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# The Effect of Gadget Use Intensity towards the Speaking Ability of Early Childhood

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**Abstract:** This study aims to determine the effect of gadget use intensity towards the speaking ability of early childhood. The method used is a simple linear regression test to test whether or not the relationship between two variables through the regression coefficient. The sample of this study are 100 parents who have early childhood. To analyze the data, the intensity percentage of gadget use is associated with children's speaking ability scores to see the significance value between the intensity of gadget use to the speaking ability of early childhood. 60% of parents do not accompany their children while using gadgets and only 40% of parents who accompany their children while using gadgets. 70% of children use gadgets every day while 30% of children only use gadgets on certain days. The intensity of the use of gadgets in early childhood is 36% in the high category, 47% in the medium category and 17% in the low category. After applying a simple linear regression test, it can be concluded that there is a significant effect on the intensity of the use of gadgets on the speaking ability of early childhood.

Keywords: Intensity, Speaking Ability, Gadget for Children,

## 1. Introduction

The development of technology is developing very rapidly day by day. Technology has become one of the important needs in human life today. Technology involves in almost every activity that is carried out by humans. One of the most widely used communication tools today is gadgets or digital devices. Nowadays, almost all people have this sophisticated tool. Gadgets have been touching all parts of society including women, men, parents, adults, and even children who should not be eligible to use gadgets. A study recently released by the American Association of Pediatrics (AAP) with the heading "The use of media is becoming dominant in the lives of today's children" proves that commonly used media for children are gadgets. The number of children using gadgets has almost doubled (from 38% to 72%). Besides, the number of 1-year-old babies who used gadget also increases (Yusmi, 2015). It is undeniable that gadgets greatly help human life. But beside all of that, gadgets have positive and negative impacts. The influence of gadgets can be very good for children's cognitive abilities. Through gadgets, children can view educational videos from YouTube or various other applications. Even gadgets can be a teacher for children, because children can seek knowledge through a gadget's search engine and thousands of answers are ready to be opened. But on the other hand, giving gadgets to children can cause negative effects such as addiction, laziness to move, and too dependent. Besides, gadgets also affect some aspects of child development, one of which is the ability to speak.

Bowler and Linke (Dhieni 2006) provide an overview of children's speaking ability at the age of 3-5 years old. According to them, at the age of 3 years, children use a lot of vocabulary and question words like 'what' and 'who'. At the age of 4 years, children begin to talk, to give their name, address, and age and to understand time. Children's speech development will increase at the age of 5 years where they can already speak fluently using a variety of new vocabulary words.

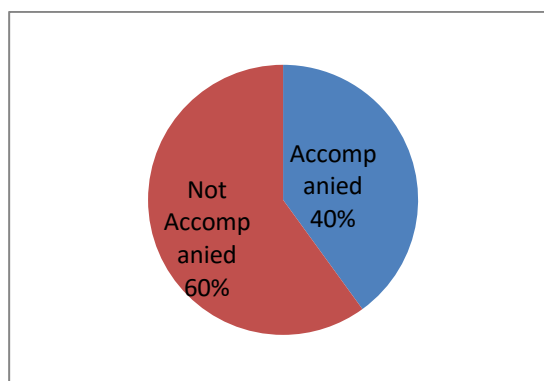
Based on a study published in the Pediatric Academic Societies Meeting (2017), a research team from the University of Toronto Canada analyzed the language and speaking ability of 900 toddlers. The study aimed to find out the focus of attention, the ability to arrange words and how many words were said when the toddlers were 18 months old. 20% of the children observed used gadgets approximately 28 minutes every day. From the research, it is known that every 30 minutes of time used to play gadgets can increase the risk of being late to speak (speech delay) up to 49%. According to the results, there found several problems, namely: (1) Lack of pronouncement in pronunciation while speaking; (2) Some children find it difficult to express their desires/feelings while speaking; (3) The lack of vocabulary that children make children difficult to communicate with others. (4) Most children use gadgets after coming home from school; (5) The average intensity of using gadgets is around 1-3 hours per day; and (6) The child cries if no gadget is given. This is the reference in this study. The sampel in this study was 100 parents who had early childhood (age 0-6 years). This research is motivated by the increasing prevalance of early childhood who use gadgets and many early children who experince problem of speaking ability. Data collection techniques use simple random sampling to choose parents who will fill out a questionnaire at Kecamatan Tampan Kota Pekanbaru Provinsi Riau.

