

UTILIZATION OF DEVICES AS LEARNING MEDIA IN INCREASING STUDENT ACHIEVEMENT DURING THE COVID-19 PANDEMIC

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Abstract

Learning during the Covid-19 pandemic can be done remotely, so teachers are required to be able to use information and communication technology-based learning, one of which is by using gadgets. Students can study anytime and anywhere. The problem in this research is how to use gadgets as learning media to improve student achievement. Qualitative research approach with case study method at SDN Budikarya. The study results: using gadgets as media and assessing learning outcomes has been going well. Student learning achievement has increased. The supporting factor for the success of distance learning is the independent ownership of the device from the students, while the inhibiting factor is the time that students spend playing is far greater than the time for studying. This device should be balanced with the use of the school LMS to integrate all data. Teachers and parents should check students' devices regularly.

Keywords: Gadgets; Learning Media; Student Achievement.

Preliminary

During a pandemic, learning must be carried out by adhering to strict health protocols. Distance learning with mobile media is an alternative to solving this problem. The conditions faced today follow the opinion of Uno & Lamatenggo, (2011), where the tendencies of education in Indonesia in the future are: (1) The development of open education with distance learning mode. (2) Sharing of shared resources between Educational Institutions Exercise in a network of libraries and other educational instruments (teachers, laboratories) turns into a source of information and (3) The use of interactive information technology devices, such as CD-ROMs, multimedia (devices), in education gradually replace television and video.

The change in the learning paradigm in the very fast Covid-19 pandemic forced the teachers to adapt well, while the conditions in the field were not a few of these teachers were reluctant to move from their comfort zone. They do not want to try new things and have difficulty using computers or gadgets. This study aims to determine teachers' performance in using gadgets as learning media, learning achievement outcomes, supporting factors, and inhibiting factors for using gadgets as media and increasing student achievement.

Method

This research was conducted using a qualitative approach with case study research methods. This research was carried out during the pandemic in 2021 with the research location at SDN Budikarya, Cipeundeuy District, West Bandung Regency. Meanwhile, the subjects of this study were elementary school students and teachers who carried out online

learning by utilizing research instruments in the form of google forms to collect data from students and interviews with teachers. Data analysis was used qualitatively with data reduction procedures, tabulation, verification, and conclusion.

Results and Discussion

Teacher's Ability to Use Devices as Media and Assessment of Learning Outcomes

According to Siswoyo (2013), "With technological advances, education development is getting more and more changes. Learning technology is currently being applied by utilizing processes and products of communication and information technology to solve educational problems.

By considering the advantages of learning technology, appropriate and optimal utilization strategies can be drawn up to improve the quality, efficiency, and effectiveness of education and learning at various levels of academic units.

Research findings related to the use of gadgets in learning activities, teacher respondents said that gadgets were used as (1) the leading media in building communication with students and their parents or guardians, (2) as a tool to convey tasks that students had to do, (3) as the leading aid media in learning activities. Besides gadgets, teachers also use modules, Student Worksheets, self-made worksheets, and daily test sheets in distance learning.

Using devices in distance learning is considered very helpful in the smooth learning process. This is following the Circular of the Secretary-General number 15 of 2020 concerning Guidelines for the Implementation of Learning From Home (BDR) during the Covid-19 emergency that the purpose of implementing BDR is to ensure the fulfillment of the rights of students to obtain educational services during the Covid-19 emergency, to protect the citizens of the education unit. from the impact of the covid-19 pandemic, preventing the spread and transmission of covid-19 in education units and ensuring the fulfillment of psychosocial support for educators, students, and parents.

Saragih (2020) explains that the prohibition of face-to-face learning in schools requires creative teachers in distance learning or online learning. The distance learning system is a learning system that has existed since the middle of the 18th century. Since the beginning, distance learning has used technology, from the most straightforward technique to the latest.

