



## **Policy Formulation of Smartphone Utilization in Learning Process at Junior High Schools in Pematangsiantar City Middle School**

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### **Abstract**

This research aims to discuss the initial draft of the smartphone utilization policy model which will be implemented in Pematangsiantar City Junior High School. In this 4.0 industrial revolution era, technology has become an inseparable part of all aspects of human life including education. The technology that is considered to be the most effective and the most efficient way for teaching and learning is smartphone. The usage of smartphones is considered to be a powerful tool which needs to be considered in improving the quality of teaching and learning in schools. But in reality, there are still many schools in Indonesia that still prohibit the use of smartphones in the school environment. This research uses a sequential exploratory mixed method. The first phase is to collect and analyze the data, followed by the collection and analysis of quantitative data. The techniques of collecting data include interviews, observation and documentation. The research was conducted at Pematangsiantar City Junior High School. This research sample uses purposive sampling. The results showed that the importance of using smartphones in schools to facilitate teaching and learning. Also, clear integration is needed to maximize its function and minimize the adverse effects of its use in schools. The first draft of the formulation of smartphone utilization policies in schools is (1) Smartphones are allowed in the classroom, but not fully; (2) The teacher makes a contract with parents and students; (3) Posting a banner prohibiting the using of a smartphone if it is not needed; (4) Intensive control when using a smartphone; (5) Class layout provides easy access to control students; (6) Plan in a timely manner what will be used for each activity; (7) Use social media in the integration of smartphone utilization.

**Keywords:** Formulation, Policy, Utilization, Smartphone

## INTRODUCTION

In this 4.0 industrial revolution era, technology has become an inseparable part of all aspects of human life including education. Humans living in this era are known as "digital natives", namely millennial generation, social networkers and collaborative work. In everyday life, digital natives tend to be inseparable from computers, tablets, iPads, iPods, Smartphones with good internet access, which are considered the most efficient as a communication tool to get information wherever and whenever they need.

In the world of education, special learning environments are crucial to support learning based on digital native thinking. In this revolution 4.0 era, schools must be able to engage students and make them able to acquire and master the skills needed to face the revolution 4.0 era. The integration of technology in teaching and learning is essential for supporting digital natives. Schools must be able to provide a learning environment and atmosphere that allows students to create, build their knowledge, share and collaborate with friends not only from their class or school, but with people from other schools, other cities, other regions and even other countries throughout the world. Creating this special environment is a challenge for teachers who are not digital natives.

Previous research done by Machmud and Basalama (2014) states that teachers are fully aware that they teach digital natives and that they do not have technological knowledge to some degree in teaching digital natives; and they don't feel threatened when teaching digital natives who have more knowledge than them. But they are fully aware of the importance of training for them to learn technology at a certain level and to learn knowledge to design a learning environment that is specific to their students.

Hence, a research by Buck, et al (2013) states that students in the 21st century are not only limited to knowledge about life, even in classroom settings, in which there are many forms of technology. Innovation in technology is influenced by how students access, learn and store and apply information which in turn fosters their learning autonomy. Other research by Machmud and Abdulah (2017) states that mobile technology is an important technology to minimize the problem of lack of learning time, peer pressure in the teaching and learning process and most importantly is to encourage the growth of student learning autonomy.

The technology that is considered the most effective and efficient way for teaching and learning to support digital natives is a smartphone. A smartphone is a mobile phone that is designed in such a way as to fulfill human needs, this mobile phone is not only for calling and sending messages, but has several more features especially supporting internet access which is getting easier and faster. No wonder this phone is named a smartphone (smart phone). Smartphones have influenced almost all aspects of human life such as business, health, social life including education. This smartphone has also been owned by almost everyone in all walks of life ranging from children to people who are elderly.

The use of smartphones is a new force to consider in improving the quality of teaching and learning in schools. Many studies have proven that the use of technology provides benefits in learning. Pandia's research (2014), states that students who use smartphones tend to be smarter,

wider insight and knowledge are also better than students who do not use smartphones. This research is supported by the statement of the government of the City of Mataram, West Nusa Tenggara through the Deputy Mayor of Mataram H. Mohan Roliskana who gave policies to students by allowing them to bring smartphones to school because of the many positive aspects. In this case we must wisely look at students' needs for smartphones because in the teaching and learning process teachers also utilize technology.

But in reality there are still many schools in Indonesia that still prohibit the use of smartphones in the school environment. The Mandailing Regency government even issued a policy on the use of smartphones, namely the Regional Regulation of Mandailing Natal Number 6 of 2010 concerning the Prohibition of the Use of Mobile Phones for Students in School Environments. The prohibition on the use of this smartphone also applies in Pematangsiantar City but this prohibition is not written legally.

