How E-Learning Deals with Higher Education during the Pandemic in Indonesia

Andhi Dwi Nugroho

English Education Study Program, Faculty of Teacher Training and Education, Universitas Sarjanawiyata Tamansiswa, Yogyakarta, Indonesia
Jl. Batikan UH-III/1043 Yogyakarta 55167
andhidn@ustjogja.ac.id

Abstract: The purpose of this study is to investigate the obstacles of e-learning, especially for students, and to find out students' perception in facing e-learning during coronavirus disease pandemic (Covid-19). The rapid spread of coronavirus urges universities in world-wide scale to do e-learning, including universities in Indonesia. This study uses online interviews and questionnaires to obtain the data, and descriptive qualitative method is used to analyse the data. The respondents in this study are 126 students with different majors from 21 universities in all across Indonesia, consisting of 6 state universities and 15 private ones. The results of the study reveal that e-learning has been carried out by universities in the country. It also shows there are several aspects such as the availability of online learning facilities, the use of facilities, learning processes, and some more points that need to reconsider or to optimize conducting the e-learning for the long term

INTRODUCTION

The beginning of 2020 which was a year that had a lot of controversies in the world, one of which was the spread of the coronavirus or Covid-19 disease. Coronavirus leads to a lethal disease with symptoms similar to flu, coughs, and colds. This virus caused the entire country to suffer enormous losses from various fields, economy, business, health, and education. As a result of the spread of the corona virus, the government of each country has implemented a lockdown in their respective countries, including Indonesia.

Several countries with a large population have gone into lockdown with various time frame starting early March. The President of the Republic of Indonesia states that the pandemic has entered Indonesian territory and was advised to be vigilant and active at home. This appeal made by the government has an impact on many things, employment, business, economy, education, and more. After this appeal issued, companies and schools carried out activities at home, one of which is online learning. All activities can only be done at home, including the learning system. The learning system previously conducted at school or offline is now done at home through the e-learning online system.

Based on the speech of the Minister of Education and Culture of the Republic of Indonesia, e learning requires an independent learning method, where the students learn to improve their knowledge and skills with the help of technology. Therefore, it is expected the method will be useful and helpful for education in Indonesia. In this dire situation of pandemic Covid-19, the country has begun to make any changes to every activity in

the process of learning. Every activity which previously carried out offline and face-to-face activity has turned into online system learning activity. Sudden changes by using this new online system require people to be ready in using technology. Almost all sectors have experienced this system change, including the education system (Porter, 2013). During the pandemic of Covid-19, Indonesia quickly establishes a learning process by using distance learning methods (e-learning). E-learning involves a distance learning method using internet-based technology and several learning applications. As a study form Mulyanti et al. (2020) proposes that there are several provisions must be repeated in this learning process namely: learning from home done by distance or online learning will give the students meaningful experiences without being required to be promoted or graduated ; learning from home can be focused on life skill education and; activities and assignments of learning from home can be vary between the students, based on their interest and condition, including offline learning facilities done at home.

The E-learning has the ability to offer and share any materials in any formats such as e-mail, video, audio, pdf and word documents (Raheem, 2020). Online learning (e-learning) involves technology and communication without face to face directly. Raheem (2020) states that e-learning requires technology support used for the learning process using computers and internet and functions as a knowledge transfer process. E-learning using computers and internet technology provides broad solutions, eases learning activities and improves performance (Ghirardin, 2011). The online learning process that is carried out uses the internet and computer technology. This learning activity usually optimizes applications such as Zoom or Google Classroom or through content such as YouTube, or TV. E-learning become an important word in the education because education using the technology is currently needed because of the rapid development and students must work with technology especially for the skill development.

The Minister of Education and Culture of the Republic of Indonesia once said that the education system in Indonesia will learn to use an online system, and know that this statement is being made, nearly 80% of education is currently using the online learning system. Although the presentation of the use of e-learning is not quite 100%, at least it has shown the progress and the development. In Indonesia, the students learn to develop ideas and innovations and start to think creatively,critically, and skilfully. In this online learning, students become independent and try to be more creative in order to be able to understand the lessons taught by the teacher online, starting from watching YouTube videos or opening several auxiliary applications to improve their understanding (Iftakhar, 2016).