What the Budikarya Elementary School teachers have done in using gadgets as learning media during the pandemic is very appropriate, considering that gadgets have advantages that can meet the learning media needs of teachers and students. This is in line

with the opinion of Benny (2017), which states that gadgets as learning media are considered appropriate because, in the learning process, the media plays a role in the process of delivering and sending messages and information. This opinion is further strengthened by the fact that the implementation of online learning cannot be separated from the role of technology because technology facilitates the learning process. This is in line with the opinion of Tounder et al. in Selwyn (2011), who said that digital technology in educational institutions is a means of support in learning, both as a means of accessing the information on learning resources or as a means of supporting learning activities and related to assignments.

The findings of the researcher's interview with the principal in the form of processing data documents from the results of the RPP study where the teacher's ability is insufficient, reasonable, and excellent condition. The ability of teachers to carry out the learning process in grades four and five are considered quite good, while the teaching abilities of teachers in grade six are in good condition. The teaching abilities of PJOK and PAI teachers showed outstanding teaching performance. When viewed from the age of the teachers, there is a positive correlation between the age of the teachers and their ability to adapt to pandemic situations and conditions. Young teachers are much more alert in responding to changes, so they can adapt quickly when carrying out their duties. The use of WhatsApp application that teachers at Budikarya Elementary School generally use is done by creating a Whatsapp group (WAG) of teachers and students in each class. Through WAG, teachers can send messages in the form of information, and share learning materials in the form of videos, photos, google forms, word files, power points, and so on. After sharing videos, photos, power points, and so on on the WAG, the teacher can ask students to observe, discuss, ask questions, and do assignments from the material presented through the WAG. According to Saragih (2020), learning using WhatsApp group media is expected to be a medium for teacher interaction with students in the learning process. A similar opinion was expressed by Lestari (2021) that with the use of this media, it is hoped that students can have the desired orientation. The orientation is in the form of knowledge, morals, and spirituality.

During the pandemic, teachers must be able to choose learning media that are easily accessible to all students without reducing the meaning of learning objectives. Distance learning will be better and more effective when the teaching materials and assignments are familiar, intimate, and touch the students themselves. Ausebel in Dahar (1996) assert that the meaningfulness of learning can be achieved when there is a substantive relationship between aspects of concepts, information, or new situations with the relevant components in the

structure within students. Both are in derivative, corrective, supportive, and qualitative relationships.

The development of science and technology encourages efforts to renew and utilize technology in the learning process. Distance learning technology is carried out by interaction using internet technology. Thus, the continuity of distance learning cannot be separated from the availability of internet infrastructure as the leading technology. A virtual class replaces the existence of a class where learning is held, called a learning management system (LMS). Supportive infrastructure conditions and skilled human resources using technology are indispensable in implementing distance learning. According to Gilbert & Jones (2001) and Michael (2013) in Dian Wahyuningsih (2017) that E-Learning is all forms of learning activities that utilize electronic media for learning. E-learning was created to facilitate the implementation of distance learning or distance learning. Furthermore, the direction of E-Learning development refers to the principle of active student learning (active student learning), the principle of participatory learning (participation learning), and the principle of reactive teaching (Fajar, 2009). Thus, through E-Learning, it is hoped that students will be more active and participate in the learning process, and the teacher and students will be more responsive or react immediately when something requires a joint solution.

Distance learning by utilizing mobile media is a component of learning resources that is very much needed by the community. Media is a tool in the learning process. Everything that can be used to stimulate learners' thoughts, feelings, attention, and abilities or skills through communication activities that encourage the learning process can be said to be a learning medium. Media that is widely used in learning activities is the type of multimedia.

The gadget is a communication device that enters all aspects of people's lives. Currently, the gadget is an application of information technology that the community needs. A gadget is a mobile device with an operating system like a computer. The device can implement various forms of multimedia. Like computers, the advantages of gadgets are that they have high mobility and can be operated easily. The high number of gadget users among students must be balanced with the ability of teachers to operate devices optimally. In the modern era, the learning process has changed. The electronic learning system (e-learning) makes it easier for students to learn without direct interaction. The device's presence as a medium to support the learning process is very much needed to implement the system. Accompanied by the internet, the sophistication of gadgets to access various kinds of information will be faster and easier. The learning process between teachers and students will also be more interactive. According to Jazi (2013), gadgets manifest the realization of

ubiquitous computing (ubicom), where the technology allows the computing process to be integrated with various human daily activities with an unlimited range in one area or scope area.

