
CHILDHOOD IN DIGITAL GENERATION: USING GADGET FOR COGNITIVE, EMOTIONAL, AND SOCIAL DEVELOPMENT

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Abstract

Early childhood has a rapid growth and development in the ability of his thinking, emotional and social skills because 80% of brain growth develops in early childhood. 21st century can be seen with the use of ICT in all sectors both in everyday life and school life. The presence of gadgets presents new opportunities and challenges in providing education to children ranging from early childhood. They are now familiar with gadgets especially games that can affect the development of children in positively and negatively. However, very limited papers can be found on the advantages of using gadgets among early childhood in positively development. Therefore, this paper will look into the advantages of using gadgets may have early childhood for cognitive, emotional and social skills. It describes cognitive skills include language, memory, critical and creative thinking can be develop by gadgets. Emotional skills such as give more fun for kids and how to know something new can be develop too. Communication, cooperation, and competition that are included in social skills are also evolving with the use of gadgets. The paper concludes that using gadget give advantages not only disadvantages for early childhood. The recommendation for further study of better understanding how to use gadgets to develop the maximal skills of early childhood.

Keywords: childhood, development, digital generation, gadgets

INTRODUCTION

In the technology era, computers and digital media, such as gadgets are integral parts that can not be separated from children. It is our strength to provide the positive things that exist in the gadget to ensure their overall development. As we know that learning is a process that never stops in a person's life and it starts from childhood. The first six years of a child are the most important period for their future development, or often called "golden age". The existence of sophisticated gadgets of course can be utilized wisely to develop the stage of learning in early childhood. Gadgets offer a variety of games that are of course very attractive to children ranging from simple games to complex games. Actually, many benefits that can be obtained from the game offered on the gadget. But we as adults who accompany them less able to pay attention to it.

For example in games in gadget application learning letters for children that exist today in google playstore, mostly using English as the language of instruction. Seeing the situation, if used properly then the development of technology can be combined and used as an alternative to help children use English so it can simplify and accelerate learning of children about alphabet and language through the use of mobile gadgets.

Most people think that games in the gadgets bring a negative impact on children. However,

according to the theory presented by Iswidharmanjaya (2013) that gadgets are not always have negative effects, gadgets also have a positive impact when used by children with more wisely, among them stimulate to follow the latest technological developments, improve language skills, reduce stress levels, improve skills mathematical, and also improve the visual acuity.

The use of gadgets can affect the child's cognitive, emotional, and social aspects. Piaget's cognitive development theory is one theory that explains how children adapt to and interpret objects and events around them. How children learn about the characteristics and functions of objects, such as toys, furniture, and food, as well as social objects, such as self, parents, and friends. Piaget sees that children play an active role in compiling their knowledge of reality (Desmita, 2005: 46). In addition, Psychologists classify the range of emotions with a variety of classifications, but usually all of these classifications see emotions as positive and negative. Examples of positive emotions are enthusiasm, joy, and love. While negative emotions are anxiety, anger, guilt, and sadness (Santrock, 2007: 7).

This paper will present various positive effects of gadgets on early childhood development gained from relevant studies of theories and research studies.

RESEARCH METHOD

This study aims to describe the advantages of using gadgets in early childhood for cognitive, emotional and social abilities. This is a library research. The method used in this research is analytical descriptive. Data obtained from books, and journals.

DISCUSSION

Childhood cognitive development according to Piaget in Suhada (2016: 123) children begin to think in terms of flexibility and logical that depend on good neurological development and experience in adapting to the environment. At the concrete operational stage children are familiar with the special concept, because of the categorization of inductive and deductive reasoning, conservation, and numbers. Children are at a formal operational age and lead to a concrete operational age. So they experience steady progress in their ability to process and retain information. Rapid information processing, increasing the efficiency of increasing the amount of information children can retain in working memory to enable them to recall well and think at a more complicated level.

According to Zick Rubin a psychologist in Partini (2010: 104) whether children have stages that are interconnected with his emotions in the play are:

- a. The egocentric stage, between 3 and 7 years. Release of children more capable. He will think and feel as he is. He will be very disappointed and sure refused if it turns out the friend is not the same as himself.
- b. Stage of fulfillment needs. Between 4 and 9 years old children are interested in the process of establishing relationships although not separated from the effort to meet their own relationship

At the age of 4-7 years according Partini (2010: 105) is usually the child's playgroup child has a child's emotional and social skills are:

- a. Children learn many new things through their newly experienced interactions such as in games.
- b. Children learn to develop emotion management skills, learn how to communicate clearly, exchange information and explain their messages when their friends do not understand. Games will teach them to train these emotions.

Smart children, will be more able to determine their own game, play more on their own, rather than play a social one and only slightly follow the

activities that involve heavy physical games rather than less intelligent children (Suhada, 2016: 124).

