

# The Effect of Gadget Usage on Speaking Ability of 3-6 Year Olds

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**Abstract**— The advanced technology makes information very accessible. The evolution of technology has revolutionized society including early childhood, but it is slowly destroying the ancient pattern itself. Indonesian children in the millennium generation are no longer familiar with traditional games because of the easy access of various games in the gadget. When using gadgets, children become less involved in interacting and communicating. Checking the current lifestyle is worrying. Children today have been adopted by the culture of technology dependence irrespective of the monitoring process by parents. The purpose of this research is to analyze the effect of gadget usage on speaking ability of children aged 3-6 years. This research was conducted at TK Al-Hikmah Jember. The results of this research indicate that there is a significant influence between the gadgets usage with the speaking ability of children aged 3-6 years.

**Keywords**—*gadget usage, speaking ability, 3-6 years old.*

## I. INTRODUCTION

Technological advances in the 21st century is growing rapidly. Various inventions with the aim of facilitating the space and the human scope are created one after another each year. This proves that the power of people's minds as well as patterns of human behavior develops and advances quickly. Defines gadget devices as mechanical devices moving in small sizes. There are several types of gadgets available at various prices, i.e. smartphones, laptops, and tablet computers. Most communities around the world, especially in developing and developed countries can already have at least a smartphone because of its affordable price.

Gadgets are electronic instruments that have functions to assist in facilitating work [1]. These technological advances make users dependent. Indonesia's mobile landscape performs more than most Southeast Asian countries and with 140 percent mobile penetration, 47 percent of Indonesians have more than one phone. The figure shows the Indonesian mobile landscape performs much more than most Southeast Asian countries and 140 percent cellular percentage with 47 percent Indonesia has more than one mobile phone.

From the point of view of health sciences, the use of gadgets for early childhood is not recommended because it can interfere with its development. Child development occurs at the age of preschool. Preschool children have great potential in developing all the potential that exists within him [2]. The research conducted by Trinika in [3] shows as much as 42.1% use of the highest gadget that is children aged 3-6 years. Children prefer to play the gadget rather than playing outdoors with their age friends. Gadgets have exciting features on offer and often make children quickly familiar

with them. The limited opportunity to learn because the gadget only communicates one way that is responding. The child cannot learn naturally how to communicate and socialize, unable to recognize and share emotions, such as sympathy, sadness or pleasure, and finally the child cannot respond to things emotionally or verbally around him. A limited child's response will interfere with the development of speech ability to blend and adapt.

The rest of this paper is organized as follow: Section II describes the literature review. Section III describes the proposed methodology. Section IV presents the obtained results and following by discussion. Finally, Section V concludes this work.

## II. LITERATURE REVIEW

In this era of development, the gadget is increasing rapidly. Increasingly attractive forms of gadgets and diverse app display make it easy for everyone to access information from all aspects of life. The development of gadgets makes every parent think "instant" in educating her child. Hence, currently, it is not uncommon anymore if there are parents who provide facilities such as gadgets for children who are still aged or still in the golden age.

Gadgets are electronic instruments that have functions to assist in facilitating work [1]. The ease of operation of gadgets and applications contained in them both online and offline, whether in the form of games or websites has given children easy to get things that they should not deserve.

Advances in gadget technology is certainly felt by almost the entire community, this is because the gadget is quite easily accessible or affordable by various circles [4]. If the first technology can only be felt by those who have economies above average, now can be felt by all circles. Even ironically children aged 3 to 6 years who became the most users. Children aged 3-6 years who are still relatively early to hold the gadget.

The use of gadgets among children has a negative impact on its development, with the ease in accessing various media information and technology, thus causing children to be lazy to move and activity [5]. They prefer to sit in front of the gadget and enjoy the games that exist on certain features rather than interact with the environment. This is certainly bad for child development and child health. Other negative effects can also lead to a lack of social mobility in children. They prefer to play with their gadgets instead of playing with their peers. Not infrequently we see the child has difficulty to communicate and interact because the child's brain has forced on gadgets [6].