Student Achievement Results in High Class

E-learning has a significant effect on student learning, but the effect is not significant for learning achievement and time to complete the lesson. According to Sadikin & Hakim (2019), "Education is also important in supporting human life. Education is one of the basic needs in determining human life in order to become a person of noble character." According to Ibrahim (2000), "The purpose of education is essential to humanize humans, change attitudes and behavior and increase knowledge to realize the quality of human life for the better." While Lazwardi (2017) argues that education is the obligation of every human being without exception, all are entitled to infrastructure and media to support the learning process of student achievement. Referring to the two opinions above, it is necessary to make efforts to improve the quality of education. Learning innovation is one thing that gets attention, in addition to other learning support facilities.

Many factors influence or play a role in achieving student learning goals. One of them is the technology used in educational and learning activities. According to Siswoyo (2013), "With technological advances, education development is getting more and more changes. Today's learning technology is applied by utilizing processes and products of communication and information technology to solve educational problems. By taking into account, the advantages of learning technology, appropriate and optimal utilization strategies can be drawn up to improve the quality, efficiency, and effectiveness of education and learning at various levels of education units.

The results showed that the average value of students' daily tests increased compared to learning before the pandemic. In addition, the teachers said that students' grades generally experienced a significant increase. However, when the teacher conducts face-to-face activities randomly to cross-check the value data, few find a discrepancy between the acquisition of scores and the student's ability. Allegedly, when students do assignments or daily tests in their respective homes, they do not do it independently but receive direct assistance from their families.

According to the researcher, social studies learning materials in elementary schools, which are full of abstract concepts, understandings, and principles, need to get serious attention to make the learning objectives more meaningful. Although it is necessary to pay attention to the significance of this learning goal, it will be better and more effective when the

teaching materials and assignments are felt to be familiar, intimate, and touch the students themselves. Ausebel in Dahar (1996) assert that the meaningfulness of learning can be achieved when there is a substantive relationship between aspects of concepts, information, or new situations with the relevant components in the structure within students. Both are in derivative, corrective, supportive, and qualitative relationships.

Researchers see that distance learning results in reduced meaningfulness of the learning outcomes themselves, and of course, the objectives of social studies education have not been fully achieved. The objectives of social studies education are stated in the Ministerial Decree no. 22 of 2006 concerning Content Standards which clearly states that the objectives of social studies subjects at the SD/MI education unit level are; (1) recognize concepts related to people's lives and their environment, (2) have the essential ability to think logically and critically, curiosity, inquiry, problem-solving and skills in social life, (3) have a commitment and awareness of values social and human values, (4) can communicate, cooperate and compete in a pluralistic society, local, national and global levels.

This phenomenon implies that distance learning conducted at SDN Budikarya seems to reduce the meaning or values of face-to-face learning. This fact cannot be denied; given the limited interaction between teachers and students, meaningful learning is challenging to create.

Supporting Factors for Using Devices as Media and Improving Student Achievement

The success of distance learning cannot be separated from the factors that support the use of gadgets as learning media found by researchers at the research location. It was found that the consistent efforts of supervisors and principals through a series of structured activities were very supportive of the success of distance learning. First, the supervisor provides direction regarding distance learning activities, then followed up by the principal in the form of preparing the principal's work program and school work program during the pandemic, which is supported by the School Work Plan and Budget (RKAS), which shows the distribution of the use of the school's financial budget following the needs of the community school during a pandemic.

Distance learning cannot be separated from e-learning, not just sharing learning materials on the internet. Apart from online learning materials, there is also an online learning process. The main difference between online learning and online learning materials is the interaction during the learning process. Interaction in learning consists of interaction between the learner and the teacher, the facilitator (teacher), fellow learners, and the learning material. According to Moore in Belawati Tian (2020: 7), the three types of interactions that occur in

online learning will create a learning experience. Dabbagh and Ritland (2005) explain the notion of online learning as an open and distributed learning system using pedagogical tools (educational aids), which is made possible through the internet and network-based technology to facilitate the formation of learning processes and knowledge through meaningful action and interaction.