During the pandemic, the learning process activities carried out at schools are temporarily replaced by e-learning system. A study from Sintema (2020) emphasizes that the learning model carried out using e-leaning is distance learning through a network system prepared by the campus or using online applications such as Google Meet, Zoom, Skype, and many more. In other word, e-learning can optimize the role of schools as a means of education during the situation of pandemic COVID-19. Many researches on the development of education during the Covid-19 pandemic have probably been done a lot. Mulyanti et al. (2020) analysed the distance learning in vocational high school during the covid-19 pandemic dealing with how online learning is carried out, how is the use of facilities. Thus, this study attempts to reveal how e-learning has been carried out by universities in the country. It is expected to show results on several aspects such as the availability of online learning facilities, the use of facilities, learning processes.

METHOD

This study used descriptive qualitative method as the research method (Johnson & Christensen, 2012). The sample size was determined based on the need to achieve depth and wealth of description. Zapalska & Brozik (2020) states the sample size is not a matter of representative opinions and views, but rather a matter of wealth of information (Garrison, 2011). This is based on the data obtained by researchers by making questionnaires and conducting online interviews with several students in Indonesia to obtain information regarding e-learning obstacles and students' perception in facing e-learning during the pandemic.

Data Analysis

A qualitative descriptive method was employed by the researcher in order to analyze the obtained data. This method described the obstacles faced by the students when doing e-learning and revealed the students' readiness for e-learning during a pandemic. The researcher collected and analyzed the data. The researcher saw the answers to each questionnaire from each respondent. He analyzed the answer from each respondent. Then, the answers were described in the form of a description. For the next stage, he made the results into graphic data. From the providing graph data, he knew how much e-learning can be utilized and how the readiness of students is for e-learning. After knowing the results of the providing graph data, the researcher described the results briefly.

Respondents

The samples were selected using the purposive sampling method to achieve the research objectives. There is no limit to the number of respondents to make a purposive sample, provided the desired information can be obtained and generated (Raheem, 2020).

In this study, the respondent size was limited to 126 students gained from 21 universities in Indonesia consisting of 6 state universities and 15 private universities regarding e-learning during the pandemic. For confidentiality purposes, respondents are given the initials R1-R126. Primary data was collected through semi-structured interviews with students, while the secondary data was from published articles, journals, and books.

Data Collection

This study used interview methods and online questionnaires to achieve the research objectives. In data collection, researchers only chose 2 students from various study programs at each tertiary institution in Indonesia. Students fill out the online questionnaire that the researcher gives after the questionnaire is collected, the researcher contacts students to conduct online interviews regarding e-learning during the pandemic.

FINDING AND DISCUSSION

Online learning is expected to support learning process in spite of no classroom activities due to pandemic situation of COVID-19. The teacher expects that students can learn and develop their creativities through online learning using advanced technology. As Swan (2019) proposes that there is a trend in the use of 'distant education' recently which produces independent intelligence for each student. The point is that e-learning has been trending for the last decades. Then, the situation of the pandemic (Covid-19) makes e-learning be done throughout the country as an effort to prevent the spread of the widespread.

E-learning is currently being carried out as a method of classroom learning activities, where students will go to school or learning institutions to gain knowledge. In other words, this method requires face-to-face as the conveyor of knowledge. This is different from the e-learning method, e-learning is a method of learning or

transferring knowledge from a distance. This method is commonly called the online method. By using it, students can continue to learn without having to come to school. The online method is strengthened by the presence of useful technology such as computers, smartphones, the internet and several learning applications.

E-learning Facilities

Facilities are a required tool in every way, including education. When doing offline learning, it needs space, teachers and learning equipment, but when learning is converted into online learning, the tools needed are different. At the time of e-learning, the facilities needed are facilities that support e-learning such as laptops or computers, the internet, networks and good learning applications so that they can be used for the learning process. Facilities e-learning are facilities used to support e-learning learning. As Wijaya (2016) proposes that e-learning facilities are divided into 3, there are: 1) information source facilities such as computer or laptop or smartphone, the internet, e-books, the world web, and Wikipedia, 2) social media facilities such as YouTube, blogs, and email 3) specialized facilities for the learning process, namely digital games, Google Classroom, Schoology, Class Dojo, Zoom application and the other learning application (Moe & Naing, 2012). As a study from Zaharah et al. (2020) emphasizes that students can search for many information and knowledge they want using the internet, so that this can be used by the teacher as an opportunity to develop the students' creativity by using new learning methods, namely e-learning. It can be interpreted that the e-learning system has several facilities that must be adequate, namely from tools, such as laptops or computers, then there are social media applications, this application is useful as a communication tool for teachers and students in the WhatsApp or YouTube learning process, and the last is an application learning, this application is

useful as an intermediary tool for teachers and students in delivering material or assignments, such as applications.

