

The Impact of Gadgets on Student Learning Outcomes: a Case Study in Indonesia Junior High School Students

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Abstract

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This study aims to determine the effect of gadget the outcomes learning in Indonesia junior high school students. This research is a type of qualitative research using case study method. Data collection techniques using observation, interviews and documentation. Data analysis was consists of data reduction steps, data presentation and drawing conclusions. The results of this research show that : (1) The use of gadgets among junior high school students is not only used as a means of communication but there are some students who often play gadgets instead of studying; 2) The positive effect of using gadgets is that students are able to get information and communication easily while the negative effect of using gadgets is that students forget time to study so that it can have an effect on student outcomes learning. The conclusion is this study is that excessive use of gadgets will have an effect on student outcomes learning.

Keywords: Gadget, Learning outcomes, junior high school students

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INTRODUCTION

In this modern era, technological developments continue to grow, because technological developments will go according to the development of increasingly high science. Technology was created to provide convenience for human life in carrying out daily activities and provide positive value (Indrawarsari, 2019). However, even though it was originally created to produce positive benefits, on the other hand it is also possible to use it for negative things. Many advanced technologies have been created, for example gadgets (Mosquera, Valles & de Luna, 2016). Technological progress has made such a big change in human life in various fields and has had such a big influence on social life (Sahetapy, 2021).

Gadgets are a technological tool that is currently growing rapidly and has special functions, including smartphones and tablets (Fauzi, 2018). Gadgets with various applications can present various social media so that they are often misused and also have a bad impact on student academic scores (Das, 2018). It is not surprising that gadgets in this era are much liked by children. Because gadgets in the current era have turned into interesting items, especially in touchscreen technology and have also been equipped with various applications that attract attention, especially in children. The use of gadgets among children,



adolescents and adults, there are various purposes for someone using gadgets, for example to find information or just to play games (Budiharto et al., 2020).

Gadgets include being a means of facilitating long-distance communication with other people, both between cities and abroad, and can also be used as information media for Warsita (Fatimatuz, 2015). But most people now cannot even control themselves to use the gadget itself and instead it has an impact that is not good for their lives Warsita (Fatimatuz, 2015). Teenagers who depend on gadgets cause anti-social behavior. Excessive use of gadgets can result in losses. Losses are not only in terms of health but in terms of economy, gadgets are indeed one of the things that can speed up the completion of various kinds of tasks and work so that the world is full of gadgets which are the main needs in the world of the internet or the world of information and the latest technology today (Indraswari, 2019; Fauzi, 2018). Many people know the benefits and uses of gadgets themselves, such as making phone calls, recording pictures, recording videos, recording voices, playing videos, playing music, accessing the internet, managing data, and so on (Indraswari, 2019).

Gadget is a technology that is growing rapidly among the people. Gadgets are widely used among students, especially in using gadgets (Muthi'ah, 2021). With the emergence of gadgets in which there are internet connection facilities, students can take advantage of the internet connection to access various kinds of information and references related to various subjects. Therefore, in this digital era students can now learn through various electronic media. Learning resources owned by students do not only come from books but with internet access facilities found in these media, with this media students are able to develop and utilize gadgets to obtain and access various kinds of information and also additional references for students. so that students are able to improve their learning outcomes. The wider the knowledge of students, the more competencies that will be achieved by students. This is supported by Arifin's opinion (2011) which states that technological developments should be utilized as best as possible, so students are not only limited to handbooks, but they can learn to use the internet network to get free e-books to support the learning process. .

