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Policy analysis of using smartphones as learning media at senior high schools

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Article Info

ABSTRACT

This study aims to examine the concept of using smartphones in school. This is because so many schools still prohibit carrying/using smartphones in school, and there is a need to consider smartphones as a learning medium for improving the quality of learning. This study is a qualitative research model with a stage application approach of the Policy Analysis Process developed by Brewer. It was conducted at Senior High Schools in Medan City, from June to September, 2020. The first analysis process carried out was an initial survey of the need for smartphones as learning media. The analysis results in each stage proved that positive impacts are made when smartphones are used as a learning medium, since the technology that has been most mastered by students is the smartphone. Completion is reached through the stages of initiation, estimation, selection, implementation, evaluation, and follow-up. Results show that smartphones could be accepted as learning media in high schools in Medan at the selection stage, adding that policy makers should supervise the use of smartphones in school by establishing supervisory rules. Nevertheless, one of the factors that contributed significantly to this conclusion is the menace of the ongoing Covid-19 pandemic. The analysis results are expected to be accepted by all stakeholders in the society and be used as basis for making policies that accept smartphones as a learning medium. However, further analyses are required so that the established rules can be made to conform to standard educational procedures.

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Introduction

Since it was launched in 2012, the smartphone has been one of the new products that have significantly influenced various aspects of human life. This is because the use of smartphones has made a positive impact in helping us to access information in a relatively short time, and at low cost. Features in a smartphone are capable of providing complete information, but the way the smartphones are being handled may negatively impact the younger generation, especially students. These negative impacts may increase in proportion if we do not balance the use with useful guidance by teachers, parents, the community, and the students themselves. Smartphone utilization is a learning medium worthy of being considered. The technology that is most mastered by students today is the technology used on smartphones, and many studies have proven that the use of technology is beneficial in teaching/learning. We observed in the cause of this study that out of a thousand high school students in Jakarta, 44.4% use gadgets, especially smartphones, to implement e-learning effectively

(Laksono & Matematika, 2014). The phone has great potential as a learning tool and can positively teach and learn in science. The study conducted in Ghana produced several recommendations regarding the use of smartphone in learning, stating that it was useful for lecturers and student (Twum, 2017). Pratiwi conducted another study at the Faculty of Computer, Sriwijaya University. The research result proved that the use of the gadget is capable of generating both positive and negative impacts. The most positive impact being the use of technology as a communication medium, information source, and business support. However, it has a negative impact on the social environment because it reduces social interaction and concern for people around the user due to the number of hours spent on using it (Pratiwi, Meytri, & Patriana, 2019).

The prohibition on the use of smartphone in school came as a result of how it affects students' attitude and their learning outcomes. A research in Sleman Yogyakarta, proved that a relationship exist between parents' role, gadget use duration, and preschool children's development (Vitrianingsih, Khadijah, & Ceria, 2018). (Rahmandani, Tinus, & Ibrahim, 2018) analyzed smartphones (Laksono & Matematika, 2014) impact on students personalities and character in public SMA 9 Malang. The result revealed the average time students use gadget as 3-7 hours and this brings a lack of communication and concern for the surrounding environment (Rahmandani et al., 2018). (Novianti & Garzia, 2020) researched the impact of gadget use on early childhood in Pekanbaru. The results proved that there is a high dependence on gadgets. Parents' views about providing gadgets for their children are positive because they want them to benefit from technology, but they must also adhere to some clear rules so as to avoid/reduce the negative impacts. Thus, it is crucial to understand how to use technology to develop children's brains and bodies with safe and effective use policies (Novianti & Garzia, 2020)

When the global Covid-19 pandemic started at the beginning of 2020, its impacts began to be felt in Indonesia in the early month of March 2020, until the government finally established a Large-Scale Social Restriction policy in the early month of April, 2020. (Sulasmi, 2022) The implementation of this policy automatically stopped all learning activities in schools and colleges so that as a solution to this problem, learning was moved online. This kind of situation is closely related to the use of smartphones as learning media. During a pandemic, the need to use smartphones becomes "mandatory". A condition like this brings about the need for solutions to the question of whether smartphones can be accepted as learning media in school and what impact it might have on students if they are given the freedom to use smartphones.