E-learning requires a teaching and learning process utilizing technology in the learning process. Gavrilova (2016) said that e-learning has several shortcomings, especially in the field of equipment such as computers, laptops, internet credit, and internet network. This can be interpreted that e-learning really requires readiness of facilities. Then during the pandemic 60% of college students have returned to their hometowns, this has resulted in limited facilities in the field of internet signals.

The following statements are the responses of the students concerning the facilities e-learning during coronavirus disease pandemic:

R32: *Kurang efektif atau maksimal dikarenakan jaringan yang sangat buruk di daerah saya.* "Less effective or maximal due to low network quality in my area."

R17: *Karena e-learning selama pandemi ini merupakan pertama kalinya bagi mahasiswa maka perlu banyak banyak penyesuaian dan adaptasi, terutama kendala di jaringan. Sinyal yang sering hilang mengakibatkan permasalahan dalam pembelajaran.* "Because e-learning during this pandemic is the first experience for students, it needs a lot of adjustments and adaptations, especially constraints on the network. Frequently lost signals cause problems in learning"

R75: *Pembelajaran ini dapat membantu tapi mungkin karena pertama kali dan belum terbiasa jadi sering mengeluh susah, lalu untuk kendala terbesar terjadi di jaringan atau sinyal.* "This learning is helpful; however, because it is the first time for students and they are not used to it. The kind of learning is difficult, then the biggest problem occurs on the network or signal."

R12: *Pembelajaran selama ini cukup baik, mahasiswa akan mampu menguasai teknologi, akan tetapi masih banyak kendala yang terjadi sepeerti sulitnya sinyal dan pemborosan kouta.* "The

learning has been good so far, students will be able to get used to with technology. Nevertheless, there are still many obstacles such as signals and waste of internet credit."

R109: *Kerana belum disiapkan dengan baik maka masih banyak kesalahan dalam segi sistem, terutama pada jam kelas, waktu dan waktu pengumpulan tugas.* "Because it has not been properly anticipated, there are still many cases in terms of the learning system, especially during class hours, time allocation, and due for submitting assignments."

The results of the responses show that during this pandemic, e-learning is quite helpful learning method in the learning process. The students hope that e-learning can provide many beneficial supports for educational process. However, some of the given responses did not agree with the existence of e-learning. In this case, they argue that e-learning is less effective because of the signal difficulties and the condition of the internet connection is less supportive. Those problems faced by many students who live in the rural areas or on an island where conditions are unstable. It will be very disturbing on the e-learning process. Besides it needs stable signal, it also costs a large amount of internet credit. Then, the other students also argue that e-learning also requires deeper learning because not all students can use the technology well. So, it can be concluded that the responses of e-learning have less influence in the learning process due to the lack of facilities in Indonesia.
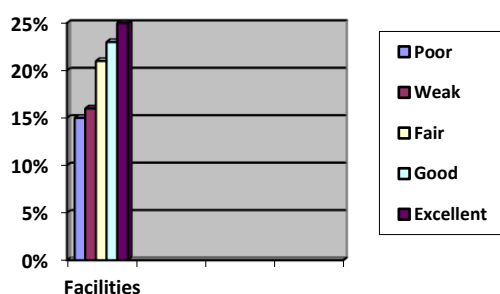

Figure 1 The result of the questionnaire of learning facilities

Figure 1 shows that the facility greatly affects the e-learning process that is being carried out. From the graph above, it can be seen that 25% of students consider the e-learning process requires a lot of facilities, 23% agree that adequate facilities help the learning process, and 15% respond that facilities are not that crucial in e-learning.

The Understanding the Material Using E-learning
One of the learning objectives is so that students can understand the material provided by the lecturer. Learning is assistance provided by educators so that the process of acquiring knowledge and mastery of skills and being able to understand the knowledge provided by educators (Zaharah et al., 2020). In the e-learning process, understanding of the material has a big influence because learning is done online. This online learning makes students reluctant to ask for more explanation about the material, so that sometimes the knowledge that is conveyed with an understanding can be different. Lack of understanding is one of the bad effects of student readiness. It is clear that students do not understand the material because of the lack of readiness of students for this e-learning process.

Here are the responses of students' understanding of the material provided by the lecturer using e-learning as a new learning system, stated in the following statement:

R122: *Biasa saja, tidak terlalu cepat paham, tergantung pelajaran dan pemahaman saya terhadap materi itu.* "Not too good and not too bad, not too quick to understand, depending on my lesson and understanding of the material"

R8: *Sedikit membantu* "It is helping, but just a bit"

R51: *Kurang dapat di pahami, lebih cepat paham ketika kuliah luring.* "Less understandable, faster to understand when studying in the classroom"

R93: *Cukup dapat di pahami, tergantung materi dan bagaimana menjelaskannya.* "Sufficiently understandable, depending on the material and how the lecture explains it."

