

Implementation of E-Learning in School: Teacher's Perception on Skills to Improve in E-Learning

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Abstract-Covid-19 pandemic bring up a lot of problems in Education practices in Indonesia, one of them is the lack of teacher skills on implementing e-learning. Therefore, e-learning is an important issue that teacher should learn and improve their skills. However, teachers in Indonesia find it difficult to adapt their skills in order to do e-learning effectively. This research aims to determine the perception on importance of the skills, and teachers preferred skills to improve or learn such as Digital Literacy (DL), Communication Skills (CS), Content Creation (CC), and Digital Based Evaluation (DBE). This study uses a mixed method with quantitative data gathered by survey distributed to 50 randomly picked teachers from 4 different schools in 2 regions in Indonesia, and qualitative data gathered by interviewing 2 teachers from each school as representatives. The result shows that teachers' perception on the most important skill to learn is Digital Literacy, however teachers' perception in the most preferred skills to improve is Content Creation. Teachers believe that digital literacy is an individual skill that ones must learn to implement e-learning effectively, however content creation skills might have an impact on solving communication and evaluation problems in e-learning. The implication of the research is to give school administrator an idea of what training courses need to be held to improve teachers' skills in order to implement effective e-learning.

Keywords—teacher competencies; digital literacy; e-learning; teacher skills

INTRODUCTION

Covid-19 pandemic start spreading in Indonesia from March 2020 until now. Even though the spread is controlled, but many of Indonesian citizen still infected. The pandemic also has left a big hole in Education. Teacher-student interaction in schools need to be halt for nearly 2 years from the first spreading of Covid-19. This also bring a lot of problems to education system in Indonesia, especially learning activity in the school. Those problems rises when Indonesia's Government applied the work from home policy to all the sectors, including education. Work from home in education means that school are banned to doing learning activity in schools directly, and pushing schools to implement e-learning as a substitute of learning face to face. Siahaan (2020) mentions about problems rises when school are forced to do e-learning while the preparation is very minimal, such as incompleteness of learning activity and goals that teacher must fulfill for eligibility to continue to

upper class level, the lack of internet infrastructure for some areas in Indonesia so the access of information are hampered, also implementation of e-learning require teachers to implement other learning model and methods which brings problems that most of the teachers in Indonesia are not ready for e-learning. This also added by Aji that mentions about the cause of students' skills quality and psychological problems is the lack of interaction in learning process between teachers and students, also the lack of teacher skill on information technology would worsen the ineffectiveness of learning.

Learning through digital platform, or called e-learning is no longer become complementary need, but then becoming basic needs for education and learning process, as the covid-19 pandemic spread across the nations in the world. To give students experience on learning, teacher also need to be able to acquire digital skills to implement e-learning. In studying e-learning, required cooperation of the education stakeholders such as government, and also teacher themselves. Serezhkina (2021) mentions that universities prepared the professional learning development on digital competencies but there are also teachers who want to improve their skills on technology independently.

Hamalainen et al (2020) also mentions that respondent realized about the importance of digital technology on educational activity and process. Therefore, teacher as a main executor on learning activities has an important role to implement digital technology in their learning process. Teacher should not be stopped learning and improving their teaching skills, and just keep doing monotonous conventional learning. With the implementation of e-learning which is one of the practices on digitalization on learning process, would improve students' learning interest and also develop a lot of potency of the student in the future. With digital learning also allow students to collaborate in the larger network and find more solutions and answers from different perspectives.

A lot of teachers feel that they are too old to learn about technology, findings from Hamalainen et al (2020) mentions that senior professional teachers is definitely weak on learning about technology, but they still aware about the importance of professional development on teaching using digital technology. The development of teacher competences using digital technology also encounter obstacles,

especially infrastructure constraints where a lot of teachers in some remote areas cannot access the internet or digital learning platform. Fernandez-Batanero et al (2020) mentions that some studies generally conclude about the lack of teacher training, especially training on information technology and digital learning practices. From that, we can see that there is difficulty on access of teacher development and training to implement digital technology on their teaching process in the class.

