



## GADGET PHENOMENON: THE EFFECT TOWARD LANGUAGE DISORDERS AND SOCIAL INTERACTION OF EARLY CHILDHOOD

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### Abstract

*Technological advances nowadays bring significant changes to human life. One of the rapidly developing technologies is the gadget. The use of gadgets has become a common phenomenon in social lives. Gadgets have appeal in the old society, young, teenagers, and even early childhood. The use of the gadget in early childhood has special attention. Many parents are careless and leave all the responsibility of educating children on the gadget. They positioned gadgets as a “nanny” to their children when the children are fussy. The main reason of parents give their gadget to early childhood are practicability and the children or toddler can calm down when their parent doing activities. But they forget about the impact of gadgets on children’s language development and social interaction. In this modern era, the percentage of early childhood language disorders has increased quite high. This cause has a new problem is the inequity of social interaction toward early childhood. This paper will discuss the extent of gadget’s impact that language disorders resulting in early childhood, any factors that can impact these language disorders. In other that, how do parents controlling and limiting the use of a gadget that caused obstructed social interaction process in early childhood.*

**Keywords:** technology, gadget, parents, early childhood, language disorders, social interaction.

### 1. Introduction

Entering the modern era and globalization, people are required to face all changes and developments that occur. One of the developments that greatly changed the pattern of people's lives is the development of technology. Technology is equipment or objects made by humans. Technology is the result of creation and innovation to facilitate human work when they doing their job. Technologies developing has various kinds of variations, but the technology of communication, especially gadgets, has experienced a very rapid percentage of progress.

The development of technology, especially gadgets nowadays has a huge influence on all circles, starting from elderly, young people and teenagers even for children. Gadgets have a positive role in the advancement of communication tools and information exchange. This is very much needed in living life in modern times like today. Gadgets have an active role in helping people work day-to-day.

In the Journal of Depression and Anxiety, it is stated that the use of gadgets in early childhood has a positive effect. Gadgets can hone early childhood creativity through attractive displays and features. Sound effects, movements, and animations generated from gadgets can hone children's motor skills through the media displayed. In the Journal of Depression and Anxiety, it is stated that

the use of gadgets in early childhood has a positive effect. Gadgets can hone early childhood creativity through attractive displays and features. Sound effects, movements, and animations generated from gadgets can hone children's motor skills through the media displayed. The gadget can be trusted to provide a pleasant experience for early childhood. But, gadgets hold a lot of risks and dangers that threaten early childhood growth and development. This is related to the child's language skills and social interactions. But, gadgets hold a lot of risks and dangers that threaten early childhood growth and development. This is related to the child's language skills and social interactions.

Continuously use of gadgets in children and without parental supervision can cause negative effects for early childhood. One of the effects that appear from the use of these gadgets is language disorders that form of speech delay in 1-2 years old's children. In addition, early childhood will also attention deficits experience if they use gadgets too often. The most worrying negative effect of using gadgets in early childhood is anxiety experience. That caused experience problems in the social interactions of children.

As is a worrying phenomenon, the authors analyzed the problems faced by parents in dealing with the negative effects of using gadgets. To explore deeper information about language disorders in early childhood, the authors conducted interviews and observations of 10 parents and students at Paud Al Huda Evergreen. This is related to the duration of time of use of gadgets in early childhood which can determine language development in early childhood.

This analysis included language acquisition in children and also about the impacts of technological development on early childhood's scope. The author will explain the extent of the negative impact of gadgets on language development in early childhood. At the end of the discussion, the author will provide suggestions for parents to minimize the occurrence of language disorders and obstruction of the social interaction process for early childhood.

## 2. Literature Review

Communication that exists between humans can be held when two or more people express their utterances through language media. Language can be issued verbally through the speaking process. The language produced when speaking can be obtained from the sounds of language or phonemes, the acquisition of words or morphemes, the use of grammar or syntax, and the meaning of the content of a language or semantics. Speaking is a process for issuing ideas, ideas, thoughts, and feelings that are obtained from the brain verbally through the form of words and sentences that are systematically arranged (Muzaiyanah, 2014). The language process begins when humans are born and enters childhood according to their development.

