

Learning Survey During the Covid-19 Pandemic and Application Media Implications for Elementary School Teachers

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ABSTRAK

Pandemi COVID-19 mengakibatkan pembatasan sosial yang berdampak besar pada kehidupan. Tujuan penelitian ini yaitu menganalisis kemampuan guru khususnya guru SD yang berada di luar kota dalam menggunakan media pembelajaran online. Penelitian ini merupakan penelitian survey. Subjek penelitian ini adalah 154 guru SD yang mengajar di kota. Teknik pengambilan sampel dengan teknik purposive sampling. Pengumpulan data dilakukan melalui instrumen berupa kuesioner. Teknik analisis data menggunakan analisis deskriptif kualitatif dan kuantitatif. Hasil kajian kemampuan guru menggunakan media aplikasi pembelajaran online untuk guru SD menunjukkan bahwa 93 orang (60,4%) merancang media, kadang-kadang (51,9%), dan sering (45,5%) untuk memproduksi media pembelajaran online, dan kadang-kadang (49,4%) dan sering (42,9%) untuk menggunakan media. Aspek fasilitas yang mendukung guru untuk melakukan pembelajaran online untuk SD menunjukkan 100% fasilitas pendukung memenuhi syarat, antara lain listrik, internet, buku pelajaran, LKS, dan fasilitas media pembelajaran interaktif. Terdapat hubungan yang signifikan antara fasilitas penunjang dasar, media pembelajaran interaktif, dan alat bantu belajar bagi siswa. Orang tua dan siswa harus bekerja sama agar siswa rajin dalam mengerjakan tugas dan lebih bertanggung jawab dalam menggunakan IT.

ABSTRACT

The Covid-19 pandemic has resulted in social restrictions that have had a major impact on life. This study aims to analyze teachers' ability, especially elementary school teachers who are outside the city, to use online learning media. This research is survey research. The subjects of this study were 154 elementary school teachers who teach in cities. Sampling technique with purposive sampling technique. Data collection was carried out through an instrument in the form of a questionnaire. Data analysis techniques using qualitative and quantitative descriptive analysis. The results of a study on the ability of teachers to use online learning media applications for elementary teachers show that 93 people (60.4%) design media, sometimes (51.9%), and often (45.5%) to produce online learning media, and sometimes (49.4%) and often (42.9%) to use media. The aspect of facilities that support teachers to carry out online learning for elementary schools shows that 100% of the supporting facilities meet the requirements, including electricity, internet, textbooks, LKS, and interactive learning media facilities. There is a significant relationship between basic supporting facilities, interactive learning media, and learning aids for students. Parents and students must work together so that students are diligent in doing assignments and are more responsible in using IT.

1. INTRODUCTION

The COVID-19 pandemic is a disaster attacking many countries, including Indonesia. Several countries have implemented a lockdown policy to prevent foreigners from entering their countries. In Indonesia, the government implements the Large-Scale Social Restriction (PSBB) Policy in some big cities in Indonesia (Anugerah et al., 2021; Hasrul, 2020). The government also invites the people to stay at home

to prevent the Covid-19 transmission and this social restriction gives a major impact on life. Work that is usually performed in the office is now done at home. Even, malls in towns shall be closed. Not only workers but the students are also asked to do online learning. The covid-19 pandemic has impacted all activities including learning activities which are usually carried out through direct interaction between teachers and students, into online learning activities (Bayley, 2022; Putra & Wulandari, 2021). It is stated by the Ministry of Education and Culture based on the Circular Letter of the Ministry of Education and Culture for Directorate General of Higher Education No. 1 of 2020. Online learning is conducted using a learning system that does not require face-to-face meetings but uses a platform that helps the teaching and learning process to be conducted (Erni et al., 2020; Salsabila et al., 2020). This method is an effective way to make all students in Indonesia keep receiving education.