Referring to the opinions of these experts, it can be concluded that distance learning is learning teachers and students carry that out at the same time and in separate places, then interaction occurs during the learning process using gadgets as learning media. The supporting factor for the success of distance learning is ownership of a device with complete features; however, the use of this device as a learning medium must still be the monitoring of parents to minimize the negative impact of using the device itself.

Inhibiting Factors in Using Devices as Media and Improving Student Achievement

The research findings show that not all students are in families that can provide learning facilities that suit their needs, so not all students have devices. This causes them to have to wait for the presence of their parents or family, who are willing to lend their gadgets for their learning purposes. As a result, they do the task slower than the rest of their friends. Therefore, the limited possession of a device for students significantly affects the implementation of online learning and cannot be separated from the role of technology because technology facilitates the learning process. This is in line with the opinion of Tounder et al. (in Selwyn, 2011), who says that digital technology in educational institutions is a means of supporting learning, both as a means of accessing the information on learning resources or as a means of supporting learning activities and related to assignments.

Along with the development of technology that continues to grow, many platforms currently help implement online learning, such as Google Forms and WA. A gadget is a device or instrument with a practical purpose and function significantly more sophisticated than the technology created before. (Wikipedia Indonesia, 2020). Furthermore, Hamalik (1984) explains that the media is an educational method of tools and techniques used to more efficiently communicate interactions between teachers and students in schools' education and learning process.

Like a coin, gadgets have two opposing sides in their function and role in learning. On the one hand, gadgets function optimally as the primary tool in implementing remote learning and assessment. On the other hand, it tempts students to get involved in the world of playing, considering that the device has interesting features, both in social media and online games. As a result, the time students use devices to play is much greater than the time spent studying.

This, of course, harms students' physical and psychological health. The results of Yuniati's research (2013) state that the negative impact of using gadgets makes students addicted to gadgets and lose track of time. As a result of forgetting the time, it makes them lazy to study, lazy to help their parents, to become anti-social because they are too busy with their gadgets and think that there is no need to meet people around them directly but enough to chat via social media.

Conclusion

The research finding is a synthesis between the results of data analysis and the discussion of this study that SDN Budikarya teachers' ability to use gadgets as media and assess learning outcomes is good. When viewed from the age of the teachers, it can be seen that there is a mutually influencing relationship between the teachers' ages and their ability to use gadgets as learning media. Young teachers are much more alert in responding to changes, so they can adapt quickly when carrying out their duties.

The results of student achievement in the average class have increased. However, distance learning has an impact on reducing the meaningfulness of the learning outcomes themselves, and of course, the objectives of social studies education have not been fully achieved. The big challenge for today's generation of students is an uncertain, fast-changing, ambiguous, and unpredictable world. In dealing with it, human qualities, which have a set of problem-solving skills that are ready to be utilized when dealing with new situations, challenges and problems that are unfamiliar and have never been faced before, are needed.

Factors that support the use of gadgets as a medium and increase student learning achievement to facilitate teachers in sending and receiving teaching materials, assignments, and assessment of learning outcomes. However, the use of gadgets as learning media must still be monitored by parents to minimize the negative impact of using gadgets by students themselves. Students are much more skilled at using gadgets than their parents and teachers. High curiosity and the courage to try to open and use various features in the device make students more quickly understand the device's function that parents and teachers previously may not know.

The inhibiting factor for using gadgets as media and increasing student achievement is that individual device ownership is still low. In addition, gadgets tempt students to get involved in the world of playing, considering that gadgets have exciting features. As a result, the time students use devices to play is much greater than the time spent studying. This, of course, negatively affects students' physical and psychological health. As a result, teachers still have to organize online and offline learning modes. Therefore, the Visiting Teaching

Program (Jarungjung) is beneficial for students who do not have a device so that students can still enjoy the implementation of distance learning.

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