Readiness and Sustainability of the Learning System E-Learning in Indonesia

Sudarto M. Abukasim[1], Faujia Umasugi[2], Taufik Abdullah[3]
{sudarto229@gmail.com[1]}

Faculty of Science Education, Universitas Muhammadiyah Maluku Utara[1,2,3]

Abstract. This study aims to analyze the readiness and sustainability of learning systems with e-learning in Indonesia. The data technique is carried out by studying literature by searching national and international research journals related to online learning, policies and regulations related to online learning, and conditions that occur in the field through the official website. Analysis using Milles and Hubermen which includes data reduction, data presentation and conclusions. The results show that Indonesia is not ready for online learning because of some internet network conditions that are not available in some areas, parents as learning companions from home do not have the skills that match or coincide with working hours, not all parents have economic capacity in providing facilities and targets for online learning, and the ability or skills of educators to use technology and information in online learning. The conclusion in this study is that online learning in Indonesia does not yet have complete readiness. Since "Learning from Home" was rolled out to date, there are still a lot of schools going on, especially internet networks and skills in the use of communication and information technology to support online learning. Online learning can be evaluated continuously to support the sustainability of education in Indonesia.

Keywords: E-learning, learning, distance learning, education, covid-19

1 Introduction

Education is one of the main fundamental factors that contribute to the development and growth of a country [1]. Education in Indonesia gets the full attention of the government, as evidenced by the fact that it is stated in the 1945 Constitution in article 31 which consists of 5 paragraphs, namely "Every citizen has the right to education" (paragraph 1), "Every citizen is obliged to follow basic education and the government is obliged to finance it "(paragraph 2), "The government shall endeavor and implement a national education system, which increases faith and piety as well as noble morals in the context of the intellectual life of the nation, which is regulated by law" (paragraph 3), "The state prioritizes the education budget at least twenty percent of the regional budget and expenditure income to meet the needs of the provision of national education" (paragraph 4), and "The government advances science and technology by upholding religious values and national unity for the advancement of civilization and the welfare of mankind" (paragraph 5).

The government issued Law No. 20 of 2003 concerning the National Education System to carry out the mandate of the 1945 Constitution, with the consideration that the national education system must be able to ensure equitable educational opportunities, quality improvement, and the relevance and efficiency of education management to face challenges in

accordance with the problems of changing local, national, and international conditions. In Indonesia, education has been implemented through face-to-face learning between teachers and students based on the applicable curriculum. The 2013 curriculum used in schools is known as K13.

The case of the Covid-19 pandemic, which was officially released in March 2020, demands policy changes to support the spread of the virus through physical access and maintaining distance, including policies in the sphere of education. The Ministry of Education and Culture officially calls on "Learning from Home" by issuing two circular letters, namely Circular Number 2 of 2020 concerning Prevention and Handling of Covid-19 in the Ministry of Education and Culture and Circular Number 3 of 2020 concerning Prevention of Covid-19 in the Education Unit. The "Learn from Home" policy for all levels of education, from elementary school, middle school, to university is a new thing so that there is a lot of unpreparedness in its implementation, such as technology failure and difficulty understanding the material presented online, especially for the elementary school level, so it still requires assistance from parents, educators are still skilled and experienced in packaging and delivering e-learning material, limited facilities owned by educators or students such as laptops and cellphones, internet costs that cannot be achieved by educators or students, and so on.

The learning system that is currently carried out online or known as e-learning. E-learning refers to the use of information and communication technology to enable access to online learning/running resources [2]. It is estimated that the provision of the Covid-19 pandemic is still taking a very long time, so distance learning will still be carried out on an ongoing basis. This requires the interaction of government and school management in preparing appropriate online learning so that it can be applied in the long term. This study aims to analyze learning with an e-learning system that can be applied in Indonesia so that education in Indonesia still meets the criteria amid the Covid-19 pandemic.

2 Literature Review

According to Gros & Pealvo, E-learning has become a more essential mode of learning and care in recent decades and has been acknowledged as a cost-effective and efficient learning approach [3]. E-learning uses information and communication technology to provide access to online learning/processing materials and to teach and study using digital tools that allow students to learn at any time and from any location. [2].