## 2. Methodology

Data collection techniques used were questionnaires fiil out by parent. This questionnaire aims to determine the intensity of the use of gadgets and children’s speaking abilities. The sample of the study was 100 parents who have young children and done randomly at Kecamatan Tampan Kota Pekanbaru Provinsi Riau. The data analysis techniques used is a simple linear regression test to test the significance of the relationship between two variables through the regression coefficient. The percentage of intensity of gadget use is associated with a child's ability to speak scores in order to know the significance value between the intensity of gadget use to the ability to speak early childhood.

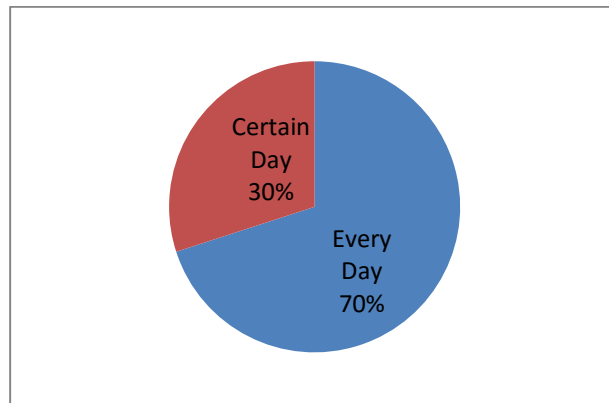
## 3. Results and Discussions

### 3.1 Result



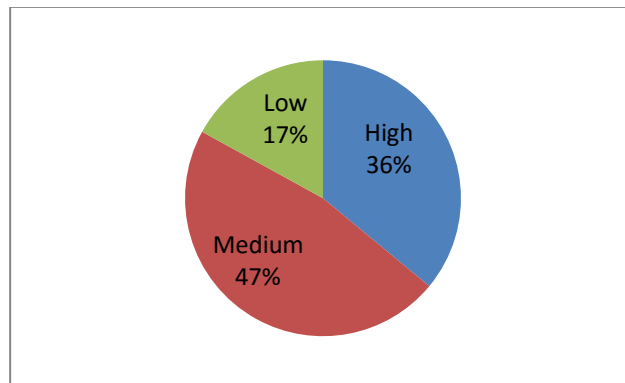
**Picture 1.** Presentation of Parental Assistance in the Use of *Gadget*

Based on the results of research, early childhood has been introduced to gadgets starting at the age of 1 year. Mostly, gadgets that are used by young children is still borrowing from parents' gadgets. 70% applications used by children in playing gadget are games and YouTube while 30% more are educational application. 60% of parents do not accompany children while using gadgets and only 40% of parents who accompany children in using gadgets.



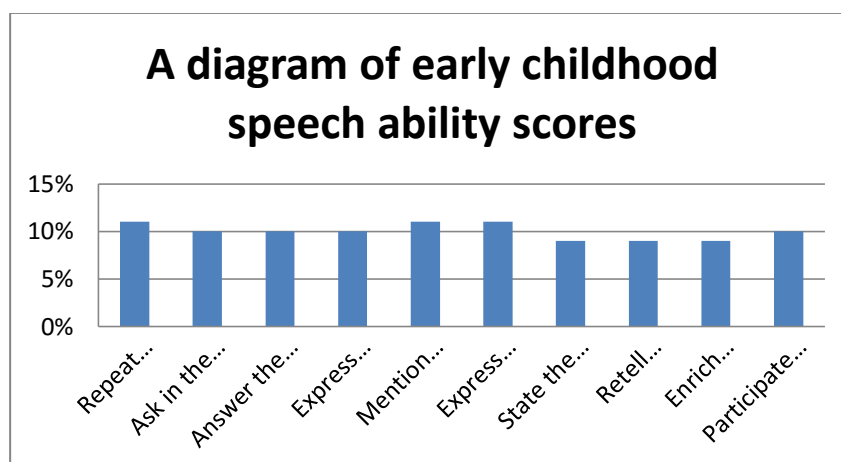
**Picture 2.** Presentation time of *gadget* usage

70% of children use gadgets every day while 30% of children only use gadgets on certain days.



**Picture 3.** Intensity of the use of *gadget* in early childhood

The intensity of the use of gadgets in early childhood is 36% in the high category, 47% in the medium category and 17% in the low category. The intensity of early childhood using gadgets at Kecamatan Tampan Kota Pekanbaru Provinsi Riau is at warning level. Parents and teachers should be aware in order to reduce the negative effect of gadgets in children in all aspect of child development.



**Picture 4.** A Diagram Of early Childhood Speech Ability Score

Based on the diagram above it can be concluded that the ability to speak early childhood using gadgets in both low, medium and high intensity has a very significant effect on ability to speak early childhood. An average of 10 indicators of speaking ability obtained result that the ability to speak early childhood using gadgets are in the category of undeveloped and begin to develop.