Other than that, teacher training should be implemented well if stakeholders continue to push the development of teachers to be able to implement e-learning on their class. In line with that, Aji (2020) finds that the role of teacher development is carried out across the education stakeholders from all elements of education, especially the state government on facilitating and improving schools to implement long distance learning during covid, and so using e-learning in order to reduce learning losses of students in the future.

RESEARCH METHOD

Author used mixed method to determine teacher's perception on skills to improve in e-learning. The research quantitative method used by conducting a survey to find and determine teacher's perception on skills to improve in e-learning. Survey conducted in 2 regions in Indonesia and followed by 50 teachers from 4 schools as respondents. The instrument asked out about 4 different skills such as Digital Literacy (DL), Communication Skills (CS), Content Creation (CC), and Digital Based Evaluation (DBE), and uses linear scale to determine teachers' preferences and importance perception on skills that they might want to improve. For the Qualitative data, to create clear description about teachers' perceptions, the author also conducts an interview to get descriptive and deeper understanding and their reason on teacher's perception for the skills presented in the survey. The interview respondents are chosen by randomly picked 2 teachers from each school as representation from their schools and region for total 8 respondents. The author analyze the data by using data presentation and verification, also triangulation from interview data and documentation.

RESULT

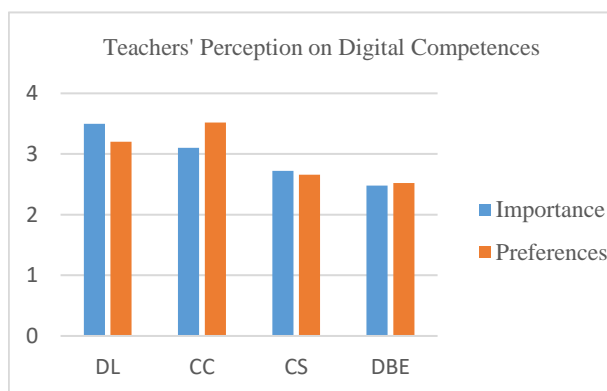
Here are the findings from the research:

a. Teachers' Perception about Digital Competence

The development of technology in 21st century has led the human activity to become digitalized, and thus further replaced manual labor and conventional technology to digital technology (Astuti, Sudira, Mutohhari, & Nurtanto, 2021). In the present situation, Covid-19 pushed the use of digital technology to further urgency as the digital learning or e-learning has become more approachable to people. Study from (Aditya, 2021) finds that majority of teachers are generally ready for implementing digital learning for the current condition of pandemic.

From the Survey found out teachers generally agree about the importance of improving their Digital Literacy skills. This also shows that teachers preferred to learn and improve their Digital Literacy Skills as the first option. The data showed in the figure below interestingly did not indicates that Digital Literacy Skills are the skills teachers

Figure 1 Survey Data



preferred to improve just because the teachers realized of its importance in order to implement e-learning in their classes.

These findings clarified through the interview data which concludes the teachers' concern about creating or using more innovative methods and media with content creation skills. 62,5% teachers from interview agree that digital literacy is important to improve, but it can be seen as individual responsibility for the teacher, as they rather chose different skills as preferred to improve, such as content creation and digital based evaluation. They also mention about the difficulties of finding a good training in content creation that able to answer teachers' need to create digital learning content.

Training held by the organization or government more likely to learn about digital literacy, therefore they feel it can be accelerated trough those training. Whereas content creation training is quite difficult to find and or rather expensive to join, especially that focus on digital learning content and media.

Moreover, teacher also feels that communication and content creation is one of the required and important skills to be learned because the differences on learning method and media that can be implied within the e-learning practices. Respondent 2 said that "Content creation has become a concern for teachers to implement e-learning, because learning content had to answer our student's need, and it is difficult to find a ready to use learning content or media that really answer the student's need" from the survey also, can be realized that some teachers feel the ability of creating their own content may effectively increase their student's engagement on e-learning, showed by high points of improvement preferences.