E-learning facilitates and enhances learning based on computer and communication technology. E-learning means sharing knowledge using technology, computers, and network-supported and knowledge transfer skills [4]. The use of internet technology to improve knowledge and performance is known as e-learning [5].

E-learning has been around for quite some time. Since the 1960s, electronic learning (e-Learning) has existed as computer-assisted learning. [6]. Although computers were still scarce, they could be used as an instructor-led training medium in the early 1980s. Multimedia that progressed from about 1985 to 1995 Windows 3.1, Macintosh, CD ROM and PowerPoint, and CDs so that training can be repeated even without the presence of an instructor. Email, web browsers, HTML, media players, simple audio/video files, and basic Java apps were unbeatable in the mid-1990s when the World Wide Web (www) was only being started. From CD-ROM to USB, low web bandwidth to high web bandwidth, computers and the web rapidly evolved around the twentieth century. Computers can be accessed more quickly, and coaches/instructors

can now have real-time web discussions with students, and larger data can be transmitted through USB or viewed via the web. Smartphones and other internet-enabled gadgets grew in popularity over time, dramatically altering how individuals search for information. The phrase e-learning is also gaining popularity. With the rise in popularity of mobile devices and internet connectivity, e-learning has expanded to the point that information or knowledge is only a click away. The e-learning process has progressed significantly from instructor-led instruction to being held in one's palm [7]. M-learning refers to e-learning that takes place on mobile devices such as PDAs (Personal Digital Assistants), smartphones, and cell phones, as opposed to e-learning on computers or laptops [4].

Based on their conditions, schools must balance two types of learning and courage-building that as: synchronous (occurs collectively with a group of online learners and usually a teacher) and asynchronous (occurs independently) (occurs anytime, not necessarily in groups, but with teacher feedback) [8].

E-learning plays a vital role in the growth of any country's education. It also offers opportunities for developing countries to improve their educational development [4]. This opportunity is also supported by the rapid development of technology (hardware and software) supported by an adequate internet. The benefits of the e-learning learning system are also very much time-saving, environmentally friendly and pollution reduction, interactive [4][9], students receive information together and communicate directly with other students, for example through teleconference (audio, video, or excess), internet chat forums, instant messages [5], flexible and providing the latest information and materials [10][7][2], providing rich and unlimited resources, encouraging less reading, and helping active students to be more active [10], as well as being cost-effective (paper costs, infrastructure costs, electricity costs, training costs, stationery costs, travel costs, food costs, etc.) [11][7][12][9].

Challenges also need attention in e-learning, such as failing and boring multimedia systems due to a lack of interactivity and supply due to a passive and unstructured way of presenting instructional content, less than networks and the internet [13], decreased social interaction and communication [10][7], Slow internet access or connection, a lack of real or direct teacher feedback, the possibility of plagiarism and cheating [10], limitations for students with special needs, such as the blind [7 and use of the internet for purposes other than education, such as accessing social media sites or downloading music and videos [14].

The use of e-learning has become a critical component of education. It increases pedagogical resources, aids students in their learning, enhances learners' abilities, motivation, and knowledge, and prepares them to be productive in today's society's workplace [15]. Learning theory provides general principles for constructing specific learning procedures, where the pedagogical approach comes from. A pedagogical approach is a technique for connecting theory to practice through instructional strategies, which instructors or instructional designers devise to help students learn more effectively [3].

3   Method and Theory

This research is a type of qualitative research with a descriptive approach (descriptive qualitative), namely research that describes or describes a condition or event regarding learning with the e-learning system during the Covid-19 pandemic.

The data collection technique is carried out by studying literature including research journals, policies and regulations related to online learning which are officially released by the

Ministry of Education through the website www.kemdikbud.go.id during the Covid-19 pandemic, and realities in the field through the valid news website.

Data from various sources were then analyzed by Miles and Huberman's analysis which included data reduction, data display, and conclusion/verification.

3.1 Data reduction

Data reduction means sorting and selecting basic data and in accordance with the research objectives. In obtaining research results, for example, not all of the contents of the journal are important to be included in the report. Therefore, data reduction needs to be done to provide data limits that need to be analyzed.