Online learning that has been established is applied to all levels of education in Indonesia. The selection of this alternative is because people have entered the 4.0 industrial revolution era that strongly supports online learning (Setiawan et al., 2019; Wardani & Ayriza, 2020). Online learning certainly eases the students because they just need Internet quota. Hence, the students can easily download the materials that they are going to learn every time and everywhere. However, the use of the Internet and Multimedia technology in the learning process changes the method of delivering the learning that is usually done in the classroom (Sourial et al., 2018; Usman, 2019).. It certainly affects the students' understanding. In the learning process, the problems most important thing is skills teachers and provides learning media, especially during this pandemic condition. Teachers are the central figures in the education and learning sector at school. Teachers are facilitators and mediators for the students to be able to learn effectively and efficiently (Amin, 2017; Rahma & Safarati, 2021). Using and selecting the appropriate learning media during online learning by a teacher certainly will affect the process and the outcome of learning that is conducted. Online learning is currently carried out regardless of age limits children are required to operate technology, namely smartphone and computers, which can be used as learning media in this day and age (Le et al., 2022; Tembang et al., 2020). On the other hand, the development of science and technology motivates the efforts for innovation and the utilization of technology products in the online learning process. The teachers are demanded to be able to use devices that keep up to date with the current development and demand (Rafianti et al., 2018; Salwa et al., 2020). The major information technology development certainly can be utilized. Several applications can be used for the learning process, such as WhatsApp, Zoom, Google Meet, Edmodo, Microsoft teams, Google classroom, etc. Even, the government provides a platform to help the students to participate in the learning to the maximum extent, namely Rumah Belajar (Learning House) (Erni et al., 2020; Sunaryanto et al., 2020).

The selection of a learning method and media will determine the teachers' success in the learning process. The use of learning media can affect students' motivation, communication, and learning interaction to be more responsive and interactive in learning activities both inside and outside the classroom (Lestari, 2018; Subekti et al., 2020). Therefore, the researchers were interested in investigating the teachers' ability in using the online learning application media for the learning process during the pandemic period. Therefore this study aims to analyze teachers' ability, especially elementary school teachers who are outside the city, to use online learning media.

2. METHOD

This study was a survey design with quantitative study using an analytical descriptive method (Cresswell & Cresswell, 2018). The survey design give more and describe information about the teachers' ability, especially elementary school teachers who are outside the city. The subject of this study was 154 elementary school teachers who taught in Pelalawan and Rengat city. This study was conducted for two months, from July to August 2021 a purposive sampling technique. The data were collected through an instrument in the form of a questionnaire that was distributed through a Google form link distributed via WhatsApp. The instrument consisted of 15 question items developed from three dimensions comprising 1) being able to design a media, 2) being able to produce a media, and 3) being able to use a media. This study used the Likert scale consisting of four alternative answers, namely often, sometimes, rarely, and never. the instrument has obtained validity which has been assessed by experts according to the research objectives. then for the reliability value it was found that the reliability value of this instrument was 0.78 which means that the instrument used in this study was valid and reliable to obtain data in this research.

The procedure of data collection was conducted using the following steps: (1) the researchers arranged the design of statements, (2) the researchers input each statement into the Google form, (3) the researchers distributed the Google form link to the teachers via WhatsApp group, (4) the researchers checked the teachers' questionnaire, and (5) the researchers analyzed the data of teachers' questionnaire. The technique for data analysis was descriptive analysis assisted by IBM SPSS Statistics 23.

3. RESULT AND DISCUSSION

Result

The result of the data analysis of the teachers' ability in using online learning media descriptively is shown in [Table 1](#).

Table 1. The Descriptive Analysis of the Teachers' Ability in using Online Learning Media

	Keterangan	Nilai
N	Valid	154
	Missing	0
	Mean	3.47
	Median	3.00
	Mode	3
	Std. Deviation	.526
	Variance	.277
	Skewness	-.168
	Std. Error of Skewness	.195
	Kurtosis	-1.372
	Std. Error of Kurtosis	.389
	Range	2
	Minimum	2
	Maximum	4
	Sum	535

Based on the data presented in [Table 1](#), it is known that, out of 154 respondents that were investigated through fulfilling the questionnaire that was distributed directly, the mean score for the teachers' ability in using learning media was 3.47. The score was in the "High" category. The data provided information that the teachers in Pelalawan and Rengat had a good capacity in using learning media. The maximum score of 4 in the "Extremely High" category illustrates that the teachers have an extremely high capacity in using learning media. The mean score for the teachers' ability in using learning media in the three dimensions measured in this study is presented in the form of a histogram shown in [Figure 1](#).