Author asked about the low preferences and importance perception on Teacher communication skills and digital based evaluation on the interview, and generally teachers feel that it those skills are the basic skills for teaching whether it is using digital technology or not, so it concludes that basic skills such as communication skills and digital based evaluation are already implemented in their e-learning. Respondent mentions several difficulties they faced in communication skills such as students' engagement, and text base communication in the assignment documentation or direct communication to their student via messenger application. 7 of the interview response also believe that skills on content creation might help teacher create more engagement on the e-learning implementation.

b. Realization of Digital Literacy and Content Creation

Respondent from survey and interview mostly agree about the importance of Digital Literacy Skills, especially senior teachers. Around 80% senior teachers chose digital literacy skills as their preferences to improve on implementing e-learning. These can be concluded that most senior teachers face difficulties on using digital technology in their learning process. Therefore, they are still wanted to improve and learn to use digital technology. Otherwise, teacher who are younger has different concern about digital literacy, respondent 3, 5 and 6

mentions in the interview about the attitude of using digital technology as the indicators of digital literacy skills, despite of the capabilities on using digital technology. Other importance of digital literacy is not only capable on using digital technology, but also the responsible attitude that comes with it (Monggilo, et al., 2021). Similar to respondent 3, 5 and 6, respondent 7 also mentions about the ethics on using digital technology. He mentions that “I think it is also important to us to learn on how to filter digital information as a literacy skill”. This is supported by the digital skills competences guide published by KOMINFO that mentions about digital ethics and its indicators which ability to filter hoax information, hate speech, or pornography and other negative content (Monggilo, et al., 2021)

Digital literacy has become the most important to improve from teacher’s perception in this research. Therefore, some of the teachers mentions about their preferences on improvement is not digital literacy, but rather about creating more fun learning with digital technology, and mentions content creation as their main preferences on improvement. Teachers who chose content creation also feels that their skills on digital literacy is good enough to implement e-learning, but they face difficulties on developing learning method and media from the ground to meet students’ need. Teachers who chose digital content creation mostly comes from younger generation of teachers, about 90% of respondent that choose content creation are younger generation or average below 40s.

c. *Schools on E-Learning Implementation*

From the perspective of schools, teacher is their resources to create learning ecosystem whether it practice e-learning or not. But the quality of the teacher in the schools affect the efficiency and effectiveness of learning ecosystem that schools had to perform. Schools in this case become the organization that carries and push teacher to make differences on e-learning implementation. As places to experiment and practices, schools must encourage teacher to improve their competence in e-learning, which can have impact on students’ achievement and learning goals.

DISCUSSION

Studies in Europe mentioning about the digital competences as the professional development for

teacher. Redecker (2017) mentions on his writing for European Framework for the Digital Competence for Educators that professional development on teacher digital competences also includes the interaction between colleagues, students, and parents while also practicing long life learning and continuous improvement to create innovation on their teaching duty. Therefore, digital competences are rather seen as a professional approach on tackling problems and challenges that teacher faced in modern era of education, and of course to implement the best practices of e-learning in their class.

CONCLUSION

From this research, the conclusions that can be drawn are:

- Teacher perception on the most important skills they need to have to implement e-learning is Digital Literacy
- Mostly teacher agrees about digital literacy skill importance, but then digital literacy must also encourage teacher to be more responsible on using digital technology and keeping those attitudes as the ethics of digital literacy
- Teacher perception on the most preferred skills to improve to implement e-learning is Content Creation
- Teacher believed that content creation skills might improve and solve their problems on communication such as student engagement, and providing guidance of students’ assignment, therefore the communication skills and digital based evaluation might also improve
- Content creation skills that teacher want to learn must aim for the digital learning content that meets their students need
- Senior teachers prefer to improve their digital literacy skills as their lack of interaction to digital technology longer than younger teacher
- Younger teacher (average below 40s) feels that content creation is more preferred to learn, as the learning media may have impact to students’ engagement.

- Digital literacy training has been trying to improve by the education organization and government, therefore teacher training on this topic can be accessed easily by teacher. Meanwhile, content creation training were generally organized by private sectors, and usually more expensive for teachers' financial ability to join.

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