3.2 Data display

Data presentation is a step to interpret the data that has been obtained according to the data selected during the data reduction process. The data display in qualitative research is in the form of a narrative which generally consists of the elaboration of the research results and discussions related to the theory.

3.3 Conclusions

The conclusions in qualitative research are new findings that have never existed before. This finding is the answer to the research objectives. In this study, the conclusions can be answered about the readiness and sustainability of the e-learning system in Indonesia.

4 Results and Discussion

Online learning in Indonesia is still not ready to be implemented. This is shown by the Covid-19 pandemic, the government is still busy formulating various policies to support the implementation of distance learning. The Ministry of Education and Culture's first step is to issue two circular letters, Circular Number 2 of 2020 concerning Prevention and Handling of Covid-19 within the Ministry of Education and Culture and Circular Number 3 of 2020 concerning Prevention of Covid-19 in the Education Unit. The Ministry of Education and Culture is to officially appeal to "Learn from Home" The next step is to adjust the funding of BOS funds that were originally allocated for traditional teaching and learning (direct contact between teachers and students) but were diverted to online learning by revising Minister of Education and Culture Regulation Number 8 of 2020 concerning Regular BOS Guidelines by Minister of Education and Culture imposing Number 19 of 2020 : Changes to the Technical Guidelines for BOP PAUD and Equality Education. In addition to policies, the Ministry of Education also facilitates e-learning by providing several portals used for online learning, including the website www.belajar.kemdikbud.go.id, Radio Edukasi (application), and TV Edukasi (tve.kemdikbud.go.id), and learning from home through TVRI broadcasts which has been scheduled.

In fact, these steps have not been able to support online learning. This is due to factors outside the government that do not support online learning readiness. Some of the obstacles experienced in implementing online learning include:

a. Some students cannot participate in online learning because the internet network signal is not strong enough in their area.
b. Most parents whose financial circumstances are inadequate or non-existent cannot equip their children with smartphones for online learning.
c. Some teachers are compelled to innovate by altering and disseminating instructional materials on state-owned television directly to students.
d. Whether parents like it or not, the learning process at home necessitates direct parental oversight even though parents must divide their time between employment, housekeeping, and assisting their children in their studies [16].

From a survey via google form conducted by Public Policy Expert at Universitas Gadjah Mada Yogyakarta, Agustinus Subarsono, the most important obstacle is the internet network. This research was conducted on 1,304 respondents including teachers, students and parents at the junior and senior high school levels in five districts in Yogyakarta. As a result, more than 50 percent of respondents complained about the internet network, especially in the Kulonprogo and Gunung Kidul areas. Another obstacle is the ability and skills of parents in assisting children, especially in the use of information and communication technology. In addition, it was found that online learning was more difficult than conventional learning, even material for online learning was more difficult than face-to-face learning [17].

Currently, the government has issued a policy to provide free quotas for students and educators for early childhood education, primary and secondary education, as well as lecturers and students [18]. However, this is not an absolute solution in overcoming problems in online learning because without the support of infrastructure such as laptops or smartphones and a strong network, online learning still has problems. In addition, the educational curriculum for online learning needs to be formulated because the achievement indicators for face-to-face and online can be different, including evaluation of student abilities from learning outcomes.

Based on various conditions that occur in the field, online learning in Indonesia is still appropriate for the middle level, especially high school students and students. This is because it does not require full parental assistance and can use information technology. For online learning for early childhood education and basic education, it is necessary to have policies and technical instructions from the Ministry of Education and Culture so that students can achieve their educational goals.

5 Conclusion

Based on the results of the description above, online learning in Indonesia is not yet fully prepared. Since "Learning from Home" was rolled out to date, there are still a lot of things going on in schools, especially internet networks and skills in the use of information and communication technology to support online learning. Online learning can be evaluated continuously so that it supports the continuity of education in Indonesia.

References

[1] T. Panyajamorn, S. Suanmali, Y. Kohda, P. Chongphaisal, and T. Supnithi, "Effectiveness of E-Learning Design in Thai Public Schools," Malaysian J. Learn. Instr., vol. 15, no. 1, pp. 1–34, 2018.

