The Effect of Gadget on Children's Social Capability

Eka Setiawati¹, Elih Solihatulmillah¹, Habib Cahyono¹, Dewi A¹
STKIP Setiabudhi, Rangkasbitung, Banten, Indonesia
echasetia14@gmail.com

Abstract. Brauner & Stephens argued that around 9.5% to 14.2% of early childhood children have emotional social problems that have a negative impact on the development and readiness of their schools due to children's habits in using gadgets. The purpose of this study was to identify the relationship between the use of gadgets for children's social emotional development in PGRI 2 Rangkasbitung Kindergarten. This research implemented quantitative research approach. This study uses a questionnaire or questionnaire sheet in collecting data, with a total sample of 33 respondents. The results of this study indicate that the majority of children use gadgets with a duration of > 60 minutes per day which is around 60.61%, the type of gadget used in the form of smartphones / mobile phones is 84.85%, and applications that are often used are games (66.67%) and games played in the form of educational games (60.61%). Based on the results of the study there were 60.61% or as many as 20 children have normal / good social emotional development, this is because the majority of children in PGRI 2 Rangkasbitung kindergarten are more utilizing the sophistication of gadgets towards more positive ones such as knowing numbers, getting to know animals, colors, and to communicate while far apart. It is also related to the characteristics of respondents who stated that around 66.67% of respondents did not work which meant that respondents had more time to accompany their children in using gadgets. The result of Chi-Square correlation test between gadget duration and social emotional development obtained p-value 0.011 (p <0.05) which means that there is a significant relationship between the duration of gadget usage on children's social emotional development in PGRI 2 Rangkasbitung Kindergarten. Based on the results of the study, it is advisable for parents to accompany their children in using gadgets as well as providing time limits, checking gadgets and choosing games and spectacle applications that can hone child development.

1. Introduction

Early childhood education is an effort to provide guidance to children from an early age through the provision of educational stimuli to help growth and physical and spiritual development so that children have readiness in entering the next basic education and life stage. "Early childhood is a child who is in the age range of 0-6 years (Sisdiknas, 2003)". According to NAEYC (National Association for Education for Young Child) early childhood is "children who are in the age range 0-8 years". Whereas...
according to Wijana (2011: 1.6)\(^2\). The World Health Organization (WHO) reports that 5-25% of preschoolers suffer from developmental disorders, including motor/motion, language, and social emotional delays which have been increasing in recent years. The incidence of developmental problems in children in Indonesia is between 13-18%. Brauner & Stephens suggested that around 9.5% to 14.2% of early childhood children have social emotional problems that have a negative impact on school development and readiness. While other studies show that around 8% to 9% of preschool children experience psychosocial problems especially emotional social problems such as anxiety, difficulty adapting, difficulty socializing, difficulty separating from parents, unruly children, and aggressive behavior is the most common problem in children early age.

In fact, children will more often use their gadgets to play games than to study or play outdoors with friends of their age. At this time many parents/caregivers intentionally facilitate their children to be busy doing fun gadgets so that parents are more free to move without having to keep on accompanying their children. Even though this is what will make children addicted in using gadgets

2. Theoretical Framework

2.1. Gadget

Use of Gadgets for Early Childhood In Indonesia, according to information technology experts from Bandung Institute of Technology (ITB), Dimitri Mahayana, about 5-10 percent of gadget mania are accustomed to touching their gadgets as much as 100-200 times a day. If the effective time of human activity is 16 hours or 960 minutes a day, thus people who are addicted to gadgets will touch the device once 4.8 every minutes. Indonesia has even become one of the biggest countries in the world with Facebook, Twitter and Whastapp users, each of which uses 51 million.

Table 1: Duration and Intensity of Using Gadgets in Early Childhood

| Category  | Duration   | Intensity               |
|-----------|------------|-------------------------|
| High      | 75-120 minutes | More than 3 times a day |
| Medium    | 40-60 minutes  | 2 – 3 times a day       |
| Low       | 5-30 minutes    | Once a day              |

2.2. Impact of Using Gadgets on Early Childhood

Positive Impact. According to Handrianto in hafidz\(^2\) said that the positive impact in using gadgets for early childhood, including: the development of imagination, training intelligence, self-confidence increased, developing abilities in reading, mathematics, and problem solving.