During its development, starting from early childhood, language disorders often appear. Language disorders can occur due to habitual factors as well as social environmental factors experienced in early childhood. Social environmental factors are daily or unnatural living environments for humans, especially in early childhood. This is related to the inability of early childhood to interact with their social relationships (Dan & Siswa, 2020)(Sidharta, 1984).

Language disorders experienced by early childhood can occur due to excessive use of gadgets. Gadgets are electronic objects or goods that have more sophisticated and smarter technology than their predecessors. Gadgets can be called a technological innovation today that strongly supports the globalization phenomenon (Nugraha *et al.*, 2019). At the beginning of their use, gadgets only functioned as a means of long-distance communication between humans, but in its development, gadgets are equipped with powerful features that resemble the world at hand. This is because the information from any part of the country can be accessed via gadgets.

According to (Novitasari & Khotimah, 2016) gadget users are not only adults, but school-age children, teenagers, and even early childhood have now become active users of these gadgets. Based

on this, the role of parents must be further enhanced in monitoring children's activities in order to use gadgets wisely and properly to minimize language disturbances and other negative impacts arising from excessive use of gadgets.

Another negative impact that arises from excessive use of gadgets is the disruption of the social interaction process in early childhood. Social interaction is a social process and activity based on dynamic social relationships, both between individuals, between groups and between individuals and groups. Social interactions are experienced from childhood to old age. Community life is closely related to social interactions. Social relations that occur between individuals and also between groups can occur with the implementation of communication. Communication can be held when humans master the language system. An early age child with a language disorder, will not get perfect communication in his life. Social interaction irregularities can be hindered by the continuous use of gadgets in early childhood. Balanced interaction is by way of direct interaction. With the continuous use of gadgets, early childhood is unable to interact directly, they focus more on the gadgets they play, so they don't care about the presence of the other person (Lioni & Nurmalisa, 2014).

### 3. Methodology

Research conducted using a qualitative descriptive approach. In addition, this study uses a case study method to analyze the problems raised as research topics. Basically, the qualitative research process is descriptive which utilizes object analysis with an inductive approach. Qualitative research is research that produces descriptive data and goes through the process of examining the meaning of a phenomenon that occurs, which is used as the object of the research (Sugden *et al.*, 2019).

The data obtained to conduct this research is by interviewing techniques and observations of the object of research. The research was conducted by observing the intensity of gadget use in early childhood for one day. Observations were made with the help of parents, parents reported the intensity of gadget use in early childhood in minutes. After monitoring, interviews were conducted with the parents of students by online media. The objects used to conduct this research were 10 early childhood students and their parents of Paud Al Huda Evergreen. In addition, a simple test of language sensitivity and focus on an invitation to early childhood was carried out. This simple test is to see how focused the child is in stimulating invitations from parents when using gadgets. From this simple test, the results of the child's language sensitivity will be obtained, whether the child will respond according to what the questioner asks or they will keep quiet or respond but not in accordance with what the questioner asked.

### 4. Results and Findings

#### 4.1 Results of the Research

According to the observations and interviews with 10 student objects and parents of Paud Al Huda Evergreen regarding the intensity of gadget use that can affect language sensitivity or disorders and early childhood social interactions, the following data can be obtained.