Gadgets can also affect the development of speech and language in children, one of them is from social environmental factors [7]. Using gadget at home is hard to communicate with, does not care and less respond when the parents or people around him to invite him to speak. The children are not yet time to know the gadget. They still need games that can stimulate the brain and support all aspects of its development. Where childhood development is a mature and interactive process, results in the regular development of perception, motor, cognitive, language, socio-emotional, and self-regulating abilities [8]. The American Academy of Pediatrics [9] states that the time allowed children to play the gadget is one or two hours per day for an early age with the lowest duration of 5 to 15 minutes per day and at most 20 to 30 minutes per day. The criteria of use of gadgets in children aged 3-6 years is called excessive when the use of more than an hour per day. However, in Indonesia, the intensity of children's gadgets usage beyond the allowed time limit. Most of its use is beyond the supervision of parents, in other words the parent frees his son to play the gadget with an important reason the child is quiet and not naughty.

III. METHODOLOGY

This research used quantitative research type, analytic descriptive method with cross sectional approach. The target population in this research was all parents who had preschool children (3-6 years old) who use gadget facilities and included in the program early childhood in kindergarten Al-Hikmah Puger Jember as many as 166 students. The number of samples in this research were 95 people. The sampling technique in this research used probability sampling with stratified random sampling. Inclusion criteria in this research were parents willing to be respondents research, parents who had preschool children (3-6 years) are included in the program early childhood in Al-Hikmah Kindergarten Puger Jember. Meanwhile, the exclusion criteria in this study were the parents of children who were physically ill or not attending school, parents who had preschoolers but lacked the ability to speak.

IV. RESULT AND DISCUSSION

Distribution of respondent characteristics include parent education, occupation and gender of children and bivariate analysis of the effect of gadgets usage on the speaking ability preschool children (3-6 years) in Al-Hikmah Kindergarten Puger Jember as described in Table I.

TABLE I. CHARACTERISTICS OF RESPONDENTS BASED ON THE LAST EDUCATION OF PARENTS OF STUDENTS AT AL-HIKMAH KINDERGARTEN PUGER JEMBER.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SMA	42	44.2	44.2	44.2
	SARJANA	53	55.8	55.8	100.0
	Total	95	100.0	100.0	

TABLE II. CHARACTERISTICS OF RESPONDENTS BASED ON THE WORK OF PARENTS OF STUDENTS IN AL-HIKMAH KINDERGARTEN PUGER JEMBER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PNS	5	5.3	5.3	5.3
	Pegawai BUMN	9	9.5	9.5	14.7
	Swasta	28	29.5	29.5	44.2
	Ibu Rumah Tangga	37	38.9	38.9	83.2
	Wiraswasta	16	16.8	16.8	100.0
	Total	95	100.0	100.0	

Based on the Table II above, analysis in the table above obtained the number of parents of students in kindergarten Al-Hikmah Puger Jember, the most occupation is as housewives that is 37 people with a percentage of 38.9%. While the fewest jobs are civil servants (Civil Servants) only 5 people with a percentage of 5.3%.

TABLE III. CHARACTERISTICS OF RESPONDENTS BY SEX OF CHILDREN IN AL-HIKMAH KINDERGARTEN PUGER JEMBER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	49	51.6	51.6	51.6
	Female	46	48.4	48.4	100.0
	Total	95	100.0	100.0	

Based on the Table III above, analysis in the table above obtained the number of sexes of boys in kindergarten Al-Hikmah Puger Jember is 49 people with a percentage of 51.6%. As for female gender is 46 people with a percentage of 48.4%.

TABLE IV. OF RESPONDENTS DISTRIBUTION AGAINST EXPOSURE OF GADGET USAGE IN STUDENTS AT AL-HIKMAH KINDERGARTEN PUGER JEMBER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	55	57.9	57.9	57.9
	Tinggi	40	42.1	42.1	100.0
	Total	95	100.0	100.0	

Based on the Table IV above, analysis in the table above, it is found that exposure to the use of gadgets at students in Al-Hikmah Kindergarten Puger Jember shows exposure to the use of lower gadgets is 55 people with a percentage of 57.9% compared with exposure to high gadget usage is 40 people with percentage 42.1%.

TABLE V. OF RESPONDENTS DISTRIBUTION BASED ON LEVEL OF SPEECH CAPABILITY OF PRESCHOOLERS (3-6 YEARS) IN AL-HIKMAH KINDERGARTEN PUGER JEMBER

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Buruk	41	43.2	43.2	43.2
	Baik	54	56.8	56.8	100.0
	Total	95	100.0	100.0	

Based on the Table V above, analysis in table 4.5, it is found that the ability of speaking preschoolers (3-6 years old) in kindergarten al-hikmah Puger Jember shows the most good that is 54 people with percentage of 56.8%, while for poor children's psychosocial development is 41 people with a percentage of 43.2%.