Method

This research was conducted at high schools in Medan City from June to October 2020, as a model of qualitative approach to the implementation stage in Brewer's process analysis policy (1983) that was carried out in four stages: initiation, estimation, selection, and implementation. SRQR guidelines were used as the basis for writing in this study (Novianti & Garzia, 2020).

Data were taken primarily from high schools in Medan City in July 2020. Data was collected by giving questionnaires to participants. Participants consisted of principals, teachers, parents, and students. The method of determining the participants (samples) was carried out through stratified random sampling to represent each participant's layer. The process of collecting data is to analyze policies on the use of smartphones as a learning medium. Research publications have received permission from the school, teachers, ad students involved in this research.

Experts developed the policy formulation process into a policy cycle that is considered to be standard and sequential from the earliest stages as follow (Brewer, 2017): a) Agenda setting (Problem Identification): Determining a subject as a problem that is the focus of the government; b) Policy formulation: Includes searching for available alternative actions to solve the problems (assessment, dialogue, formulation, and consolidation); c) Decision-making: The government decides an action, either to maintain the status quo of an existing policy or to change the policy (Decisions can be positive, malicious, or a decision not to act); d) Implementation: Plenary decisions made and in the form of real action; e) Evaluation: Measuring public policies and effectiveness from the government and stakeholders' expectations or from the field's real results..

Results and Discussions

We conducted a preliminary research in several high schools in Medan on the need to use smartphones as learning media. The steps we took are as follows: a) Observation and survey of the need smartphone use in several schools; b) Observation and survey of the need smartphone use in several schools; c) Conducting a preliminary analysis of smartphone usage policies.

This research's initial stage analyzed the need to use smartphones as a learning medium for high school students in Medan. We performed an analysis using descriptive statistics on several variables related to smartphone use. The data was gathered from the questionnaires sent to students in several high schools (SMA) in Medan City, via Google Forms. Five hundred and ninety students filled the questionnaires that were distributed. The results of the initial survey can be described as follows:

First. Practical smartphone use in several schools: a) Some 61.69% of students stated that though their schools permit them to use smartphones, only 32.88% of teachers allow them to use smartphones when studying in the classroom. This condition reflects on the absence of a government policy regarding the use of smartphones in school; b) A total of 98.98% of students stated that their schools provide internet networks. The result illustrates that there is no difficulty in connecting to the internet network at the school.

Second. Survey of the need for using smartphones as learning media: a) Based on the analysis, 71% to 91% of students stated that they used smartphones to help themselves in their learning process. The need to use a smartphone is considered necessary in the learning process at home and school when completing assignments, when discussing with school friends and study group friends, and when using some learning resource search tools; b) Another thing that can be discussed from the survey results is that smartphones can foster students' learning autonomy. The results show a high percentage of students who stated that they can learn independently by using smartphones (68% to 90%), to answer practice questions and assignments with smartphones' help, and that they hardly need anyone except their teachers to help them in their studies.

Third. Analyzing the characteristics of high school students: a) As many as 96.98% of students stated that they owned smartphones. This fact illustrates that almost all adolescents of high school age use smartphones; b) The average time to use the smartphone that most students chose was 3 to 6 hours per day. The time is relatively long and it will increase the risk of using the smartphone for purposes other than for studying; c) They mostly use their phones for social media activities, browsing information, watching YouTube, reading news, playing games, and learning activities that occupies a low position as compared to the other options; d) The discussion about whether smartphones interfere with learning concentration yields quite impressive results. This position can be used as a basis for further discussion because the survey results illustrate that the average student is still unsure about the disruption in learning concentration.

Fourth. Conducting a preliminary analysis of smartphone usage policies: a) Almost all adolescents of high school age use smartphones. This is unavoidable, given the rapid development of information and technology at this time. The use of smartphones as learning media is very much needed and will significantly help the learning process; b) The results show that students lose concentration when using phones because they are often distracted. This is more serious when they are learning how to use smartphones, coupled with the long time they dedicate to the use. Therefore, it is necessary to establish strict rules for them to use smartphones at home, and especially at school.