Table 1. Intensity of Gadgets Use and Ability to Respond in Paud Al Huda Evergreen's Early Childhood

No.	Name	Intensity of Gadgets Use (minutes/day)	Linguistic Ability to Response
1.	Alika Fausyia R	300/1	Not Good
2.	Chaunisa Adhiani	150/1	Not Good
3.	Deriza Alifia A	70/1	Good
4.	Dyanoza Raditya	206/1	Not Good

5.	Fachrian Hasyim C	25/1	Good
6.	Harasyi Annisa	105/1	Not Good
7.	Kamalia Putri Z	45/1	Good
8.	Muhammad Zaid	345/1	Not Good
9.	Raihaniza Rukmi B	265/1	Not Good
10.	Zhivara Aisyah	50/1	Good

#### Information:

<100 minutes / day: Good

> 100 minutes / day: Not Good

After observing 10 early childhood of Paud Al Huda Evergreen, it can be seen that four early children have a low intensity of gadget use, which ranges from 25 to 70 minutes per day. Based on interviews with each of the parents of early childhood, they make it a habit that their children's gadgets use to a minimum. They divert the use of gadgets towards activities that further hone early childhood activeness. These activities include role-playing activities and storytelling which aim to hone speaking skills in early childhood and sensitivity to social interactions within the child. By way of role-playing and storytelling, children also indirectly learn about word pronunciation and can practice bilabiality in children.

Meanwhile, from the results of observations made, there was seven early childhood who were very intense about using gadgets per day. Based on the observations that have been made, the results are very concerning where the average use of gadgets in early childhood reaches 105-345 minutes per day. The time generated is not necessarily within the period of one use, but is divided into several sessions per day. Busy parents are behind the use of gadgets in these children. In addition, parents are still confused when children experience unhelpful fussiness. They rely on the features of the gadget to quiet their children. The high intensity of gadget use indirectly affects the emergence of language disorders in early childhood.

For example, an early childhood named Muhammad Zaid spends 345 minutes using gadgets per day. Parents apply the use of gadgets so that Zaid can be calm at home. Based on the results of interviews with Zaid's parents, he has difficulty pronouncing several phonemes in a word. For example, in pronouncing the word "Rabu" he takes out the word "Labu", in pronouncing the word "Pandang", he pronounces the word "Dandang", in pronouncing the word "Di Dinding", he takes out the word "Dingdingding", and so on. It can be denied that Zaid's language skills had errors, namely in the pronunciation of the phoneme / r / to / l /, the phoneme / p / to / d / and in the pronunciation of 2 words in "Di Dinding", he added the phoneme / ng / and the phoneme / g /. This is due to the absence of bilabial training for early childhood, as well as the intensity of using gadgets in one day so that children experience slurred and difficulties with their social interactions.

## 4.2 Findings of the Research

### 4.2.1 The Negative Impact by Using Gadgets Cause of Language Disorders in Early Childhoods

Language is a sign that shows human life. Language is a very important material for communication between humans. Based on the theory of language acquisition, humans acquire language from an early age. This was stated by Noam Chomsky, that the language acquisition process was motivated by the nativism Language Acquisition Device or LAD. LAD enables newborns to determine the structure of the language through their mother tongue and everyday language of

instruction. To acquire language proficiency, children need to imitate patterns and also memorize sentences directly from parents.

Children have a period of development and growth in all aspects. This development starts at the age of 12 months. This period is called the golden period or The Golden Age. Emotional, intellectual, and spiritual aspects developed during this period. The development that occurs at that time will affect the development of children in the next period. Therefore, it takes an active role of parents to guide and direct early childhoods, so they don't lose these golden times.

In this modern era, many parents ignore the importance of direction and guidance for early childhood development. They use excuses of being busy and time-constrained to guide their children. Parents take a middle path by providing gadget facilities with the aim that children are active, creative, and independent in their growth and development. But this does not necessarily apply to parenting activities. Parents still act as playmates and also someone who provides directions for creativity. The children's period of development care of gadgets will have a negative impact that can continue until the next development period. Gadgets are not "the nanny" for early childhood in their golden age.

Early childhood must have to do active movements through psychologically and physically. It aims to optimize growth and development in early childhood. Children who linger in front of the gadget screen will experience disturbances in their psychological and physical development. Early childhood who are addicted to gadgets will have difficulty acquiring language. Children tend to be passive and don't want to hone their language skills. In addition, too frequent use of gadgets in early childhood will also have a negative impact on eye health and hearing. This is due to the radiation rays emitted by the gadget and the audio generated from the gadget media.