This study aims to discuss the initial design of the smartphone utilization policy model to be applied in Pematangsiantar City Middle School.

## **LITERATURE REVIEW**

Public policy is the result of intensive interaction between policy makers based on the phenomena that must be found a solution. According to Dunn (2018: 3), policy analysis is a multidisciplinary inquiry process that aims to create, critical assessment and communication that is relevant to educational policy. As a problem solver, policy analysis refers to social science methods, theories and substantive findings to solve problems. According to Wahab (2012: 40), policy analysis is an approach and methodology for designing and finding desired alternatives with regard to a number of complex issues. According to Suharto (2010: 85), policy analysis is a planned and systematic effort to make an accurate analysis or assessment of the policies consequences both before and after the policies are implemented.

Based on the expert opinion above, it can be concluded that policy analysis is a planned and systematic multidisciplinary inquiry process in making accurate analyzes and assessments to create policies and alternative policies and the implementation of policies and their consequences. Education is seen as a necessity for a nation that wants to progress, surpassing other needs. Therefore, improving the quality of education must be considered through education policies that are considered to be able to improve the quality of education. According to Hasbullah (2015: 37), education policy is the product of the selected person / unit, a product of several inputs from all parties for the sake of improving the quality of education. According to Rohman (2012: 86), education policy is a decision in the form of guidelines for acting both simple and complex both general and specific, both detailed and loose formulated through a political process for a particular direction of action, programs and plans in organizing education. According to Madjid (2018: 11), education policy is a government policy in the field of education which includes general, long, medium and short term planning and strategic steps that must be taken to achieve educational goals.

Based on the expert opinion above, it can be concluded that education policy is a government policy in the field of education which is formulated in actions, programs and plans in organizing education to achieve educational goals.

According to Dunn (2018: 5), the stages in policy analysis include:

- 1) Structuring the problem. The problem structuring method is used to generate knowledge about what problems must be solved. The problem structuring methods include influence diagrams and decision trees.
- 2) Forecasting. Forecasting methods are used to produce knowledge about expected policy outcomes.
- 3) Recipe method. The recipe method is used to create knowledge about policies that are preferred.
- 4) Monitoring. The monitoring method is used to produce knowledge about the observed policy outcomes. The scorecard is a simple method for monitoring the observed policy outcomes and estimating the expected policy outcomes.
- 5) Evaluation. Evaluation methods are used to produce knowledge about the value or usefulness of observed policy outcomes and their contribution to policy performance.

According to Suharto (2010: 102-118), the stages in policy analysis include:

#### 1. Defining Policy Problems

Defining policy problems basically refers to activities to explore various social issues or problems and then to establish a social problem that will be the focus of policy analysis. The choice of social problems is based on several considerations including the issue being actual, important and urgent, relevant to the needs and applications of the public, broad and positive impact and in accordance with the vision and agenda of social change.

#### 2. Gathering Evidence of Problems

The statement of the policy problem must be supported by evidence, facts that are relevant, current, accurate and adequate. Statement of problems without evidence will not convince those who will be the target of our policy text. The evidence that is included can be based on the results of our research (primary data), especially policy texts in the form of policy studies. Data can also come from secondary data, which is the findings of other people published in books, newspapers, the internet, government documents. Policy texts in the form of policy briefs and policy memos rarely include evidence based on the results of primary research.

#### 3. Assess the Causes of the Problem

Analysts and policy makers can identify causes or factors that contribute to social problems. They can develop public policies to eliminate or reduce these causes or factors.

#### 4. Evaluate Existing Policies

Evaluating existing policies or products can lead to improvements, however evaluation also often results in decisions to totally replace existing models.

#### 5. Develop Alternative or Policy Options

Developing public policy solutions to overcome social problems also needs to consider several alternatives. Two main steps will be very beneficial for the development of alternative public policies is to develop alternative policies to solve social problems is to eliminate or reduce the causes or contributing factors to the problem and examine the current policies.

#### 6. Selecting the Best Alternative

In this step there is an alternative policy that is considered the best and is the initial selection in overcoming the problem. Two criteria that can help determine the best alternative are feasibility and effectiveness. The best policy must meet these two criteria (have a high value), if possible. And also, this stage carried out monitoring of the impact and purpose of the situation to be achieved from a proposed policy.

According to Ramdhani (2017), the stage of policy analysis includes the stages of activities / activities / programs in implementing policy decisions made by individuals / officials, government groups, the public and / or the private sector in order to achieve the goals set in the policy decisions that will affect the final results a policy.