Learning outcomes are the realization of the potential skills or capacities possessed by a person after participating in learning activities (Priyatna & Ngalmun, 2021). Mastery of learning outcomes by a person can be seen from his behavior, both behavior in the form of mastery of knowledge, thinking skills and motor skills (Irawati, 2018). Many things affect student learning outcomes such as the teaching strategies given by the teacher, the ability of the teacher to teach, the time and place of learning, and learning facilities (Irawati, 2018). Excessive use of gadgets can have a negative effect on student learning outcomes, for example student learning outcomes will decrease (Das, 2018). In essence, all that is excessive will not have a good impact on the individual. But if individuals can adjust their use, gadgets also have a positive influence on student learning outcomes (Harahap et al, 2018). The effect of gadgets on other student learning outcomes is that students rely more on gadgets than having to learn to use books (Harfiyanto, Cahyo & Tjaturahono, 2015)

Based on the observations that have been made, it is found that many students use gadgets. Students use gadgets to get rid of boredom during recess,

students use gadgets for entertainment during recess such as playing games and opening social media, but there are students who use gadgets during recess to looking for additional information that students do not know yet. There are many application features available on gadgets, not only applications for learning to recognize letters or pictures, but also entertainment applications such as social media, videos, pictures, and even online games. Students often use gadgets to play games, listen to songs, open tick tock and open YouTube. Students spend time during recess playing gadgets and do not pay attention to the brightness of the screen and the distance of the screen from the student's eyes, which will ultimately have an impact on the vision and health of the student's eyes. Staring at electronic screens continuously for a long time will cause various problems such as eye irritation or temporary difficulty focusing. It can be seen that some children avoid socializing with the environment, get bored easily and have difficulty concentrating on real life.

Based on the background above, it can be seen that the use of gadgets is more widely used to open social media and play online games. To examine more deeply the impact of using gadgets, the authors are interested in conducting research that examines the impact of using gadgets on learning outcomes for junior high school students.

RESEARCH METHOD

Research Design and Sample

This research method is a case study. The case study method is research conducted on objects referred to as cases which are carried out in its entirety, comprehensively and in depth using various data sources (Gunawan, 2013). The sample of this study consisted of eighth graders of junior high school as well as 4 teachers and 1 school principal. The research sample was selected using a purposive sampling technique in which the researcher chose the research sample based on the involvement of the research sample with the research topic.

Data Collection Technique

Data collection techniques are the most important step in research, because the main purpose of this goal is to get data. Without knowing data collection techniques, researchers will not get data that meets the established data standards. The data collection techniques of this research are observation, interviews and document study. Observation means collecting data directly from the field (Haryono, 2020). The data observed in this study are in the form of an overview of attitudes, behavior, behavior, actions, overall interactions between students related to the use of gadgets and their impact on learning outcomes.

Furthermore, the interview technique is a method of collecting data by asking questions orally to the informants. Ryan, Coughan & Cronin (2009) explained that an interview is a meeting of two people to exchange information and ideas through question and answer, so that meaning can be constructed in a particular topic. Interviews in this study were used to obtain data or information about the impact of using gadgets on student learning outcomes. The interview technique used is a structured interview technique where the researcher already knows about the questions to be asked and the researcher uses an interview

guideline instrument as a reference (Bolderson, 2012). There are two interview guidelines used by researchers, namely interview guidelines for students and interview guidelines for teachers. Researchers interviewed students and teachers who use gadgets. Furthermore, documentation studies are used to collect data from non-human sources, these sources consist of documents and records. Records for any writing or questions prepared by or for individuals or organizations with the aim of proving the existence of an event (Moleong, 2014).

Data Analysis Technique

The qualitative data analysis model used in this study is qualitative data analysis developed by Miles and Huberman (2014) which consists of data reduction steps, data presentation and drawing conclusions. Reducing data is an activity of summarizing, choosing the main things, focusing on things that are important and removing things that are not needed and looking for themes and patterns. Thus the reduced data will provide a clear picture, and make it easier for researchers to carry out further data collection. After the data is reduced, the next step is to present the data. Presentation of data in qualitative research can be done in the form of tables, charts, brief descriptions, relationships between categories, flowcharts and the like. Whereas in qualitative it is often presented with narrative text. The third step in data analysis in qualitative research according to Miles and Huberman (2014) is to draw conclusions and verify. The process of taking the essence of the data presentation is organized in the form of sentence statements. Making conclusions must be based on the description of the data. Because the data collected will mean nothing without being analyzed and given meaning through the interpretation of the data. Verification is done by reviewing all the researchers' initial thoughts when writing, reviewing and re-selecting field notes. Re-discuss the research findings and confirm with the object of study.