**Coefficients<sup>a</sup>**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	36.171	1.021		35.427	.000
X1	-7.882	.444	-.873	-17.756	.000

Dependent Variable: Y1

Based on the results of a simple regression test between gadgets use intensity towards the speaking ability of early childhood, it was obtained the significance results of the data as much as 0,000. If the significance value is smaller than 0.05, it means that there is a significant influence between the intensity of gadgets use (X) towards the early childhood speaking ability (Y).

### 3.2 Discussion

The most influential figure in preventing or overcoming the negative effects of gadgets are parent. One negative effect of the lack of parental assistance when children use gadgets is radiation. Therefore, parents have a big role in guiding and preventing gadget technology from having a negative impact on children. Jovita Maria Ferlianda (2013) explained the ways parents should accompany their children when using gadgets: choose according to age, limit time, avoid addictions and adapt to the times. Romo (2013) said that playing gadgets in a long duration and carried out every day continuously can make children develop toward an anti-social person. This happens because children who are accustomed to playing gadgets every day do not interact with other people. Besides playing gadgets every day has the potential to encourage children to establish shallow relationships and enjoy more time alone playing gadgets. Playing gadgets every day takes up a lot of children’s time so not many other activities that can be done. Whereas children who only play gadgets on certain days have more time that can be used for various useful activities.

According to Saris and Mitsalia (2016), gadget use is categorized at high intensity when using gadgets lasts more than 120 minutes/days and in one time Settings go by > 75 minutes. In addition, many times a day (more than 3 times use) of gadgets running the length of 30-75 minutes will result in addiction to gadget use. Subsequently, the use of gadgets with moderate intensity if using gadgets takes longer 40-60 minutes/days and the intensity of use in one instance of 2-3 times/days each use. Then appropriate use of gadgets in children is in the lower category of the duration of < 30 minutes/days and the intensity of usage at most of 2 times. Besides, trinika and team (2015) adds that gadgets used high intensity in early childhood are more than 45 minutes at a time per day and more than three times a day. From the data analysis, the intensity of gadget used in children is average or above 60 minutes per day.

American Academy of Pediatrics (AAP) recommend gadget use for 6 years old children and older, place consistent limits on the time spent using media, the types of media, and make sure the media does not take place of adequate sleep, physical activity, and other behaviors essential to health (2016).

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#### 4. Conclusion

This study aims to determine the effect of intensity of the use of gadgets on the ability to speak early childhood. The sample of this study are 100 parents who have early childhood. To analyze the data, the intensity percentage of gadget use is associated with children's speaking ability scores to see the significance value between the intensity of gadget use to the speaking ability of early childhood. 60% of parents do not accompany their children while using gadgets and only 40% of parents who accompany their children while using gadgets. 70% of children use gadgets every day while 30% of children only use gadgets on certain days. The intensity of the use of gadgets in early childhood is 36% in the high category, 47% in the medium category and 17% in the low category.

Based on research result, early children commonly have been introduced to gadgets from a very early age. The ability to speak early childhood using gadgets in both low, medium and high intensity has a very significant effect on ability to speak early childhood. An average of 10 indicators of speaking ability obtained result that the ability to speak early childhood using gadgets are in the category of undeveloped and begin to develop.

So the negative impact of the use of gadgets that seen based on this research is the development of children's speech skills. This is because children who use gadgets do not socialize with other people so that their speaking ability is not honed. This is what needs to be avoided by parents by providing assistance, time constraints and other activities so that the children's speaking ability can be trained.

#### References

- Yusmi Warisyah. 2015. The Importance of Parent's Dialogis Assistance in the Use of Gadgets in Early Childhood. University Muhammadiyah Ponorogo
- Henry Guntur Tarigan. 2013. Speaking as a Language Skill. Bandung: CV.Angkasa.
- Indiana & Eva, 2017. Yes or Not Gadget for Baby . Yogyakarta: Deepublish.
- Nurbiana Dhieni. 2006. Method of Language Development. Jakarta; Universitas terbuka.
- Wulansari, Nyi Mas Diane. 2017. Educate Children According to Their Times. Jakarta: Visimedia.
- Putri Hana Febriana. 2017. Analysis of the Use of Gadgets on the Ability of Social Interaction in Early Childhood. *Jurnal Obsesi*. 1 (1):3
- Nanang Sahriana. 2019. The Important of the Role of Parents in the Use of Gadgets in Early Childhood. *Jurnal Smart PAUD*. 1 (1):4.
- Sari, P dan Mitsalia A.A. 2016. The Influence of the Use of Gadgets on the Personal Social of Preschoolers in Tkit Al Mukmin. *Jurnal Profesi*. 13 (2):73-77.