Initiation Stages

We conducted a Focus Group Discussion (FGD) to formulate alternative solutions to existing problems involving teachers, parents, and related parties. The FGD conducted at this phase was the most crucial thing in the policy-making process and is carriedout to determine policy issues after prioritizing environmental issues.

The results of the FGD are as follows: a) The matter arising is the need to establish a policy on the use of smartphones in high school. Aspects that influence the emergence of this issue are: the phenomenon of smartphone use among adolescents of high school age, the need for ease of finding learning resources and tools that can help complete assignments and study group discussions. This was supported by the survey results, which stated that students felt that learning how to use smartphones would be very helpful to them. On the other hand, there were issue that cropped up about how students' concentration can be disrupted due to long time use of smartphones, especially when they come across some interesting contents that can be of primary interest to them; b) Since smartphone use is very essential in a pandemic situation, the government decided that learning should be moved online with a distance learning system(pengelola web Kemdikbud, 2020). However, this decision requires some political support because distance learning will need media that can support the achievement of learning objectives; c) An agreement to have alternative solutions; d) The determination for a policy implementation on the use of smartphones in Senior High Schools in Medan City; e) The agreement that it is necessary to agree on the rules that would be established should smartphones be allowed in school for learning purposes.

Estimation Stages

We conducted FGDs to determine the development of alternative policies that were obtained as solutions to problems. The results of the FGD are as follows: a) The use of smartphones at school and home without

establishing proper rules has negative impacts, among others:a) A tendency to lose concentration in class learning; b) The interest in the content on smartphones takes a lot of student time that should be spent studying; c) Smartphone abuse will encourage the viewing of contents that should not be; d) Determination of rules related to policies on smartphone use in schools is designed as follows; e) Students are given the freedom to bring smartphones to school; f) Smartphones are not allowed in operational conditions, and during class hours, they should be collected and kept in a specific place; g) Students are to activate their smartphones only when needed, namely when making research into areas that require a smartphone as a medium; h) The applicable rules should be communicated through the bulletin boards, stickers, or banners as to how students must conduct themselves if they are to use smartphones.

Selection Stages

We conducted focus group discussions to adopt alternative policies with majority support from parents, teachers, and school principals. The analysis method that we used was to provide recommendations on smartphone use policies—provision of information about the possible impact of decisions on using smartphones in schools.

Implementation Stages

This stage focused on how to implement the determined smartphone use policy. In this case, the implementation stage could not be carried out because of the pandemic situation.

Therefore, what can be done to date is to oversee the implementation of the old policy that is currently underway. The use of smartphones has proved to be very significant during pandemics, since they can be automatically used by students in their learning process. Consequently, the Covid-19 pandemic has made a significant contribution to accelerating the decision making on the use of smartphones in school. It is hoped that after the pandemic ends, policy implementation can be carried out in schools.

Conclusions

According to the results of the study, it can be concluded that high school students' characteristics. That as many as 96.98% of students have smartphones, and the average time they use their smartphones is 3 to 6 hours per day. This time is relatively long and it will increase the risk of using the smartphone for purposes other than for studying. This is because smartphones are used for several activities such as connecting on social media, browsing information, watching YouTube, reading news, playing games, and learning activities that occupy a low position in the options. The discussion about whether smartphones interfere with concentration in learning yields quite impressive results. About 91% of students stated that they use smartphones to aid their learning process. Smartphone usage requirements are considered a necessary practice in the learning process at home and school, when finishing tasks, when discussing with school friends, friends group study, and it is being used as a search tool for learning resources. Smartphones can foster learning autonomy in students. This fact is evidenced by the high percentage of students (68% to 90%), who stated that they can learn independently when they use smartphones to answer practice questions and assignments and that they hardly need anyone except their teachers to help them in their studies. Smartphones can be accepted as learning aids or learning media for Senior High School Students in Medan City. Determination of rules related to policies on smartphone use in schools are as follows: a. students are allowed to carry smartphones to school. b.Smartphones are not allowed in operational conditions, and during class hours, they are to be collected and kept safe in a specific place. c. students are to activate the smartphones only when they are needed, namely when it is their learning time, and they require smartphones as a medium. d. schools should announce applicable rules by making bulletin boards, stickers, or banners about the rules that students must obey regarding smartphone use.

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