RESEARCH RESULTS AND DISCUSSION

Type Of Gadget Usage

Based on the results of interviews in the use of gadgets, there are some students who often play gadgets instead of studying. They use gadgets not only for studying, but they use gadgets for school work as well, almost all students have gadgets. Students who have gadgets always bring these objects to school. However, most of them did not use it during the KBM and chose to keep it in their bags and only a few people used gadgets during the KBM. Gadgets are used to open social media, search, and play games during recess. Most students open online games during recess to fill their free time. Based on the results of the interview put forward by student A who stated that,

"Use of gadgets for students is usually used to play online games such as legendary cars and free fairs. Of the total usage, students can spend 3 hours of their time playing gadgets. While the most common among students is the use of gadgets to open their social media such as tick tock, Instagram, Twitter and many more. Meanwhile, only a very few use gadgets to communicate with their parents and find information about learning on the internet. The

school itself, of course, prohibits its students from bringing these gadgets into the school environment because this can disrupt the learning process, but some of them secretly bring gadgets into the school environment. The school also did not remain silent in responding to this. To give a deterrent effect to students who bring gadgets to the school environment, the school organizes raids on students who bring gadgets, then the gadgets that have been raided must be taken by the parents of these students.

The above statement is supported by the results of interviews put forward by the B-1 teacher who said that,

"For the use of gadgets among students who have started to know and use them, the use of gadgets is basically prohibited or limited to use when in class but returns to the teacher, if the teacher allows to search for some information on the internet it is usually allowed but it is prohibited to use for class. For its own use there are students who spend 3 hours of their time playing gadgets and there are also students who spend hours on their gadgets, of course this really disturbs learning.



Figure 1. Type of Gadget Usage

The researcher concluded that the use of gadgets is included in high use and low use, it can be said to be high use because the use of gadgets is at an intensity of more than 3 hours a day and usage can be said to be low use because it is at an intensity of use of around less than 3 hours a day. Students who fall into the category of not dependent on gadgets if the student uses the gadget at an intensity of less than 3 hours a day, while students are included in the category of gadget dependence if the student uses the gadget at an intensity of more than 3 hours a day.

Juditha (2011) and Fajrin (2015) define gadgets as objects with unique characteristics, have high performance units and are related to size and cost. In the beginning, gadgets were more focused on a communication tool, since the times have advanced so that this tool has been sophisticated with the features in it so that it allows its users to do various things with just one gadget, starting from playing games, making calls, playing social media, and so on. many more.

However, there are some effects of using gadgets when excessive. The negative impact of gadgets can make us have headaches, neck and back pain, stress, lack of focus (study concentration), behavioral disorders, potential accidents (23% of accidents occur when drivers play cellphones), gadget addiction, etc. (Budiharto et al., 2020; Sahetapy, 2021).

The positive and negative impacts of using gadgets on student learning outcomes

The impact that can be caused by the use of gadgets is increasingly diverse, ranging from social to health aspects. Excessive use of gadgets not only has a positive impact on students but also has a negative impact. The positive impact obtained from the use of gadgets is that students are able to find information and communication easily, but excessive use of gadgets will have a negative impact on student learning outcomes.

In accordance with the results of the interview what is the impact of using gadgets on student learning outcomes by student A which states that,

"The positive impact of using gadgets is that it is easier for students to find the information they need. Students can access the internet at any time to find information about learning and students can also communicate remotely, for example with their parents at home. While the negative impact of using this gadget is that students lose track of time and are lazy when studying, students focus more on gadgets than on subject matter, of course this will greatly affect student academic grades, too often playing gadgets will also have a very bad impact on students' eye health."



Figure 2. Use of gadgets for negative things such as playing games during lessons in secret

Based on the results of interviews what is the impact of using gadgets on student learning outcomes by B-5 teachers who state that,

"When viewed from a positive perspective, it certainly has a good impact on students' academic grades, because with the existence of gadgets, students' knowledge becomes wider and increases. Students can find the information they need only by accessing the

internet once, whereas if viewed from a negative perspective, it will certainly have a very bad impact on student academic grades, especially if the student is already dependent on his gadget, of course this will be very difficult. Too often playing gadgets regardless of time will certainly have a very bad impact on student learning outcomes, many of them students sometimes say harsh words that are not appropriate for a student to say.