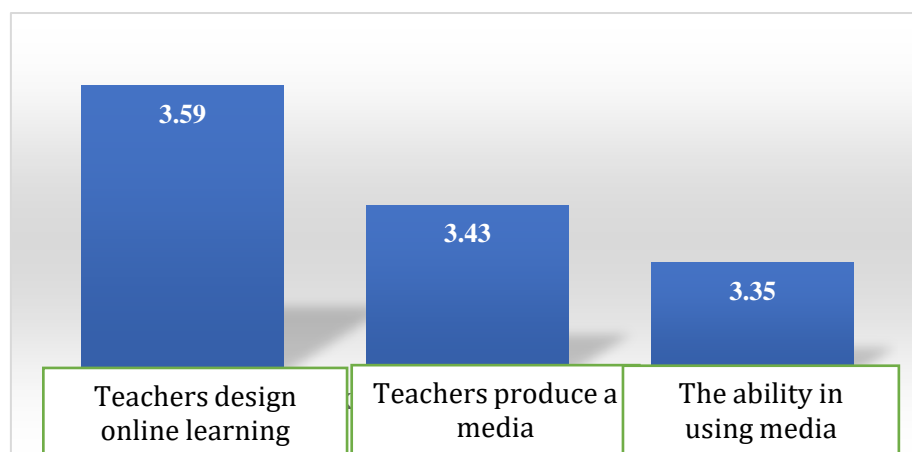


Figure 1. The Histogram for the Teachers' Ability in using Online Learning Media

[Figure 1](#) shows that there are three aspects to be the indicators for the teachers' ability in using learning media measured in this study. From the three aspects, the highest score was in the aspect of "teachers design online learning media" of 3.59. Meanwhile, the aspect of "teachers produce a media" had a mean score of 3.43, and "the ability in using media" had a mean score of 3.35. The lowest score was the ability in using media with a score of 3.35. In more detail, the teachers' ability in using online learning media for each aspect is presented in [Table 2](#).

Table 2. The Mean Score and the Category of Teachers' Ability in Designing Online Learning Media

No.	Statement	Mean Score	Category
1	Being able to use information technology media for learning	3.57	High
2	Analyzing the students' characteristics before determining which media that will be used in the learning	3.53	High
3	Considering the available budget in determining the media that will be used	3.47	High
4	Before determining the media that will be used, the teachers analyze the characteristics of materials that will be produced in learning media	3.70	Extremely High
5	Designing and producing media based on the available steps	3.67	Extremely High

Based on the data in [Table 2](#), in the aspect of designing learning media, the teachers in Pelalawan and Rengat can use the information technology media for learning and it is categorized as "High". The teachers can also analyze the students' characteristics before determining the media that will be used in learning with a score in the "High" category. Besides, the teachers can consider the available budget in determining the media that will be used with a score in the "High" category. Besides analyzing the students' characteristics, the teachers can analyze the characteristics of materials that will be made in the learning media with a score in the "Extremely High" category. Then, the teachers can also design and produce media based on the available steps with a score in the "Extremely High" category. The mean score and the category of teachers' ability in producing online learning media is show in [Table 3](#).

Tabel 3. The Mean Score and the Category of Teachers' Ability in Producing Online Learning Media

No.	Statement	Mean Score	Category
1	Determining the type of media by referring to the result of need analysis	3.63	High
2	Creating/producing learning media based on the competency	3.63	High
3	Creating the media script/storyboard before producing media	3.13	High
4	Being able to develop learning media well	3.49	High
5	In producing media, I edit the media that has been made (modifying the available media)	3.29	High

Based on the data in [Table 3](#), in the aspect of designing learning media, the ability of teachers in Pelalawan and Rengat in determining the types of media by referring to the result of need analysis is in the "High" category. Next, the teachers' ability to devise/produce learning media based on their competency obtains a score in the "High" category. Besides, the teachers' ability to make media script/storyboard well before producing learning media obtains a score in the "High" category. Besides analyzing the students' characteristics, the teachers' ability in developing learning media well obtains a score in the "High" category. Further, in producing media, the teachers' ability in editing media that has been made (modifying the available media) with a score in the "High" category. The mean score and the category of teachers' ability in using online learning media is show in [Table 4](#).