[2] V. Arkorful and N. Abaidoo, "The role of e-learning, advantages and disadvantages of its adoption in higher education," Int. J. Instr. Technol. Distance Learn., vol. 12, no. 1, pp. 29–42, 2015.

[3] B. B. Lockee and B. Gros, "Learning, Design, and Technology," Learn. Des. Technol., pp. 1–23, 2020, doi: 10.1007/978-3-319-17727-4.

[4] P. D. S. Kumar, "E- And M-Learning: A Comparative Study," Int. J. New Trends Educ. Their Implic., vol. 4, no. 3, pp. 65–78, 2013.

[5] O. Oludare Jethro, A. Moradeke Grace, and A. Kolawole Thomas, "E-Learning and Its Effects on Teaching and Learning in a Global Age," Int. J. Acad. Res. Bus. Soc. Sci., vol. 2, no. 1, pp. 2222–6990, 2012.

[6] Z. Bezhovski and S. Poorani, "The Evolution of E-learning and New Trends," Iiste, vol. 6, no. 3, pp. 50–57, 2016, [Online]. Available: https://www.iiste.org/Journals/index.php/IKM/article/view/29274.

[7] N. Guragain, "E-Learning Benefits and Applications," no. February, pp. 6–10, 2016, [Online]. Available: https://www.theseus.fi/bitstream/handle/10024/105103/Guragain_Nischal.pdf?sequence=1&isAllowed=y.

[8] International Baccalaureate, "Online learning, teaching and education continuity planning for schools," Int. Baccalaureate Organ., pp. 1–13, 2020, [Online]. Available: ibo.org.

[9] M. Somayeh, M. Dehghani, F. Mozaffari, S. M. Ghasemnegad, H. Hakimi, and B. Samaneh, "The effectiveness of E- learning in learning: A review of the literature PhD of nursing, Instructor , Department of nursing , Lahijan Branch , Islamic Azad university , Instructor , Department of Operating Room , Faculty of Medical Sciences , Birjand Un," Int. J. Med. Res. Heal. Sci., vol. 5, no. 2, pp. 86–91, 2016, [Online]. Available: https://www.ijmrhs.com/medical-research/the-effectiveness-of-e-learning-in-learning-a-review-of-the-literature.pdf.

[10] F. Rahmawati, "E-Learning Implementation: Its Opportunities and Drawbacks Perceived by EFL Students," J. Foreign Languange Teach. Learn., vol. 1, no. 1, 2016, doi: 10.18196/ftl.111.

[11] S. Goyal, "E-Learning: Future of Education," J. Educ. Learn., vol. 6, no. 4, p. 239, 2012, doi: 10.11591/edulearn. v6i4.168.

[12] T. Nguyen, "The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons," MERLOT J. Online Learn. Teach., vol. 11, no. 2, pp. 309–319, 2015.

[13] M. Conkova, "Analysis of Perceptions of Conventional and E-Learning Education in Corporate Training," J. Compet., vol. 5, no. 4, pp. 73–97, 2013, doi: 10.7441/joc.2013.04.05.

[14] M. Gupta, S. Marsden, T. Oluka, R. Sharma, and H. Lucas, "Lessons learned from implementing E-learning for the education of health professionals in resource-constrained countries," Electron. J. e-Learning, vol. 15, no. 2, pp. 144–155, 2017.

[15] M. Kuimova, A. Kiyanitsyna, and A. Truntyagin, "E-Learning as a Means to Improve the Quality of Higher Education," SHS Web Conf., vol. 28, p. 01129, 2016, doi: 10.1051/shsconf/20162801129.

[16] C. Dimas, "Sorotan: Belajar Online Punya Kendala," 2020. https://www.kompas.tv/article/79001/sorotan-belajar-online-punya-kendala.

[17] Ika, "Kendala yang Banyak Dihadapi Dalam Pembelajaran Daring Jaringan Internet," 2020. https://ugm.ac.id/id/berita/19837-ketersediaan-jaringan-jadi-kendala-belajar-daring-di-diy.

[18] Kementerian Pendidikan dan Kebudayaan, "Bantuan Kuota Data Internet 2020," 2020. https://kuota-belajar.kemdikbud.go.id/.