting social distancing as a good solution to prevent the spread of Covid-19. The implementation of online learning allows students and lecturers to carry out lectures from their respective homes. Students can access lecture materials and send assignments given by the lecturer without having to meet physically on campus. This action can reduce the emergence of crowds on campus as happened in face-to-face lectures. WHO (2020) recommends that maintaining distance can prevent transmission of Covid-19.

Unfortunately, in areas that are remote and do not have good internet access, the implementation of online learning shows a different trend. In dealing with this condition, students who live in areas with weak internet signals will look for certain areas such as hills and sub-districts to be reached by internet access. So that the effectiveness of learning or not can be identified through the behaviors between learners and learners. How do learners respond to what the teacher says.

CONCLUSIONS

In order to break the chain of the spread of the Covid-19 outbreak in higher education, online learning is an effective solution that allows lecturers and students to interact in virtual classes that can be accessed anywhere and anytime Online learning can make students learn independently and increase motivation. However, there are weaknesses that student online learning is not well supervised during the online learning process. Weak internet signal and high quota fees are challenges for online learning. However, online learning can reduce the spread of Covid-19 in universities. Online learning will continue to be carried out considering the incomplete Covid-19 outbreak in Indonesia, it helps prevent the spread of Covid-19 so that until now it has not been determined when to return to school for face-to-face learning. Lack of facilities and infrastructure which is influenced by economic factors and technological unpreparedness are also an obstacle in taking place online learning activities. So that the learning outcomes provided by the teacher are not 100% smooth or effective.

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