Table 4. The Mean Score and the Category of Teachers' Ability in using Online Learning Media

No.	Statement	Mean Score	Category
1	Before being used in learning activities, I perform a trial test on the media that has been produced	3.16	High
2	If weaknesses or errors are encountered during the trial test, I improve the media that has been produced	3.28	High
3	The use of online learning media indirectly improve the students' knowledge of technology development	3.52	High
4	With the current competencies, I use some of the available online learning media.	3.52	High
5	I use many types of online learning media to support the learning (PowerPoint, Internet (YouTube, Zoom, Google Meet), Learning CDs, etc)	3.25	High

Based on the data presented in [Table 4](#), in the aspect of designing learning media, the ability of the teachers in Pelalawan and Rengat in determining the type of media by referring to the result of need analysis is in the “High” category. The teachers also can perform a trial test on the media that has been produced with a score in the “High” category. Moreover, the teachers’ ability in revising the media that has been produced obtains a score in the “High” category. The teachers’ ability in using online learning media that indirectly can improve the students’ knowledge of technology development obtains a score in the “High” category. Subsequently, in producing media, the teachers use some of the available online learning media and used several types of online learning media to support the learning (PowerPoint, Internet (YouTube, Zoom, Google meet), Learning CDs, etc) with a score in the “High” category.

Discussion

The teachers’ competency in designing learning media is categorized as “good”. In the pedagogical competency, it is mentioned that a teacher shall be able to use information and communication technology for the sake of learning ([Priyanto & Kock, 2021](#); [Yusrizal et al., 2017](#)). In SMK Negeri 3 Banda Aceh entitled “Teachers’ Competencies in Using Information and Technology (IT) as Media in Learning Process in SMK Negeri 3 Banda Aceh” revealed that the teachers’ competencies were still low in using IT. Many factors cause the teachers to not use IT as media in learning, for instance, the teachers’ poor knowledge in the IT sector due to lack of training on IT and no effort made by teachers in improving their competencies. Previous study stated that to have competencies and skills, the teachers were demanded to improve their knowledge of using and mastering technology both computer and other technology devices, that can be used in learning ([Payu et al., 2022](#); [Wagiran et al., 2019](#)). Therefore, the teachers are demanded to be able to use information and communication technology as media in a daily learning process. In designing learning media, the average competency owned by teachers with an excellent category is in the aspect of “teachers analyze the competency standards of materials that will be made in learning media” and the teachers determine the types of media by referring to the result of need analysis.

Besides, the teachers should be able to consider the budget for learning media. Previous study stated that New Star Cineplex in the practice of social media-based e-commerce using Facebook as media for promotion was conducted through 5 stages, namely determining missions, considering the budget, determining the media, determining the message that will be delivered, and evaluating the activity ([Kunto et al., 2021](#)). Developing and procuring learning media should consider the availability of budget. If a teacher has to make learning media by him/herself, it should be ensured if some teachers have knowledge and skills for developing the required learning media. If they do not exist, the amount of cost required for producing the media should be investigated. In this case, teachers are demanded to be able to design and develop the media based on the facilities and equipment they have ([Abdullah, 2017](#); [Inayahtur Rahma, 2019](#)). Therefore, the media (media by design) designed by the teachers shall be self-developed.