Figure 3. The use of gadgets for positive things such as searching for information when learning takes place

Researchers can conclude that the impact of using gadgets on student learning outcomes is divided into two, namely positive impacts and negative impacts. The positive impact of gadgets on student learning outcomes is that students are able to find knowledge and information that they have not learned in the school environment, facilitate long-distance communication, and train children's creativity, namely technological advances have created a variety of creative and challenging games. While the negative impact of gadgets on student learning outcomes is that students become dependent on gadgets so that this is very dangerous for the students themselves, dependence on playing gadgets makes students forget their study time so this is very influential on student learning outcomes. Students who are dependent on their gadgets will certainly not have a good impact on students because this is very detrimental to health, disrupts student development, is prone to crime, and greatly affects the behavior of the students themselves.

According to research conducted by Rahayu (2018) which shows that student learning outcomes do not have a significant increase even with source books or searching for information through devices. It can be concluded that student learning outcomes do not affect the presence or absence of the use of devices in the information search process, but devices greatly affect the process of teaching and learning activities. Based on research that has been conducted by Nikmawati (2021) which concludes that the use of gadgets does not significantly affect the learning outcomes of fifth grade students. The positive impact obtained in using gadgets makes it easier for students to participate in teaching and learning activities, makes it easier to access information, and learns new things through social media. But there is also a negative impact on students' learning achievement which is decreased interest in learning, playing more social media, online games and eye disorders. Addiction to using more gadgets to play games

and social media results in students' achievements not progressing in understanding learning which makes their grades decrease (Galingging, 2022).

According to research conducted by Sandrawita (2019) which shows that the gadgets they have are only used as entertainment media, the gadgets used cannot be used as learning media. Children's study time, has not been managed properly. This is marked by the absence of a child's study schedule at home. Gadgets have a negative impact on children with gadgets when children's learning is not managed properly. Besides that, it is difficult for children to break away from using gadgets, weak parental control, there is no policy from the sub-district government regarding time limits for using gadgets, an unsupportive environment and so on.

Based on research that has been conducted by Nelli (2019) which concludes that field research shows that student academic development greatly influences the use of gadgets because students who really fuse gadgets as they should or more precisely students who use gadgets to learn, these students will experience an increase the value of achievement or academic value increases. The form of using gadgets that can shape student academics is the ability of students to find study materials and references and even use them correctly, because it is obvious that students who use gadgets correctly tend to win in competitions even in almost all fields of competition they win because they don't only fostered by schools but also additional learning at home using gadgets (Das, 2018; Budhiarto et al., 2020; Fauzi, 2018).

CONCLUSION

Based on the results of research that has been conducted by researchers regarding the following conclusions can be drawn. First, the use of gadgets among students is not only used as a communication tool, but there are some students who use gadgets to play games, open social media and there are some of them who prefer playing games rather than studying. Some of them even use gadgets for entertainment, but they also use gadgets to do school work. The use of gadgets among students is included in high and low usage intensity. Second, the continuous use of gadgets not only has a positive impact on student learning outcomes, but can also have a negative impact. The positive impact obtained is that students can easily get information, carry out long-distance communication, and train student creativity. While the negative impact obtained by students so that this becomes a cause of decreased student academic scores, namely the continuous use of gadgets will greatly interfere with student health, interfere with student cognitive development, be prone to crime, students who are dependent on their gadgets will affect the behavior of students itself Students become forgetful of time, lazy and reluctant to study. Most students often open social media and play games which are less useful for the students themselves.

There are recommendations based on research findings. First, it is better for the school to make clear school policies and carry out socialization and directions for these policies as well as supervision from the school. Schools are also expected to involve gadgets in positive ways during learning so that students have different views on the form of using gadgets. For future researchers, it is hoped that they can examine the influence of gadgets at other levels. Researchers

can also examine the influence of gadgets on a particular application and also examine other variables such as learning motivation, independent learning, mastery of concepts, etc.

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