The game has significance for the development of children's lives. Hetherington and Parke (1979) in Desmita (2005: 141) mentions three main functions of the game:

- a. Cognitive functioning of the game helps the child's cognitive development. Through the game, children explore the environment, learn the objects around them and learn to solve the problems it faces. The child's cognitive structure needs to be trained and the game allows the child to develop the competencies and skills he needs in a fun way.
- b. The social function of the game can enhance the social development of the child. In a fantasy game playing a role, children learn to understand others and the role they play.
- c. The emotional function of the game allows the child to solve some of his emotional problems, learning to overcome anxiety and internal conflict. The game allows the child to release physical energy and free the hidden feelings. Due to the inner pressure of the game, the child can overcome life problems.

The game is a fun activity by engaging in it, as its function and shape vary. Games are very important for the health of children. According to Freud and Erikson, games help children overcome anxiety and conflict. Children feel less threatened and more likely to express their true feelings in the context of the game. The game also plays an important context for cognitive development (Coplan & Arbeau, 2009). Piaget (1962) stated that the game promotes cognitive development of children. Games allow children to practice the competencies and skills acquired in a relaxed and fun way. Piaget assumes that cognitive structures need to be trained, and the game provides the perfect place for the exercise. Vygotsky (1962) also considers the game to be an excellent setting for cognitive development. In particular, he is interested in the symbolic and imaginary aspects of the game. Parents should encourage imaginary games as they can advance children's cognitive development. Daniel Berlyne (1960) describes the game as something exciting and fun because it satisfies our exploratory impulse. The impulse involves curiosity and the desire for information about something new and unusual. The game encourages exploration behavior by offering children the possibility of renewal, complexity, uncertainty, surprise, and oddity (Santrock, 2011: 124).

Despite these differences, for most children playing less actively playing outside with

entertainment such as television, radio, movies and reading are increasingly popular. Especially in the digital era of this technology in the form of gadgets that increasingly make children rarely play outside the home. However, games in the gadget was brought some benefits to the child's cognitive development as well. In accordance with research Rogulj (2014) states that the development of new media related to technology affect the pattern of child play. Children's games have evolved using technology according to their developmental level of openness to new and different things. In this study also obtained that the development of critical thinking can be stimulated through a game that involves exploring computers and other digital media in a way that is introduced to the children of useful features.

Some research results also show how gadgets with game features can help child development shown in the table as follows:

Tabel 1. Relevant Research Results

No	Researcher	Research result
[1]	Rogulj (2014)	The development of new media related to technology affects the pattern of child play. Children's games have evolved using technology according to their developmental level of openness to new and different things. In this study also obtained that the development of critical thinking can be stimulated through a game that involves exploring computers and other digital media in a way that is introduced to the children of useful features.
[2]	Takeuchi (2012)	Digital Media displays a variety of interactivity that requires more thinking, skills, human interaction, or initiative to make use of it. For example in this study, the 8-year-old Katle and Victoria use games to support their designer desires and as a result they can showcase their design skills and imagination or technical knowledge related to fashion design.

[3] Master etc. (2016) His research results show students' attitudes toward electronic gadgets. Almost all students agree "electronic gadgets are the best source of entertainment and can not live without technology gadgets even for a day, and they also claim that social networking sites are awesome and the internet is the ultimate source of knowledge.

[4] Mitsalia& Sari (2016) the results of his research that the majority of the use of gadgets for pre-school age children is to play the game, although there are some who use it to learn to study, or learn something that adds insight of children from applications in the gadget.

[5] Trinika (2015) When a child uses gadgets with parental supervision and time sharing between the use of gadgets with the time of socialization of children with other people around the environment then the child's psychosocial development will develop well. In addition, if parents provide more educational and appropriate applications to their child's age than games that are less useful for children

[6] Novitasari & Khotimah (2016) Positive impact of the use of gadgets, among others, to facilitate a child in sharpening creativity and intelligence of children. Like the application of coloring, learning to read, and writing letters certainly provide a positive impact on the development of the child's brain.

[7] Singaravelu, (2014) Gadget Based Learning of Grammar in English at Standard II is more effective than conventional methods

- [8] Vu, P., McIntyre, J., and Ceper, J., (2014) The findings showed that there were three practices of iPad use in the classroom. The most common roles the teachers took were lecturing and facilitating when they integrated iPads into their teaching while the most common class activity was “research. The most common level of class activities was “knowledge representation.” According to the teachers, the use of the iPad in the classroom was somewhat useful
- [9] Yudhitara, R. A. and Saehu, A.,(2017) Mobile phones can facilitate students to recorded video projects that present vocabulary learning. Proven with students can use the mobile phone to use EMD application in learning English (ELL). Students demonstrate skills in operating EMD applications embodied in their knowledge of pronunciation, grammar and meaning information when searching for a particular word. They also use audio features to operate the EMD from mobile phones to improve listening capabilities.

4. Games and Sports
Early childhood plays a simple type of game and will develop along with the development of his age.
5. Entertainment
Various types of entertainment are popular in children such as reading, books, comics, movies, radio, television and fantasizing.