Negative Impact. According to Iswidharmanjaya\(^5\)(2014: 16-30) the negative impact of using gadgets for early childhood, including: Being private, brain health disrupted, impaired eye health, impaired hand health, sleep disorders, loneliness, violent behavior, fading creativity, Exposed to radiation

2.3. Social dan Emotional Development

Social and Emotional Development of Children Aged 5-6 years, children should be able to 1). Development of Self-Understanding: self-awareness, self-recognition, self-concept, and self-esteem. 2). Development of Social Relations: Unoccupied Behavior, Onlooker Behavior, Solitary Independent Play, Parallel Play, Associative Play, Cooperative Play. 3). Development of Self-Regulation. 4) Development of Social Behavior Problems on Children’s Emotional and Social Development

Problems on Children’s Social Development. According to Nugraha\(^6\) (2005: 11.10), here are some common problems faced by early childhood, as follows: 1) Maladjustment, 2) Egocentrism, There are three things that underlie egocentrism, Feel Superior, feeling inferior, being a victim.
Impacts of Gadgets on Emotional Social Development. There are two effects of gadgets on social emotional development, including:

2.3.1. Positive Impacts
According to Sundus M the following are some of the positive effects of using gadgets on children's social emotional development, including:

- Children get the ease of information and the ease of communicating with long distances.
- Cellphones or smartphones are not only for communication, but children can also use smartphones for entertainment.
- With technological advancements in the world of the internet, children can get to know and establish communication with many people from various parts of the world.
- As a result of technological advancements, many creative and challenging games are loved by children, and through this game the child can eliminate all the boredom that is in him and this will make him feel happy.
- Increase self-confidence. (when children win a game they will be motivated to finish the game).

2.3.2. Negative Impact
According to efendi (2014: 4) the following are some of the negative effects of using gadgets on children's social emotional development, including: reducing interaction with others, potentially keeping things close, lazy to do other activities, aloof, fostering an egocentric attitude, triggering mental illness, disruption of child development, lack of socialism around, aggressive

2.4. How to deal with children who are addicted to gadgets
According to Wulansari here are some things parents can do to overcome children who are already addicted to the gadget, including: limiting usage, giving a schedule, don't give full access, set the gadget's territory, teach children about the importance of restraint, give a good example.

Figure 1. How to deal with children who are addicted to gadgets
3. Research Methodology
This study uses quantitative research. The population in this study were parents of students in Group B in kindergarten PGRI 2 Rangkasbitung with 36 children. The data collecting technique used was a questionnaire regarding the effect of using gadgets on the social emotional development of preschoolers.

Table 2. Instrument Social and Emotional Development

| No | Question                                                                 | SS | S  | TS | STS |
|----|--------------------------------------------------------------------------|----|----|----|-----|
| 1. | Children do not want to lend their toys to others                       |    |    |    |     |
| 2. | Children increasingly disobey or refute parent’s orders                 |    |    |    |     |
| 3. | Children will be angry and cry if not given permission to play gadgets  |    |    |    |     |
| 4. | Children will be angry when disturbed while using gadget                |    |    |    |     |
| 5. | Children will be angry if the gadget they used is asked by their parents, even with good reasons and explanations from their parents |    |    |    |     |
| 6. | Children prefer to play alone in the house rather than playing outside with their siblings or friends |    |    |    |     |
| 7. | Children love to show / show off their intelligence in playing gadgets in front of their friends |    |    |    |     |
| 8. | Children will be fussy (crying / hanging on you) when you leave         |    |    |    |     |
| 9. | Children like to hit or throw other people using objects around them    |    |    |    |     |
| 10.| Children prefer to be persuaded to use gadgets rather than being invited to play with their friends when they are angry or crying |    |    |    |     |
| 11.| Children are less cooperative to be invited to work with                |    |    |    |     |
| 12.| Children will be angry when they find out the gadget battery is playing low / low |    |    |    |     |
| 13.| Children have had disputes with family, friends or relatives his age because of fighting over gadgets |    |    |    |     |
| 14.| The child looks gloomy and not cheerful when meeting friends            |    |    |    |     |
| 15.| Children tend to be silent and inactive when playing with their friends |    |    |    |     |
| 16.| Children look like they are mocking / vilifying their friends           |    |    |    |     |
| 17.| Children will easily cry and be angry when a friend comments / evaluates them |    |    |    |     |
| 18.| Children are more likely to be given gadgets than other toys            |    |    |    |     |
| 19.| Children feel frightened after seeing the scary shows from the gadget   |    |    |    |     |
| 20.| Children like to be angry and hit other people because they imitate the game scenes they play |    |    |    |     |

