

UTILIZATION OF INFORMATION AND COMMUNICATION TECHNOLOGY MEDIA IN DISTANCE LEARNING IN THE UPPER GRADE OF ELEMENTARY SCHOOL

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Abstract: Along with the Covid-19 pandemic and the issuance of a Circular Letter from the Minister of Education and Culture regarding the Implementation of Education in an Emergency Period, the Indonesian education system has also adapted by implementing distance learning. This distance learning forces teachers and students to change the concept of learning in class to learning in cyberspace using existing information and communication technology media. This study aims to identify and explain what information and communication technology media are used in distance learning in the upper grades of elementary schools, and how to implement their use. The collection of research data uses the library study method and uses secondary data collected from articles and journals. The criteria for the selected data are regarding the utilization of information and communication technology media in the upper grades of elementary schools during distance learning. From several sources obtained, finally the most relevant was selected and 13 articles were obtained. The results of this literature study research are information and communication technology media used during distance learning in upper grades in several elementary schools are Zoom, Google Classroom, gadgets, animated videos, Google Forms, Google Sites, Quizizz, MS 365, WhatsApp, WPS, Youtube and the Rumah Belajar portal. Blended learning and e-learning systems are also worth trying to use in distance learning.

Keywords: high grade, media use, online learning

INTRODUCTION

The use of information and communication technology in all fields also influences the world of education. Education in Indonesia must keep up with developments in information and communication technology so that it is not left behind by the times or other countries, so inevitably it must be able to take advantage of information and communication technology to facilitate the learning process. According to Zuhendri, Yunita, and Hayeni al (2021), the rapid development of information technology can affect the direction of learning so that: (1) the creation of online and offline learning patterns, (2) changing the face-to-face learning model to a blended learning model, and (3) the creation of distance learning [1].

Since Covid-19 was declared a pandemic on March 9 2020 by WHO, and continued with the publication of Circular Letter Number 4 of 2020 by the Minister of Education and Culture, Nadiem Makarim concerning Implementation of Education in the Emergency Period of Coronavirus Disease (Covid-19), the Indonesian education system has also adapt. This system is called distance learning (PJJ) or also known as online learning, or Learning from Home (BDR).

Based on the age range, elementary school students are divided into two, namely the lower grade and the upper grade. Upper grade students consist of grades four to grade six. The character of students in the upper grade is different from the lower grade, which can be seen in the child's learning process. Upper grade students are able to think and create broadly. Some of the characteristics of upper grade students according to Djamarah (2008: 125) include: 1) an interest in concrete everyday practical life, 2) very realistic, curious and eager to learn, 3) towards the end of this period there is an interest in things and special subjects, which experts who follow factor theory interpret as starting to highlight factors, 4) until about the age 11 years children need teachers or other adults, to complete their tasks and fulfill their desires, 5) children at this time like to form peer groups, usually to play together. It can be concluded, the age of upper grade students is in the concrete operational period, already able to develop logical thinking in understanding something, but is

still limited to concrete objects [2]. The age of these students has also entered the time to understand technology, so they are considered able to accept technology in the times [3].

On the positive side, teachers, students and parents of students who are not tech-savvy are willing to learn new things related to the use of information and communication technology. While on the negative side, teachers and students experience various obstacles, including (1) the ability of teachers (mastery of technology) to organize distance learning, especially old teachers, or traditional teachers so that online learning becomes unattractive; (2) students have limited internet access; (3) students' (economic and technological) abilities in participating in distance learning; and (4) students' interest in participating in distance learning [4]. This is in accordance with the opinion of Anggianita, Yusrina, and Rizal (2020) that online learning is not suitable for use at the elementary school level. Because basically the learning of elementary school children is still centered on the teacher. Online learning makes learning objectives not fully conveyed to students. Students have difficulty understanding the material when the teacher does not use appropriate information and communication technology media and according to the learning style of students, especially for elementary school upper grade students [5]. Distance learning can negatively affect the learning outcomes of upper grade students as students cannot adequately comprehend a teacher's explanations online via WhatsApp [6].

In addition, teachers also have to experience various types of difficulties in the form of mental, physical, and financial. Meanwhile, the long-term chaos is that the curriculum cannot be implemented properly so that competence achievements cannot be fully achieved [7].