Based on the expert opinion above, it can be concluded that the stages of policy analysis include defining policy problems, gathering evidence of problems, examining the causes of problems, evaluating existing policies, developing alternative policies and selecting the best alternatives

## **RESEARCH METHODOLOGY**

This study uses a sequential exploratory mixed method. The initial phase of collecting and analyzing qualitative data are followed with the collection and analysis of quantitative data. Data collection techniques are conducted with interviews, observation and documentation. The study was conducted at Pematangsiantar City Middle School. This research sample uses purposive sampling, which is choosing people who are considered to know and can be trusted to be sources of data related to the issues discussed.

## **RESEARCH FINDING AND DISCUSSION**

To get an idea of the initial conditions for using smartphones in schools, data was collected through questionnaires distributed to 252 students, interviews with 12 teachers and 6 principals from 13 state junior high schools and 29 private junior high schools in Pematangsiantar City.

The results of the analysis of data obtained from student questionnaires and the results of interviews with teachers and principals who were participants in this study showed that smartphones have several other functions besides calling. Smartphones are considered as an alternative tool for computers, digital cameras, watches, couriers, and digital storage.

The results of the questionnaire showed that of 252 respondents in this study who were Pematangsiantar City Middle School students, only 21 students did not have a smartphone. Most students every day have internet access via wifi or internet data packages at home and at school. Students most use smartphones for social media such as Facebook, Instagram, WhatsApp, Telegram, Path and other social media. Applications used to support student learning such as browser applications, pleco, google translate, youtube.

Schools do not allow the use of smartphones in schools in accordance with advice from the Office of Education. But respondents, teachers and principals stated the importance of using smartphones in schools to facilitate teaching and learning. The greatest benefit that can be felt especially for students at junior high level is access for parents of students to reach their children directly. The simplest example is the coordination of the place, time and method used to pick up children after school. Smartphones are equipped with GPS so parents can track the whereabouts of their children.

The benefits felt by teachers with the use of smartphones in the learning process are students have access to find and solve problems provided by their teacher quickly. In addition, by maximizing the use of smartphones, the principal believes that children will be trained in their level of creativity, especially in completing tasks related to digital systems such as editing videos, making posters, presenting the results of power points and other tasks. Moreover, it must be recognized that each student's catching ability is different, but with the use of smartphones for these children it provides a feeling of comfort for students who are more closed nature such as raising their hands and asking the teacher if there are lessons that are poorly understood. Things like this can be done by children after they finish learning by using their smartphone. Additionally, features on smartphones can give students access to applications that can help them complete their classwork. These features can also teach students to develop better study habits such as time management and organizational skills. Finally, creative teachers can use smartphones as learning media. Teachers can provide exercises through various interesting features such as quizzes which are considered to increase student motivation. Because through quizzes, students can play and learn at the same time.

There are reasons to ban the use of smartphones in schools, namely: (1) students are feared that they will access pornographic content and other content that can damage their character and personality; (2) students tend not to focus and their concentration is disturbed due to smartphones; (3) cyberbully is of particular concern to teachers because of its hard to identify nature and will cause pressure and intimidation for students. (4) the use of smartphones will cause social inequality because it will change the lifestyle of students.

Based on the results of the analysis stated that there needs to be clear integration to maximize its function and minimize the adverse effects of its utilization in schools. The results of this analysis serve as input for designing the initial draft formulation of smartphone utilization policies in schools. The initial draft of the formulation of smartphone utilization policies in schools is as follows:

1. Smartphones are allowed in the classroom, but not fully released.

The use of smartphones is felt to be important in supporting the teaching and learning process in schools. But its use must be arranged in such a way as not to be abused by students. Students are only allowed to use smartphones after being invited by the teacher who teaches in class.

2. Making contracts with parents and students.

Teachers should first communicate to parents and students related to the use of smartphones in schools, including sanctions that will be given. And then make a contract agreement between the teacher, parents and students in the hope that students can be more responsible for the contract that has been agreed.

3. Put a poster on the prohibition to use a smartphone if it is not needed.

Posters can be placed in front of classrooms or places in schools that prohibit the use of smartphones. This ban aims to discipline students in the use of smartphones in schools. If necessary the poster is made by students themselves so that they are responsible for not violating the rules they made themselves. Posters made must be communicative, up-to-date and non-threatening.

4. Intensive control when using a smartphone.

The use of smartphones in the classroom requires intensive control from the teacher to avoid misuse of smartphones by students. Intensive control can be done by walking around while monitoring what students are doing with their smartphone.

5. Class layout makes it easy to access to control students.

The teacher can easily control students from all directions through proper seating arrangements.

