



# Positive Impact of Smartphone on the Children's Thinking Ability Process (Case Study: ABA 58 Surabaya Kindergarden)

Gusmaniarti<sup>(✉)</sup>, Wahono, and Sudarmi Mauboi

Early Childhood Study Program, Faculty of Teacher Training and Education, Muhammadiyah  
Surabaya University, Surabaya, Indonesia  
gusmaniarti01@gmail.com

**Abstract.** ABA 58 Surabaya Kindergarden located in the east of Kota Surabaya by seeing firsthand the conditions in the classroom during the learning process, that's where I found that there were some children who focused on playing educational game tools, and playing with their friends, but there were some children who playing a smartphone then we tried to approach and see the child playing the smartphone. From the results I saw, it turned out that the child was already agile and could apply the smartphone, through online game applications where in ancient times adults could not apply the smartphone, Thus, after seeing this, We tried to write this scientific paper in order to obtain and summarize what has happened, how the positive role of smartphones in children's thought processes and convey messages to parents and educators on how to control children in playing smartphones. Therefore, we wrote a scientific paper with the title "Positive Impact of Smartphones on the Children's Thinking Ability Process in ABA 58 Surabaya Kindergarden."

**Keywords:** ABA 58 Surabaya Kindergarden · Children Smartphone

## 1 Introduction

Smartphone is an electronic instrument that has certain practical purposes and functions to help and facilitate human work [1]. Smartphone is a technology in the digital era that is developing today, almost all aspects of life depend on the development of information technology. Smartphone use can affect people's lifestyles from children to adults and the elderly, with a smartphone connected to the internet it feels like the world is in their hands. All information can be obtained, the distance to communicate seems in front of the eyes, people's knowledge is growing.

The era of digital smartphone technology is currently an important aspect in influencing children's development. The study before stated that 98 percent of the 2,174 parents in Southeast Asia who participated in this study allowed their children to access technology in the form of computers, smartphones, or tablets [2]. This study was conducted on 2,174 parents in Southeast Asia who have children aged 3-8 years. The results of the survey are most parents allow their children to play gadgets for educational purposes. But

in fact, according to the survey results, most of their children use these gadgets/tablets for entertainment purposes such as games [3].

Kindergarten is one form of early childhood education on the formal path. Indonesian Government Regulation No. 27 of 1990 states that pre-school education is education to assist the physical and spiritual growth and development of students outside of family education before entering basic education. The first task of Kindergarten is to prepare children by introducing various knowledge, behavioral attitudes, skills, and intellectuals so that children can adapt to actual activities in elementary school [4]. According to Indonesian Law No. 20 of 2003 concerning the National Education System states that Early Childhood Education is a coaching effort aimed at children from birth to the age of six which is carried out through the provision of educational stimuli to assist the growth and development of the child's physical and spiritual so that children have readiness to enter education further [5]. Early childhood education provides stimulation for various developments which include physical, motor, social, emotional, cognitive, religious, moral, artistic and language developments. According to several research results, the media used in providing stimulation to children at an early age in technology development shows that the use of smartphones can have a number of positive impacts, including providing new space for children to explore [6].

TK Aisyiyah Bustanul Athfal 58 (ABA 58 Kindegarden), located in the east of the city of Surabaya, parents often discuss being so worried about the condition of ABA 58 Kindergarten students who tend to be active smartphone users at home. Based on the phenomenon of the results of the research on the positive impact of smartphones, the authors seek to explore the positive impact of smartphones more deeply on improving children's thinking processes in Aisyiyah Bustanul Athfal 58 Kindergarten to reduce the anxiety of parents.

## **1.1 Formulation of the Problem**

1. How is the positive impact of smartphones on the thinking ability of children in ABA 58 Surabaya Kindegarden?
2. What is the role of smartphones in the process of thinking skills of children in ABA 58 Surabaya Kindegarden?

## **1.2 Goals**

1. To find out the positive impact of smartphones on the process of thinking skills of children in ABA 58 Kindergarten Surabaya
2. To find out the role of smartphones in the process of thinking skills of children in ABA 58 Kindergarten Surabaya

## **2 Theoretical Review**

### **2.1 Early Childhood Cognitive Development**

The term cognitive has an equivalent word with knowledge. In a broad sense, cognitive is the acquisition, arrangement and use of knowledge [7]. Furthermore, cognitive can also

be interpreted as the ability to learn or think or intelligence, namely the ability to learn new skills and concepts, skills to understand what is happening in their environment, and skills to use memory and solve simple problems. Children's cognition grows not only through actions towards objects, but also by interactions with adults and their peers [8]. Help and guidance from teachers can help children improve skills and acquire knowledge. Meanwhile, peers who master a skill can be learned by other children through models or verbal guidance. That is, children can build their knowledge from learning through adults (teachers and not solely from objects or objects. Learning and working with other people can provide opportunities for children to respond to others through suggestions, comments, questions, or actions).