Based on the above conditions, the authors feel the need to conduct a literature study related to the use of information and communication technology media in distance learning for elementary school seniors. This study aims to identify and explain what information and communication technology media are used by teachers and upper grade students, and how to implement them in distance learning.

METHODOLOGY

This study uses the literature study method which is intended to extract as much information as possible from library data so that it can be processed into research journal material. According to Sugiyono (2012) literature study is a theoretical study, references and other scientific literature related to culture, values and norms that develop in the social situation studied [8]. Researchers used data source triangulation techniques, with analysis carried out through four stages, namely (1) data collection, (2) data reduction, (3) data display, and (4) conclusions. The data used is secondary data collected from articles, journals and books on the Google Scholar search engine. Secondary data collection was carried out with the following criteria, namely articles in Indonesian and full text with the keyword upper grades of elementary school, distance learning/learning from home (BDR) and use of the media. From the search results, after being selected, 13 articles were obtained that had these three keywords.

RESULT AND DISCUSSION

Since Covid-19 was announced as a pandemic by WHO, not only the economic sector has been affected, but all aspects, including the education sector. Stopping the spread of Covid-19 is necessary to prevent the number of victims from increasing, especially among children. Because getting an education is a right for children while still paying attention to the health and safety of their souls [9].

In Indonesia, the Minister of Education and Culture, Nadiem Makarim, officially announced through a Circular Letter regarding the implementation of education during a pandemic, which is known as online or distance learning. Online or distance learning is a teaching and learning method that is usually carried out in schools, but is moved to homes in order to reduce interaction between teachers and students so as to break the chain of transmission of Covid-19 [10]. This distance learning is a learning that aims to reach massive and broad groups by utilizing the internet network [11]. The internet can connect students with teachers through e-learning pages, whatsapp groups, google classes, google doc or google forms, and zoom. The Ministry of Education and Culture also provides a free distance learning platform called "Rumah Belajar", the government even works with TVRI to deliver learning materials for several months in the Study at Home program for areas with poor internet connections [12].

In general there are three categories of utilization of information and communication technology in learning that should be carried out in distance learning systems, namely (1) as a tool in delivering learning material, including using computers, sound and infocus devices which can make it easier for students to obtain the material delivered by the teacher. Currently, most schools have utilized computers and other technologies as media in delivering teaching materials, especially at the university level. Apart from being used as a learning tool (media), students are also taught to operate computers and other supporting applications, (2) as a tool for distributing or delivering teaching materials using internet facilities, either in the form of webpages or through other applications that can make it easier for students to obtain information

from the material presented, and (3) the development of online-based communication media also makes it easy for teachers and students to communicate. So that in order to communicate about learning, students are no longer required to meet face to face because it can already be done with these media (such as WhatsApp, SMS, Facebook, and so on) [13].

Characteristics that need to be considered and understood by a teacher in choosing and utilizing information and communication technology media, namely: 1) Selection of media in accordance with the clarity of intent and purpose, 2) Understanding the characteristics of the media to be used, 3) selection of media with compare several media so that learning objectives can be achieved properly [7]. So that the use of information and communication technology can be very helpful in the distance learning process during a pandemic.

Based on the research method, the researcher obtained several previous studies that are relevant to the research topic, the following is the description:

The first research conducted by Utami (2021) regarding the use of Copvid (convert powerpoint to video) in class V students at SDN 06 Mukomuko City. The research was conducted to find out whether copvid information technology media could be used to increase the value of student learning outcomes or not. Because distance learning makes the value of student learning outcomes decrease. From the results of the data on student learning outcomes before using copvid and after using copvid, it is concluded that there was an increase in student learning outcomes by distance learning after using copvid [6].

The second research conducted by Dharma and Kristin (2021) regarding the effectiveness of distance learning using Zoom and Google Classroom on social studies learning activities for grade 5 students at SDN 1 Sidorejo, it was concluded that using Zoom is superior and more effective than Google classroom for social studies learning activities. Because when using Zoom, teachers and students can communicate like face-to-face learning at school. So that the teacher easily lures student stimulus to the material presented. In addition, the use of Zoom for distance learning can provoke students to discuss and conduct questions and answers so that students are able to be active in expressing opinions and can develop self-confidence in communicating with friends regarding learning. The chat feature on Zoom is used to ask questions when there are students who are less brave in expressing their opinions directly during the learning process. The disadvantages that occur during distance learning are unstable internet networks when using Zoom and there are some students who are less focused when using Zoom [14]. This is in accordance with the third research conducted by Solihin (2020) in class 5 of SDN 1 Selaawi Garut which resulted in the conclusion that the use of Zoom is very effective for good distance learning. Students respond positively and enthusiastically in participating in learning and increasing the ability of grade 5 students in understanding learning material. Students do not feel the difference between learning in class and distance learning. The drawback is that Zoom can only be accessed with a very large quota so that it becomes an obstacle if the government's student quota assistance program does not continue [15].