The linguistic aspect is very important for human life. Given such situations, parents demand their children speak fluently. However, the development of children's speaking skills does not all go as parents expect. Each child's speech development has a different process. Badudu and Suciningsih revealed that language problems in early childhood are partly due to demands from parents so that children can speak fluently as soon as possible. The development of language in children goes hand in hand with their biological and psychological development

Language development in children begins with the achievement of aspects that affect language acquisition. These aspects consist of pragmatic aspects, semantic aspects, and also syntactic aspects. The pragmatic aspect in the language acquisition process is an aspect that measures the child's speaking ability and also the child's ability to say many things the child will say. The semantic aspect in the process of acquiring language in children is an aspect that explains the choice of words the child will use when explaining something. The syntactic aspect is the child's language ability in terms of examining and understanding the meaning of words and sentence structures that they say themselves or those spoken by others. Mastery of these linguistic aspects makes language development optimally in early childhood. The linguistic aspects that are useful as a process of acquiring the language can be achieved with guidance from parents.

With the development of technology, especially gadgets, parents feel helped and have new ways of educating and monitoring children's language development. They rely on the media and the features contained in the gadgets to train early childhood to speak and gain experience in languages. They make gadgets as "nannies" that are practical and easy to manage their children's growth and development. But they don't know, that gadgets can have a negative impact on children's language development. In addition, using gadgets for too long will result in early childhood experiencing language disorders.

Language disorders in early childhood can appear due to a lack of two-way interaction and communication involving the child. Two-way communication is for example communication between dad and their mother, communication between parents and children, communication

between children and the people around them. When doing communication, early childhood indirectly imitates the lips spoken by the interlocutor. This requires parents to be more active in accompanying their children when they are playing or doing other activities.

Children who enter the golden period will easily follow directions from parents. It's can turn on the bonding in early childhood and the parents. Gadgets are a challenge for parents in implementing child development. Gadgets have a negative impact that can cause language disorders in children. When playing with their gadgets, a child doesn't care about their surroundings. Early childhood will only be silent and carried away with what is presented in their gadgets.

Language disorders in early childhood caused by the use of gadgets originate in the disruption of brain function. Reporting to the Times, brain damage due to frequent use of gadgets can affect absorption and language disorders in early childhood. Golden age children will have difficulty digesting the sentences and words that other people say, they will even experience speech delay. The brain has a very sensitive response to the radiation rays emitted by gadgets.

The brain as a center of cognitive, sensory, motoric, language, verbal and emotional activity as well as a person's social activity will experience a decrease in absorption when receiving too much radiation. Disturbances that can be seen from exposure to gadget radiation are seen in forebrain activity. The Imbalance in forebrain function due to frequent use of gadgets in early childhood causes children to have low verbal IQ. It also causes emotional instability in early childhood.

Based on the research that has been done, children who use gadgets for one hour to watch videos, spend time playing games will lose 500 to 1,000 new vocabulary words they have learned. This is because early childhood can only save phrases, clauses, and words without understanding what words they find meaningful. It is inversely proportional to the activities of children who communicate and interact directly, for example with parents or their closest people. Early childhood who are often involved in direct interactions is confirmed to have more ability in terms of word processing and verbal abilities than children who only interact with gadgets.

Early childhood will lose the opportunity to learn the languages it absorbs. The languages that are presented in the gadget are not necessarily compatible with the language consumption of early childhood. Language in gadgets will cause confusion and disruption in the language process in early childhood. Early childhood language skills start from the bilabial process. The bilabial process is a linguistic word processing process based on lip movements.