## **2.2 Smartphone**

Smartphones are cellular phones with more capabilities, ranging from resolution, features, to computing, including the mobile operating system in it. The presence of this smartphone is indeed able to provide various benefits and conveniences for its users. There are those who use smartphones for positive things, but there are also those who use them negatively. If we look at the positive side of using smartphones, I think there are many benefits that can be obtained from playing smartphone activities when compared to today's people in general always have the opinion that excessive smartphone playing activities can have a negative influence or impact on thought processes, behavior and actions. Somebody. Smartphones in the present era are equipped with very sophisticated facilities with various amazing features. Smartphones were previously only used to communicate and with the passage of time, technological developments have increased and have produced various kinds of smartphones that provide all services.

The facilities contained in smartphones are not only limited to telephone and sms functions. Smartphones can be used as a learning tool where through a smartphone someone can learn new things through the content or messages that are distributed. In addition, smartphones are also used by a handful of people as one of the icons of 'lifestyle'. Person's lifestyle in the world which is expressed in his activities, interests, and opinions. Smartphones can also be a medium of entertainment as well as channel someone's hobbies such as; playing games, and listening to music we can even play musical instruments by using supporting applications.

## **2.3 Things Children like in Smartphone Projects**

Children have a very high curiosity and want to try new things because of the nature that exists in children, it can be associated with smartphone playing activities, when children see something interesting, they automatically want to try smartphones which are generally only used for adults. And its purpose is as a communication tool, but with technological advances and the increasing number of applications and features provided on smartphones, it makes children want to use smartphones, then what do children like in smartphones that make them feel happy and use the facilities on smartphones.

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The following is how a smartphone works that can produce services and provide facilities for its users. There are six functions of Information Technology, including the following:

- Capture
- Processing can be in the form of converting data into other forms (conversion), condition analysis (analysis), calculation (calculation), merging (synthetic) all forms of data and information
- Generating, generating or organizing information in a useful form. For example, producing services that can be accessed by smartphone users such as applications provided on smartphones
- Store record or store data and information into a media for other purposes. For example floppy disks, hard disks, tapes, compact disks and so on
- Looking back (Retrieval), tracing to get back information or copying (copy) data and information that has been stored, for example suppliers who have paid off, and so on

With the presence of this smartphone, it is able to provide various benefits and conveniences for its users, especially for educators and children. Based on the pre-survey it was found that some use smartphones for positive things, namely with the many supporting facilities in it and being able to connect to the internet network, children feel the need to have a smartphone and use it to find useful and interesting learning or children's videos.

## 2.4 Child's Thought Process

The thinking process of children is an achievement of cognitive development that should be obtained by early childhood, through the stimulation of building knowledge. The aspects involved in children's thinking processes, namely schema, assimilation, accommodation, organization and equilibrium [9]. Schema is an action that regulates knowledge which is influenced by assimilation so that it is easy to understand, if in the assimilation process the child does not get new information, a new scheme will appear in the child's thinking process called accommodation, if the child gets new information in the assimilation process then the process of assimilation will occur. Thinking is continued towards the organization at the planning stage of implementation and decision makers as well as monitoring the last stage in the thinking process is equilibration where there is a process in decision making and evaluation.

## 3 Methods

This type of research is qualitative research with a case study approach, namely research that emphasizes single cases of children aged group. Stating that qualitative research with a case study approach is research conducted by carrying out observations and interviews and documentation with determine participants. The results of the research are described in detail so as to get a conclusion that can improve the perspective of the

results of previous findings [10]. Qualitative research does not use the term population but social situations, while the term sample is called respondents or participants [11].

The study was conducted in October 2020 for 3 weeks starting from October 8 to 31, 2020. The location of the study was TK ABA 58 Surabaya. The determination of respondents in this study was carried out through interviews with parents, children who were given smartphones freely, from 50 total Kindergarten B students at ABA 58 Surabaya 35 students were given a Smartphone.

Data collection techniques in this study there are 2 ways, namely observation and interview techniques. In terms of collecting this data, the authors go directly to the object of research to obtain valid data,

- Observation

Observation can be interpreted as a systematic observation and recording of the symptoms that appear on the object of research aimed at describing an event or problem that exists, and focusing on developing research subjects. The observation technique carried out by the researcher was in 2 places, namely the activity of using smartphones at home and the children's learning process while at school.

- Interview

The interview technique in this study is a question and answer activity carried out between respondents, researchers and teachers in the learning process. Interview activities were carried out using semi-structured instruments. In carrying out the interview technique, the interviewer must be able to create a good relationship so that the respondent is willing to cooperate, and feels free to speak and can provide true information.

Data analysis techniques in this study are:

- Data reduction

Data reduction is very important in conducting data analysis, data reduction itself is summaries that have selected the main things and focused on the things that are important to the theme and pattern. However, the data that has been reduced is expected to make it easier for researchers to carry out further data collection.