From the students' responses about the results of understanding the materials, the evidences above proves that e-learning does not help much in understanding the materials. The students will understand the material given by the teacher depends on the material itself whether it is easy or not. They respond that the e-learning method cannot be understood well. It means this learning method does not help a lot in the learning process during the pandemic.
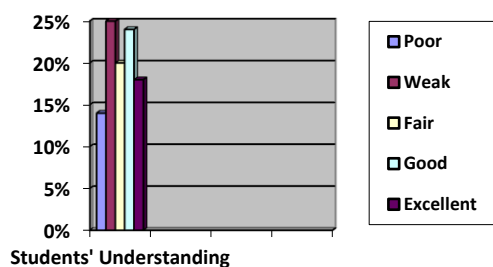

Figure 2 The result of students' responses of understanding the material using e-learning

Figure 2 shows that students express their lack of understanding in the learning process through e-learning. From the graph above, it can be seen that 25% of students agree that e-learning is less helpful in understanding the material provided by the teacher, 20% think that both class and e-learning are the same and 15% respond that e-learning is quite helpful in some material. However, in essence, students prefer learning in the classroom with the real explanations from the teacher to having e-learning activities through applications.

Learning using e-learning is intended to increase creativity, knowledge about technology, and be able to innovate to prepare for a more globalized future. This is being planned, but the emergence of the Covid-19 pandemic in early 2020 requires an online learning process, this serves to cut the spread of the corona virus. As study from Zaharah et al. (2020) and Bassendowski & Petrucka (2013) emphasize that e-learning as an independent learning process help students to study privately and can express appreciation as students. Learning from home or e-learning is conducted via online or distance learning to provide a meaningful learning experience for students without being burdened with the demands of completing all curricular goals for grade promotions and graduation (Mulyanti et al., 2020). Distance or online learning activities can be more interesting, make the students more active and understand well about the learning material, and then develop their skills (Basilaia & Kvavadze, 2020) and (Rao, 2014).

The followings are the students' statements how they express their skill development using e-learning activities:

R19: *Harus di persiapkan lebih matang lagi, agar kemampuan mahasiswa dapat berkembang walaupun belajar dari jarak jauh.* "(E-learning) must be thoroughly prepared so the students' skill well developed."

R37: *Pembelajaran online learning ini cukup membosankan, kurang menarik karena kurangnya interaksi langsung antara pengajar dan mahasiswa.* "Online learning learning is quite boring, less interesting due to the lack of direct interaction between lecturers and students."

R48: *Semoga di segala dapat saling mendukung dan dapat menghasilkan pembelajaran yang efektif.* "Hopefully everything can support each other and can produce effective learning activities."

R66: *Menurut saya sangat membosankan, karena kurangnya media yang menarik dan kurang paham akan teknologi, mungkin perlu sosialisasi e-learning.* "In my opinion it is very boring, because of the lack of interesting media and a lack of

technology understanding, it may be necessary to socialize e-learning."
R117: *Mungkin akan lebih menarik jika di tambah beberapa inovasi.*
"Perhaps it would be more interesting if you added some innovations."
The students's responses toward e-learning during the pandemic situation of Covid-19 was surprising. Many students think e-learning is a bit boring. The students respond the learning process being carried out through e-learning is very unattractive because it suddenly makes them have to get used to learning technology, especially some applications related to the e-learning. They think the applications are less attractive in the process of learning so that the students get bored and lazy, and a lack of innovation in e-learning.
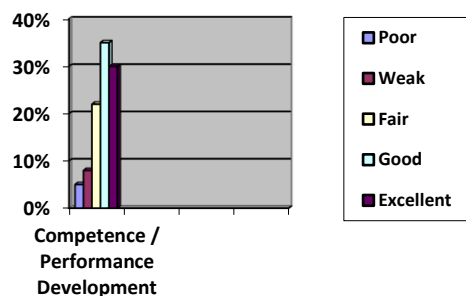

Figure 3 The result of the Students' Competence / Performance Development

Figure 3 shows that most of the students respond that e-learning is a bit boring. Looking at the graph above, 35% of the students agree that e-learning is boring and less effective learning, 30% respond that it will be effective learning if students understand well about technology, and 5% think that e-learning is a method to help the them in the learning processes.