Table 3. Questionnaire on the use of gadgets in children.

| No | Question                                                                 | Answer |
|----|--------------------------------------------------------------------------|--------|
| 1. | What is the duration or total time (hours) of children playing gadgets (smartphones, Laptops, Tablet PCs and Video Games) every day? a. 30 minutes, b. 30-50 minutes, c. ≥ 1 hour |        |
| 2. | What type of gadget is often played by children? a. Smartphone / Mobile, b. Laptop, c. Tablet PC |        |
| 3. | Now there are many types of mobile phones that are owned by the public from simple to sophisticated cellphones. Which type of cell is often played by children? a. Monochrome Cellphone b. Candybar Cellphone without internet network, c. Touchscreen Cellphone and equipped with internet network |        |
| 4. | Gadget has a lot of applications that can be downloaded. Which applications do kids play / watch most often? a. Youtube, b. Video Game / Game, c. Social Media application (FB, Twitter, Wathsapp) |        |
| 5. | In which game / game application do you like the most? a. Adventure Games, b. Game of Fights, c. Educational Game |        |
| 6. | Today many early childhood are familiar with social media applications (such as: sending pictures, sounds, videos, etc.). Which social media applications do children often use? a. Facebook, b. Twitter, c. Whatsapp |        |
4. Research Findings and Discussions

4.1. Duration on gadgets used by children

**Table 4. Duration of use of the gadget**

| Duration of use of the gadget | Frequency | Percentage |
|------------------------------|-----------|------------|
| < 30 minutes                 | 2         | 6.06       |
| 30-60 minutes                | 11        | 33.33      |
| > 60 minutes                 | 20        | 60.61      |
| Total                        | 33        | 100.00     |

4.2. Types on gadgets used by children

**Table 5. Types on gadget used by children**

| Types on gadget used by children | Frequency | Percentage |
|----------------------------------|-----------|------------|
| Handphone/Smartphone             | 28        | 84.85      |
| Tablet/PC                       | 5         | 15.15      |
| Total                            | 33        | 100.00     |

4.3. Most common application used by children

**Table 6. Frequently application used by children**

| Frequently applications used by children | Game                    | Frequency | Percentage |
|------------------------------------------|-------------------------|-----------|------------|
| Frequently application used by children  | Media Social/Youtube    | 11        | 33.33      |
|                                          | Total                   | 33        | 100.00     |
| Games are frequently played              | Education Game          | 20        | 60.61      |
|                                          | Adventure Game          | 10        | 30.30      |
|                                          | Fighting Game           | 3         | 9.09       |
|                                          | Total                   | 33        | 100.00     |
| Introduction to Social Media            | Do not know about social media yet | 13 | 39.39 |
|                                          | know about social media  | 20        | 60.61      |
|                                          | Total                   | 33        | 100.00     |

5. Analysis of Children's Social and Emotional Development

The social and emotional development of children in kindergarten PGRI II Rangkasbitung is categorized into 2 categories namely "Good" and "Less". Based on the normality test of data and data normally distributed, so using the median = 52.00. Based on the results of the data distribution, the level of children's social emotional development is categorized into:

Score ≥ 52.00 = Good dan Score < 52.00 = Low.

**Table 7. The results of the data distribution**

| Social Emotional Development | Frequency | Percentage |
|------------------------------|-----------|------------|
| Good                         | 20        | 60.61      |
| Low                          | 13        | 39.39      |
| Total                        | 33        | 100.00     |
6. Conclusion
Based on the results of research that has been conducted on "Using gadget in kindergarten PGRI 2 Rangkasbitung", it can be concluded that:
1. Most children play gadgets with a duration of > 60 minutes a day.
2. Most children have a good level of emotional social development which is around 60.61%
3. There is a relationship between the use of gadgets and the level of children's social emotional development with p value 0.011.

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