- Data Presentation

Presentation of data in this qualitative research data presentation that can be done in the form of a narrative description. Presentation of data in the form of a set of information that is structured and easy to understand.

- Conclusion

The third step is the conclusion, namely the conclusion from the evidence that has been obtained during interview research in the field. However, this conclusion aims to determine the final data from the initial process of the analysis stage so that the problem.



## 4 Results and Discussion

### 4.1 Positive Activities of Children Playing Smartphones on Their Thinking Skills

Early childhood is a child who is still under age and needs supervision and provision of stimulus from parents, educators, and people around their environment for all activities, activities and movements so that the process of growth and development of children can run as expected. Which exists. With the supervision and restrictions for children on all their activities, it is expected to help develop various aspects of their development, one of which is the aspect of cognitive development or the development of thinking. Need for supervision and stimulation.

One aspect of cognitive development is about the ability to think of an individual, in this case, I associate it with the activities of children playing smartphones on their thinking abilities, as we have seen in the current era where technology is increasingly sophisticated and developing so it is impossible not to use it. as one of the supporters to get everything that has been provided, however, there needs to be a deep understanding of how it should be and to whom and how we use such tools, for example, smartphone, has a lot of benefits for everyone from those who are already familiar with it. Old or young or early childhood. Of course, there are not only negative benefits but also many positive impacts.

The following is a brief summary of the impact of children's positive activities playing smartphones on their thinking skills. A few weeks ago I made observations and saw firsthand how the activities of children in ABA 58 Surabaya Kindergarden, where from one class consisting of 20 students and I accidentally saw and compared one student who was playing with a cellphone and I trying to see the progress after I approached it turned out that the student was playing a game where the game is a game designed with sophisticated technology so perfectly that it becomes interesting for children who have tried the game and the problem with playing the game is that children are used to it. Doing activities like that will affect the ability to think after seeing the activity I try to compare and conclude with other friends who are playing using educational game tools.

When compared to their friends who are used to playing using educational game tools, the results of their thinking are still very lacking because educational games require a lot of thought and of course there must be a pattern. I think that's a lot to solve the problem of the APE game itself, while the child who plays the cellphone also I think he can gain knowledge when I compare again between children who play APE and children who play games in this case I see from the process when learning In progress, most people will think that children who are more active in playing APE and socializing with friends in the learning process will be able to understand but,

After seeing firsthand and the results I got in comparing these children in the learning process, I can conclude that children who play mobile phones are more active and know and understand the material taught by the teacher, why is that? because in my opinion those who have seen and learned know the positive impact in playing smartphones. Children who play smartphones can learn on their own through smartphones even though there are many opinions that playing smartphones can damage children's thinking and concentration but when playing smartphones it's the same as because in the application provided on the smartphone it contains educational value, it is likely that children who

play smartphones access material or learning through youtube, an application provided by a smartphone where in playing a smartphone he sees, remembers, understands, and follows the existing guidelines, for example when he watches a video learning to count by singing it will be interesting and he can definitely follow and try adjust it, it is one of the service applications on smartphones that children use to play.

#### **4.2 The Relationship Between Smartphones and Children's Thinking Skills**

Playing a smartphone if it is associated with the child's ability to think, I can conclude that when a child plays a smartphone, he or she will be careful, concentrate, try to learn. Understand and try to solve the problem in what he wants to get. Smartphones provide educative and entertaining applications, so for the thought process of children in playing smartphones, I take it from the positive side, why is that because if there are facilities that can support and hinder learning, of course, what we need to improve is to take from the supporters, in this case the smartphone has two the side for users is positive and negative, if we use our minds then what we choose is the positive and of course the negative is discarded or eliminated, while there are still those who support the availability of the learning process and get information easily why don't we process everything into a positive and if what is in question is online games for early childhood, I think it is also very helpful for children in the thought process, why is that because in addition to entertaining in early childhood games, they can see and provide interesting applications, for example game applications that make a child to solve a problem of course he will think and try to find out and solve it there is no punishment for people who want to know and solve a problem it will be an important point in the child's thinking.

After I discuss the child's thinking and proper thinking, I will give a little solution to be able to eliminate the negative and process the positive in this case the use of smartphones where most people think that playing smartphones can damage the thought process, but as a person who wants to be successful and useful and want to get satisfactory results, you have to be smart in managing smartphones, meaning that in its use everything must be regulated with existing needs, not access that can damage the mind and of course for early childhood, the task of parents as primary educators in children is that there is a need for supervision and control. control the child at all times.

## **5 Conclusion**

Based on the results of observations we can conclude that the positive impacts are:

- As a means of entertainment is to use it to play games
- As a medium of communication easily
- The use of the internet in learning to find learning materials
- Add friends and expand the network of friends in cyberspace



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