The fourth research conducted by Kurniasari, Pribowo, and Putra (2020) in grade 6 SD Muhammadiyah 18 Surabaya regarding the effectiveness of implementing learning from home during the Covid-19 pandemic resulted in the conclusion that the implementation of the Learning From Home (BDR) program was quite effective with a percentage of 60-79% with the use of gadgets, google classroom, and learning videos that are sufficiently interesting for students to complete each stage of learning and understand the material well. For quizzes, use Google Form, Quizizz, and MS 365. Weaknesses that occur during the BDR process are games/TV which make students less focused, students tend to want to finish quickly, and a lack of effective communication between teachers and students and between students and other students causes the BDR process becomes tedious. Application constraints that are complicated or not commonly used by students, as well as the ability of teachers and students who do not master the distance learning media platforms used [16].

The fifth research conducted by Nuraeni, Uswatun, and Nurasiah (2020) regarding the use of instructional videos shared via WhatsApp media in mathematics lessons on corner material in distance learning in class 4B Pintukisi Public Elementary School, Sukabumi City resulted in the conclusion that on indicators of students' cognitive understanding, namely (1) the ability to classify objects according to certain characteristics, students have a high level of cognitive understanding; (2) the ability to use, utilize, and select certain procedures or operations, students also have a high level of cognitive understanding; whereas in (3) the ability to apply concepts or problem solving algorithms, students have a low level of cognitive understanding [17].

According to the sixth research conducted by Nanda, Maula, and Sutisnawati (2021) regarding the perception of the use of information and communication technology in the upper grades (4, 5, and 6) Tegallega Sukabumi SDN for natural science subject matter, it concluded that the information and communication technology media used were WhatsApp, Google Classroom, Zoom, and WPS. However, the use of some of these media makes the majority of students have negative perceptions and consider distance

learning to be less effective. This is because the majority of students do not understand the material presented, and the way the material is delivered is considered less interesting [18].

The seventh research conducted by Ma'ruifah, Gestardi, and Chumdari (2021) in class 5 of SDN Kembangbilo I Tuban regarding the use of technology in distance learning resulted in the conclusion that the information and communication technology media used were WhatsApp, Zoom, Google Classroom, and Google Form. The use of this technology is a solution to the current pandemic situation through various applications that have various features. Of course there are some obstacles that occur such as signal problems and students who don't have smartphones to carry out the learning process [3].

The eighth research conducted by Zuhendri, Yunita, and Hayeni (2021) regarding the effectiveness of using information technology in distance learning in grades 4, 5, and 6 of SDN 04 Koto Tuo Sulit Air during the Covid-19 period resulted in the conclusion that as many as 89.47% of students stated that the use of information technology was effective for distance learning, and as many as 50.88% of students stated that the most effective platform for distance learning was WhatsApp [1].

The ninth research conducted by Adzkiya and Suryawaman (2021) regarding the introduction and use of Google Sites learning media in English lessons for fifth grade students at SDN Palumbonsari 3 resulted in the conclusion that Google Sites media is considered as a simple learning media that is practical and easy to use and understand by teachers and students. Students find it easier to understand material with innovative materials. Students are more comfortable learning because Google Sites presents material in the form of colored text, images, video and audio [19].

The tenth research by Tamara and Thohir (2022) regarding the analysis of the effectiveness of using YouTube as a distance learning medium for 5th grade elementary school students in Nganjuk district resulted in the conclusion that using YouTube can attract students' interest, be able to clarify material, and can motivate students to learn and be able to improve student learning outcomes. The distance learning process becomes more effective [20].