Early childhood children who are just practicing speaking are only able to sound out words with elements of the phonemes p, b, and m. Therefore, when early childhood learns to speak, the first spoken words are "Mama", "Papa", "Baba". They get this from the direction and guidance of their parents. Meanwhile, if the child is only given gadgets to learn to read, the child's language and speech development will not develop optimally. Besides being able to cause brain disorders that affect the verbal ability of early childhood, excessive use of gadgets will make children experience addiction which will affect the child's emotional condition. Children will experience academic decline, lack of self-control so that they will become irritable and can cause a lack of concentration. In addition, children will experience problems in the social interaction process as well as disruption in the problem-solving process. That causes gadgets to have limitations, unlike direct social life which creates a process of interaction with another.

The information from Smart Parenting, it is stated that the percentage of early childhood who experience language disorders has increased. This is based on a study of 900 children conducted by Dr. Chatherine Briken, a pediatrician from Canada. In this study, the results showed that early childhood using gadgets for more than 1 hour a day are likely to experience expressive language disorders (based on the interaction of sounds and words) as much as 49%. Based on the explanation above, it can be concluded that the negative impact of gadgets is very influential for the language

development of early childhood. If this is left alone, early childhood will experience language problems. Language disorders will cause other disorders and imbalances in early childhood.

#### 4.2.2 Minimizing the Impact of Gadgets on Language Disorders and Social Interaction

With the negative impact of gadgets on language development in early childhood, the authors provide input to parents to overcome the problem of gadget addiction in early childhood. This suggestion can also minimize the emergence of social interaction imbalances that occur in early childhood because they use often gadgets. In this case, parents are required to be more active and expressive to their children. The role of parents must be done optimally to build communication and bonding with children. If parents are busy with their work, at least once a week do quality time with their children. Strong bonding between children and parents will establish intense communication and can train speech skills in early childhood.

Doing bilabial exercises in early childhood. This aims to practice pronunciation in children. Always involve children in every simple communication. It will help the children to hone their language skills and make them think more critically. In addition, the right way to minimize language disorders in early childhood is by reading fairy tales before they go to sleep. Storytelling is very effective because when parents read their children's tales, the child will listen to what the parents say. The words spoken by the parents will quickly be recorded in their brain memory. Children will remember and imitate the words they have absorbed.

In addition to the various methods above, minimizing the use of gadgets can have a good effect on the language development of early childhood. The American Academy of Pediatrics advises parents that children under 1.5 years of age are not recommended to stare at a gadget screen, other than that for children aged 1.5 to 2 years old can use gadgets but must be under extra supervision from parents. The length of time they use gadgets is also only one to two minutes per day. Then for children aged 2 years to 5 years are allowed to use gadgets but only to get rid of boredom, the effective time to use gadgets is a maximum of 1 hour every day.

Excessive use of gadgets not only causes early childhood to experience language disorders. The use of gadgets can also affect early childhood social interactions. Early childhood prefers to play with applications on their gadgets rather than communicate and interact with their peers. Early childhood social life becomes unbalanced. Addiction to these gadgets makes children reluctant to be active and have activities outside the home. Social interaction is needed in early childhood development, one of the factors in preventing language disorders in early childhood. Social interactions have been shown to increase bonds between children and peers and also the environment. Early childhood will experience difficulties when starting the world of education. They will find it difficult to communicate with their peers and will affect their peers at school. It takes an active role of parents to solve this problem. Parents are the main supporters to minimize the negative impact of gadgets on early childhood. The process of social interaction has a very big role in shaping the character of early childhood.

## 5. Conclusion

Based on the explanation and description results of the observation activities above, it can be concluded that language disorders in early childhood caused by the continuous use of gadgets are very worrying. Radiation rays emitted by gadgets can damage the structure of the brain, especially the forebrain, which is directly related to verbal skills and word processing in early childhood. Children with language disorders will find it difficult to understand what other people say, besides that, they also do not understand and have difficulty pronouncing words. The impact of using gadgets can also affect early childhood social interaction activities, social interaction is related to character building in early childhood. To minimize language disorders and lack of social interaction in early

childhood, the role of parents is needed. Parents can set aside a little time to read fairy tales or have two-way communication with their children and minimize the use of gadgets for early childhood.

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