Moreover, in the aspect of the teachers’ ability to design, the study showed that teachers can produce online learning media. This study is supported by previous study stating that 60% of partner teachers have “sufficient” knowledge in producing ICT-based interactive learning media in learning ([Mardhatillah & Fahreza, 2017](#)). Other study stated that the teachers can determine the appropriate media for learning, either graphics, audio, and still projected media ([Angraini, 2017](#)). Selecting media shall not be done irresponsibly. It should be based on certain criteria. The mistake in selecting both the type of media and the topic for the media will result in an unwanted serious effect in the future. Many inquiries that we need to answer before determining a certain media. In general, the criteria that should be considered are the purpose of using media, the target of using media, the media characteristics, time, cost, and readiness. Therefore, the teachers are demanded to be able to develop their skills to produce learning media, especially if the media is not available at school ([Rohmah & Bukhori, 2020](#); [Shalikhah, 2017](#)). For that reason, the teachers should have sufficient knowledge and understanding of learning media. Here, we provide training to the teachers to be able to create more innovative and interesting learning.

When the teachers have been able to design and produce media, they should be able to make the media script too. A media script is a form of a learning material presentation through the designed media that is the description of the core of materials that have been well-arranged. Thus, to make the learning materials can be delivered through the media, the materials shall be presented in a written form or pictures known as the script of the media program ([Han & Ellis, 2019](#); [Nurrita, 2018](#)). The advancement of information technology becomes one of the opportunities that can be used by the teachers in improving their learning model. The number of available software can be used for developing learning media to be more interactive and interesting to attract the students’ interest. The available internet facility also becomes a big opportunity to enrich the content of materials that can be prepared to be delivered to the students. Furthermore previous study said that the teachers should be able to edit and review the media into share resources collaboratively ([Vartiainen et al., 2016](#)).

Further, the teachers shall also be able to use online learning media. It is crucial to achieving success in using Information and Communication Technology-based learning media. Using Information and Communication Technology-based learning media requires a teacher with the relevant skills, such as the teachers' understanding of hardware and software available in the computer (Adlin, SE., 2019; Vartiainen et al., 2016). The teachers shall understand the operation, namely the way to turn on the computer according to the correct procedure. The teachers shall be able to organize the data and using the computer for the learning process and the teachers have to know the procedure to close out the class lesson and turn off the computer based on the correct procedure. Previous study stated that one of the competency development that should be possessed by the teachers in the 4.0 industrial revolution era is the mastery of technology skills (Santoso, 2018). Other study also added that the mastery of literacy and science & technology for the teachers will minimize the rising problems in the online learning process during the Covid - 19 pandemic (Sudrajat, 2020). A study conducted by other study stated that online learning implementation to early childhood education conducted by assignment method was inextricably linked to the technology utilization (Nahdi et al., 2020).

Some media that can be used for media for the learning process in e-learning are as follows: (1) WhatsApp, an application that can be used for having communication in the form of texts, videos, and voices (Pakpahan & Fitriani, 2020; Riananda, 2016). As the statement published by the Ministry of Information and Communications on Monday, October 18, 2020, that the most frequently used and preferred application via the Internet is (1) WhatsApp with a percentage of 83% out of 171 people. (2) Zoom is a video sharing application with a capacity of more than 100 people, (3) YouTube is a video sharing platform, and (4) Google Classroom is a learning room for producing, sharing, and classifying the assignment without requiring any paper. It is reinforced by previous study in her study stating that the most effective application used in the learning process for elementary students is WhatsApp because it is easy to be used (Sofiyanti, 2020). Hence, the teachers of elementary students, during the Covid-19 pandemic era, are demanded to be literate in the information and communication technology to support their responsibilities and professionalism in the learning process. It becomes crucial because the key to successful online learning during the Covid-19 pandemic period is mastering technology skills.

4. CONCLUSION

Based on the result of the study above, it can conclude that the teachers' ability -is in the "High" category, indicating that the teachers in Pelalawan and Rengat can use online learning media well. The teachers can design, produce, and use online learning media. It is strongly supported by the teachers' mastery of the learning media utilization theories. The follow-up of this study intensifies the use of online learning media. Moreover, the teachers shall be more responsive in giving responses to the students' questions immediately after they respond or give some questions through the learning media. Besides, the school shall provide training to the teachers about designing and producing learning media that are eligible for online learning conditions.

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