CONCLUSION

From the discussion above, it can be summarized that some students' responses toward e-learning are quite helpful for the leaning process. However, in other hand, most of the students' responses toward e-learning during the pandemic can be said to be less supportive of learning for Indonesian students. E-learning can be interpreted as a government effort to keep education going during a pandemic. The biggest obstacle faced by students is inadequate facilities such as signals, applications, and internet credit. Students complain that the internet signal is not supportive, especially for the students in rural areas. Then, there are still students who do not understand well about the applications used for learning so they are often confused about how to use the applications. Regarding to the internet credit, the students argue that so far they have been using a large amount of internet credit seen from several applications that must be used as substitute applications for learning in class. Secondly, less of students' readiness for e-learning was seen by the students' responses. They think that during a pandemic, e-learning is a bit boring because all courses, both theory and practice, have to be done online. While some of them realize that they have lack of knowledge in the use of technology. So, the e-learning system during this pandemic was declared less successful in replacing the learning process in the classroom.

REFERENCES

Basilaia, G., & Kvavadze, D. (2020). Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus Transition to Online Education in Schools during a SARS-CoV-2 Coronavirus (COVID-19) Pandemic in Georgia. *Pedagogical Research*, *5*(4). https://doi.org/10.29333/pr/7937

Bassendowski, S. L., & Petrucka, P. (2013). Are 20th-century methods of teaching applicable in the 21st century? *British Journal of Educational Technology*, *44*(4), 665–667. https://doi.org/10.1111/bjet.12032

Garrison, D. R. (2011). *E-Learning in the 21st century: A Framework for Research and Practice, Second edition teaching in Blended Learning Environments* (Issue January 2011).

New York: Routledge/Taylor and Francis. https://doi.org/10.4324/97802038387 61

Gavrilova, M. L. (2016). *Computational Science and Its Applications – ICCSA 2016 : 16th International Conference* (Issue January). Glaslow: Springer. https://doi.org/10.1007/978-3-319-95162-1

Ghirardin, B. (2011). *E-learning methodologies: A guide for designing and developing e-learning courses*. New York: Routledge.

Iftakhar, S. (2016). Google classroom: What Works and How? *Journal of Education and Social Sciences*, *3*, 12–18.

Johnson, R. B., & Christensen, L. (2012). *Educational Research: Quantitative, Qualitative, and Mixed Approaches*. California: SAGE publications, Inc.

Moe, S., & Naing, D. K. (2012). Role Of E-Learning Facilities on Student's learning: A Literature, Review, ICERI 2012 Proceedings. *5th International Conference of Education, Research and Innovation*, 3941–3948.

Mulyanti, B., Purnama, W., & Pawinanto, R. E. (2020). Distance Learning in Vocational High Schools during the COVID-19 Pandemic in West Java Province, Indonesia. *Indonesian Journal of Science & Technology*, *5*(2), 271–282. https://doi.org/https://doi.org/10.175 09/ijost.v5i2.24640

Porter, G. W. (2013). Free choice of learning management systems: Do student habits override inherent system quality ? *Interactive Technology and Smart Education*, *10*(2), 84–94. https://doi.org/10.1108/ITSE-07-2012-0019

Raheem, B. R. (2020). The Role of Learning in COVID-19 Crisis. *International Journal of Creative Research Thoughts (IJCRT)*, *8*(3), 3135–3138. www.ijcrt.org

Rao, B. M. (2014). Use of Media as an Instructional Tool in English Language Teaching (ELT) at Undergraduate Level. *International Journal of English and Literature*, *5*(6), 141–143. https://doi.org/10.5897/IJEL2014.05 80

Sintema, E. J. (2020). Effect of COVID-19 on the Performance of Grade 12 Students : Implications for STEM Education. *EURASIA Journal of Mathematics, Science and Technology Education*, *16*(7), 1–6. https://doi.org/https://doi.org/10.293 33/ejmste/7893

Swan, K. (2019). Research on Online Learning. *Research Center for Educational Technology*, 55–59. https://doi.org/10.24059/olj.v11i1.17 36

Wijaya, A. (2016). Analysis of Factors Affecting the Use of Google Classroom to Support Lectures. *International Conference on Information Technology and Engineering Application*, *5*(1), 61–68.

Zaharah, Kirilova, A. G., & Windarti, A. (2020). Impact of Corona Virus Outbreak Towards Teaching and Learning Activities in Indonesia. *SALAM; Jurnal Sosial & Budaya*, *7*(No. 3), 269–282.

Zapalska, A., & Brozik, D. (2020). *Learning styles and online education*. Campus-Wide Information Systems. https://doi.org/10.1108/10650740610 714080