TABLE VI.

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	83.169 <sup>a</sup>	1	.000		
Continuity Correction <sup>b</sup>	79.387	1	.000		
Likelihood Ratio	103.378	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	82.294	1	.000		
N of Valid Cases	95				

- a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 17.26
- b. Computed only for a 2x2 table.

Based on the Table VI above, result of chi square test, the significance value is 0.000. Therefore, since the value of  $p < 0.05$  means that there is influence between the Use of Gadgets on Psychosocial Development of Preschoolers (3-6 years) in Al-Hikmah Kindergarten Puger Jember.

Based on the results of chi-square test obtained a significance value of 0.000. Therefore, since the value of  $p < 0.05$  means that there is an influence between the Use of Gadgets to the Preschoolers' Presentation Speaking Capability (3-6 years) in Al-Hikmah Kindergarten Puger Jember. The researcher gets data that 55.8% of parents of students in kindergarten Al-Hikmah Puger Jember have a high level of education is a scholar, therefore their knowledge is high enough to the impact that will be generated from the gadget. Thus, parents anticipate by always controlling and supervising their children in the use of gadgets. Parents are also smarter at sifting through the apps in the gadget and always accompanying the child while using the gadget. Therefore, the negative impact of the gadget on the speaking ability of children in kindergarten Al-Hikmah Puger Jember is not too big.

Other research conducted, Anggrahini in [10] shows that since using gadgets, children become hard to communicate, do not care, often bad mood and do not listen to parent advice. This is in accordance with the theory proposed, Iswidharmanjaya and Agency [11] about the negative impact of the use of gadgets in children, that is when children have been addicted to gadgets, it would surely consider the device is part of his life. It will disturb the child's closeness to his or her master, the environment, even his peers. Another study conducted, Delima, *et al.*, in [12] obtained almost all parents (94%) states that their child used to use technology devices to play games. Most children (63%) spend a maximum of 30 minutes on a game. While 15% of respondents stated that children play games for 30 to 60 minutes and the rest can interact with a game over an hour.

The results of the researchers' analysis in this research found that there is influence of the use of gadgets on the speaking ability of preschool children (3-6 years) in kindergarten Al-Hikmah Puger Jember. Almost all children use gadgets in everyday life. The use of gadgets generally not only used for their learning but to play as well. When using gadgets, the time they need to play games more than they learn, especially when they are not accompanied by

their parents. Sometimes, parents deliberately give gadgets to their children so that children do not play outside the home and do not disturb the activities of parents. Of course, this will hinder the speaking ability of children, because children will only busy with their gadgets and over time children can feel dependent on the gadget. However, unlike the case when children use gadgets with parental supervision and the sharing of time between the use of gadgets and the time with others around the environment then the speaking ability of children will develop well. Moreover, if parents are more likely to provide educational and appropriate apps at the age of the child than games that are less useful for children. Meanwhile, if the parents are not paying attention to the applications contained in the gadget and let children play whatever they like without choosing an application that educate or not then when exposure to the use of gadgets in children is high and without the control or supervision of parents, will also have a negative impact on the ability to speak children.

#### V. CONCLUSION

In summary, the conclusions can be drawn are as follow: (1) The characteristics of parental education level is dominated by undergraduate education, that is 53 people with percentage of 55,8%, work dominated by housewife that is 37 people with percentage 38,9% and child sex dominated by men which is 49 people with a percentage of 51.6%; (2) The exposure of the use of gadgets to students in kindergarten Al-Hikmah Puger Jember is categorized as low with percentage of 57.9%; (3) The level of students' speaking ability in the aged 3-6 years of Al-Hikmah Puger Jember Kindergarten is categorized as good as the percentage of 56.8%.

The use of gadgets for early childhood is not recommended because it can interfere with their development. Child development occurs at the age of preschool. Preschool children have great potential in developing all the potential that exists within them. Gadgets can also affect the development of speech and language in children, one of them is from social environmental factors [7]. Using gadgets at home is hard to communicate with, does not care and less respond when the parents or people around him to invite him to speak. The children have not yet got to know the gadget. They still need games that can stimulate the brain and support all aspects of its development. Based on the result of chi square test, the significance value is 0.000. Therefore, since the value of  $p < 0.05$  means that there is influence between the Use of Gadgets on Psychosocial Development of Preschoolers (3-6 years) in Al-Hikmah Kindergarten Puger Jember.

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