Gadgets offer different types of games that children need according to these characteristics. Therefore how parents direct the use of games in gadgets will affect the development of child cognition. In accordance with the results of research Novitasari & Khotimah (2016) that the positive impact of the use of gadgets, among others, to facilitate a child in sharpening creativity and intelligence of children. As the application of coloring, learning to read, and writing letters certainly give a positive impact for brain development in childhood. The results research Mitsalia and Sari (2016) obtained that the child gadget can know the vocabulary of English, and others. Children feel helpful in reading or memorizing from gadgets. Gadgets can be used as a child’s advice for children while in the limits of time is not excessive. Children can understand the command / foreign language that is in the gadget and make him used. Experienced children’s intelligence when he can finish a stage of the game higher than ever.

Cognitive development that lasts from the age of 2-7 years is the preoperational stage. Desmita (2005: 130) states that at this stage a stable concept is formed, mental reasoning emerges, egocentrism begins strong and weakens and the formation of belief in the magical. The child’s thinking at the preoperational stage is divided into preconceptual subtrees (2-4 years) and intuitive thinking (4-7 years). Desmita (2005: 131) explains that this stage is also called symbolic thinking where childhood can organize and process what they know. It can easily recall and compare the objects and experiences it has gained if those objects and experiences have names and concepts that describe their characteristics. Symbols also help children communicate to others about what they know, even in situations far different from their own experiences.

Well, games in gadgets use a variety of symbols that of course easy to understand by children like the language. So indirectly children learn about these symbols and they cultivate in their thinking. Children are usually very happy to tell what they experience through playing games so that it can also help the development of social relationships among children. Thus in this sub-stage the symbolic

The various games available in the gadget also match the various forms of play that kids love according to Suhada (106: 124) which includes:

1. Constructive play
Making things just for fun alone, without thinking of the benefits is a popular form of play among boys, whereas child ladies prefer a more refined constructive type such as sewing, drawing, painting, shaping the ground and making jewelry.
2. Exploring
Like younger children, children prefer to satisfy their curiosity about different new things. They want to explore further from neighborhoods and neighborhoods and explore new areas.
3. Collecting
Children like to collect various forms of play, they collect this to train their emotional to show each other among friends.

appearance is indicated by the rapid development of the game, the imaginative play and the increase in imitation (Desmita, 2005: 131).

When the age of 4-5 years according to Santrock (2007: 17) children began to show improvement in social reflection. Some of the most important changes in emotional development in early childhood are memories of being able to talk about the emotions of the self and the emotions of others and increasing understanding of emotions. Expressions of child emotions can be seen when children show their guilt, shame, pride, anger, happiness and so on. When children show shame, they seem to shrink their bodies like they want to hide, whereas when they experience feelings of guilt, they usually perform certain movements as if trying to correct their failures. The presence of games can certainly help their emotional train. They will experience different emotional levels when playing a game from the gadget. Emotions as feelings or affections that arise when a person is in a state or an interaction that is considered important by him, especially well-being. Emotions are represented by behaviors that express comfort or discomfort with the circumstances or interactions that are being experienced (Santrock, 2007: 6).

According to Anne parents do not have to worry about exposure to technology early on in children, because the gadget can also give a positive impact for the Little, as long as given the limit. Here are some of the positive impacts of using gadgets:

- a. Smart Child Selecting Information. Getting used to using gadgets, Little Used to get a lot of information in one click. In the future he will be more adept at sorting out the information he needs, explained Anne.
- b. Quick Decision Making. Basically the games in the gadget have a fast tempo. "Children get used to making decisions quickly," says Anne, while reminding parents to keep a tight selection of what games are good for Little.
- c. Creative Thinking. Games help to develop peripheral vision that has an effect on children's creative thinking skills.
- d. Good Habit. With the right games, Little One can also imitate good habits. This can happen because children tend to imitate what the characters do in the games.

According to Sundus (2017) childhood use gadgets for various purposes like playing games, watching videos, listening songs, chatting with their friends, browsing different websites. Gadget can improved cognitive skills, Children have better motor skills, More fun for kids, Educating young

ones and Competition skills. The games that they use to play for example puzzles or images that are now diverted with gadgets can Gadgets will be faster cognitive exercise of the child because the child will be more interested in the gadgets than other games. Educational games help children to perform well in their studies. As they can have many online quizzes available, online tutorials and brainstorming riddles. They enjoy playing games on them whether it's a puzzle or race, or candy crush, or a simple first person shooter game, children have fun and they understand simple aspects of cause and effect, action and reaction.

Thus gadgets that have been viewed only bring negative impacts for children it also brings a positive impact depending on how we direct the use of gadgets in accordance with its features to help its development.

CONCLUSION

Technology is the whole means to provide the goods necessary for the survival and convenience of human life. While the gadget is a term that comes from English, which means a small electronic device that has a special function. One of the things that differentiate gadgets with other electronic devices is the element of "novelty". That is, from day to day the gadget always comes up by presenting the latest technology that makes human life more practical.

From the above discussion, the technology clearly affects the development of children. Because a technology device is a very effective learning media. With the appearance of a picture that can run, sound effects or singing to make learning media by utilizing technology devices are favored by children. And because advances in technology can also help the child's creativity, if the beneficiaries are offset by interaction with the surrounding environment.

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