6. Plan in a timely manner that will be used for each activity.

The teacher must make clear planning in the learning tools so that the sequence of activities is clear and directed. Thus students will not have the opportunity to use a smartphone to do things outside the ongoing teaching and learning process.

7. Use social media in the integration of smartphone usage.

The teacher should have a blog or website that can be accessed by students. This will prevent students from losing focus during the learning process because the links given by the teacher are clear and controlled.

## CONCLUSION

Based on the results of the discussion, the following conclusions can be drawn:

1. Smartphone has several other functions besides calling. Smartphones are considered as an alternative tool for computers, digital cameras, watches, couriers, and digital storage.
2. Almost all students have a smartphone that can be accessed to the internet, from 252 respondents in this study who are Pematangsiantar City Middle School students, only 21 students who do not have a smartphone.
3. Schools do not allow the use of smartphones in schools in accordance with the advice of the Office of Education. But respondents, teachers and principals stated the importance of using smartphones in schools to facilitate teaching and learning.
4. Many benefits can be obtained through the use of smartphones in schools, namely parents can find out the whereabouts of their children through GPS, can increase student creativity because students through internet access can solve the problems given by their teachers, increase student confidence, attract students' learning interest that ultimately will be the motivation of students in learning autonomy.
5. There are several teachers and principals who support the ban on the use of smartphones in schools because of concerns students accessing pornographic content and other content that can damage their character and personality; students tend to not focus and disturbed concentration caused by smartphones. Cyberbully is of particular concern to teachers because of its difficult to identify nature and will cause pressure and intimidation for students. The use of smartphones will cause social inequality because it will change the lifestyle of students.
6. There needs to be clear integration to maximize its function and minimize the adverse effects of its use in schools.
7. The initial draft formulation of smartphone utilization policies in schools is as follows:
  - a. Smartphones are allowed in the classroom, but not fully released.
  - b. The teacher makes a contract with parents and students.
  - c. Posting a poster prohibiting using a smartphone if it is not needed.
  - d. Intensive control when using a smartphone.
  - e. Class layout makes it easy to access to control students.
  - f. Plan in a timely manner which will be used for each activity.
  - g. Use social media in the integration of smartphone usage.

## REFERENCES

- Buck, J. L., McInnis, E., Randolph, C. 2013. **The New Frontier of Education: The Impact of Smartphone Technology in the Classroom**. A Conference Paper. ASEE Southeast Section Conference.



- Dunn, William M. 2018. **Public Policy Analysis**. New York and London: Routledge Taylor & Francis Group.
- Hasbullah, M. 2015. **Kebijakan Pendidikan: Dalam Perspektif Teori, Aplikasi dan Kondisi Objektif Pendidikan di Indonesia**. Depok: Raja Grafindo Persada.
- Machmud, K. & Abdulah, R. 2017. **Using Smartphone-Integrated Model of Teaching to Overcome Student's Speaking Anxiety in Learning English as a Foreign Language**. Journal of Arts and humanities, Vol. 6(9), pp. 1-11.
- Machmud, K. & Basalama, N. 2014. **Integrating Technology into EFL Curriculum**. Proceedings of the 2014 International Conference on English Language Teaching (ICELT 2014). Ho Chi Minh City: Knowledge Publishing House.
- Machmud, Karmila. 2018. **Model Kebijakan Integrasi Pemanfaatan Mobile Technology di Sekolah Menengah Atas dan Kejuruan**. Yogyakarta: deepublish (Grup Penerbitan CV Budi Utama).
- Madjid, Abd. 2018. **Analisis Kebijakan Pendidikan**. Yogyakarta: Samudra Biru.
- Pandia, Idawati. 2014. **Penggunaan Smartphone Dalam Mendukung Prestasi Belajar Siswa SMPN 1 Kubung Kabupaten Solok Sumatera Barat**. Jurnal Penelitian Komunikasi dan Pembangunan. Vol.15, No.2.
- Peraturan Daerah Kabupaten Mandailing Natal Nomor 6 Tahun 2010 Tentang Larangan Pemakaian Handphone Bagi Siswa/ Siswi di Lingkungan Sekolah.
- Ramdhani, Abdullah dan Muhammad Ali Ramdhani. 2017. **Konsep Umum Pelaksanaan Kebijakan Publik**. Jurnal Publik. Vol. 11, No. 01.
- Rohman, Arif. 2012. **Politik Ideologi Pendidikan**. Yogyakarta: Laksbang Mediatama.
- Suharto, Edi. 2010. **Analisis Kebijakan Publik**. Bandung: CV Alfabeta.
- Wahab, Abdul Solichin. 2012. **Analisis kebijaksanaan dari Formulasi ke Implementasi Kebijaksanaan Negara**. Jakarta: Bumi Aksara.