This is different from the eleventh research conducted by Yanti, Kuntarto, and Kurniawan (2020) in class 5 at SDN 112/I Perumnas and SDN 13/I Rengas Condong, Muara Bulian. The results of this study are that these two elementary schools utilize the Rumah Belajar portal as a medium for distance learning. Features that are often used by teachers in the learning process are Learning Resources which provide a media catalog containing audio, animated, visual and audiovisual content; Electronic School Books (ESB), which are books in electronic files that can be downloaded, printed and reproduced by anyone; and Question Bank which is a collection of questions based on a particular topic and its discussion. While for other features the teacher has never tried it for the learning process because it is still in the stage of further learning and planning according to the material needed in learning. Teachers admit that they have no difficulty at all when accessing these three features because the material needed has been grouped by class, subject and certain topics, making it easier for teachers to select and sort material according to the learning objectives to be achieved by students. The use of the Rumah Belajar portal has shown that there are different learning experiences for students at each meeting. Students feel interested, enthusiastic and happy during the learning activities taking place [11].

These last two studies were not carried out during a pandemic, but carried out distance learning. Like the twelfth research conducted by Wicaksono and Rachmadyan (2017) regarding blended learning through Google Classroom in the upper grades of elementary schools. The advantage of blended learning is that it combines two methods, conventional and distance learning to make students feel comfortable and active in constructing their knowledge. The use of Google Classroom is targeted at upper grade students, because they have a concrete interest in practical everyday life. Upper grade students are also in the stage of investigating, trying, and experimenting, are already technologically literate, and ready to accept the times through existing technology [21]. Even though there was no Covid-19 pandemic when this research took place, blended learning can be used as an alternative system for distance learning.

The thirteenth research by Ibrahim and Suardiman (2014) regarding the effect of the use of e-learning on the motivation and learning achievement of grade 4 students at SDN Tahunan Yogyakarta. This study resulted in the conclusion that the use of e-learning has a positive effect on motivation and student achievement. The positive effect is in the form of differences in learning achievement and better motivation to learn mathematics students due to the use of e-learning. Students become curious and become more excited and motivated to find out more about the lessons presented with e-learning. The e-learning used is divided into two, namely learning software and electronic devices. Learning software is software that contains school learning materials whose contents have been adjusted to the applicable curriculum, some are stand-alone, that is, contain all the material needed, so that they can stand alone without the help of other learning sources. The presentation also follows learning theories so that students can use the software directly. While electronic devices are electronic devices or tools used to run or display learning software. Some of these devices have their respective functions that complement one another. Some examples of electronic devices that can run learning software are taken from Wikipedia. The characteristic of e-learning used in this study is an effective

learning process that is created by combining learning content that is delivered digitally using electronic devices in the learning process of students in elementary schools [22].

2 CONCLUSION

1
Based on the discussion above, it can be concluded that information and communication technology media used in distance learning in the upper grades in several elementary schools in Indonesia are Zoom, Google Classroom, gadgets, animated videos, Google Forms, Google Sites, Quizizz, MS 365, WhatsApp, WPS, Youtube and the Rumah Belajar portal. Blended learning and e-learning systems are also worth trying to use in distance learning.

The benefits expected when using information and communication technology media in the discussion above are in order to increase students' understanding, can stimulate students' thoughts, feelings, interests and attention so that discussions can go on and be active, can increase students' cognitive understanding of mathematics, students become active and enthusiastic in learning, feel that there is no difference between distance learning and offline, has a positive effect on student motivation and achievement, and is effective for use in the upper grades of elementary schools in the learning process because it is appropriate for the age of upper graders.

However, there are also those who consider its use to be less effective due to complicated application constraints or students not used to it, ways of delivering material that are considered less 1 attractive, students who do not have smartphones, and the ability of teachers and students who do not master the information and communication technology media platforms used.

5
In the end, collaboration between teachers and students is needed so that distance learning can carried out properly and effectively in utilizing the information and communication technology media. It takes more creativity from teachers to attract more interest, motivation and curiosity of high school students to learn. Schools are also required to facilitate and support teachers in implementing distance learning, such as holding training or seminars to improve teacher quality in the use of information and communication technology. Equal distribution of internet and electricity facilities by the government is also a very important role so that distance learning in the future runs well and evenly.

1
The role of parents of students is also very ver influential, if they do not help and supervise their children studying at home, or if they do not understand the use of information and communication technology media at home properly, students' distance learning from home may not be efficient and carried out properly.

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