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The Relationship Between the Use of Gadgets and the Social Interaction of Five-Year-Old Children at Workplace Kindergartens in Kuantan

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ABSTRACT

Nowadays, the situation of children with gadgets can be considered as a common things around the world. However, dependence on gadgets from a young age has many negative effects, especially in the aspect of social interaction growth. The purpose of this study was to identify the relationship between the use of gadgets and the development of social interaction in five years old children in workplace kindergarten, Kuantan. In this study, a questionnaire by "google form" was distributed to parents of children at workplace kindergarten around Kuantan. In this case study, the method used is quantitative and questionnaire instruments. The number of samples is 66 respondents which is consists of five years old parents. The results of the study show that the frequency of gadget use among five years old children around Kuantan is at a moderate level. Furthermore, the results of the coefficients value for the frequency of gadget use and children's social interaction skills are equal to 0.266. This proves that the frequency of gadget use also affects children's social interaction skills on a low scale. As conclusion, the development of social interaction is also influenced by the use of gadgets in children's daily lives. Therefore, parents should monitor their children's use of gadgets so that the development of their social interactions is more guaranteed.

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1. Introduction

1.1 Background

In this era of globalization, the situation of children with gadgets can be considered as something that is no longer foreign and is considered normal all over the world. The majority of children these days are indeed tech savvy and are able to use the technology around them easily. Along with the passage of time, gadgets are more children's choice than games or any activity that involves physical activity. Traditional games such as congkak, batu seremban or marbles have been increasingly forgotten. The rapid development of modern technology has had a huge impact and has changed the landscape of human life regardless of age.

According to Setiani (2020), gadgets can be defined as small electronic devices with various functions to facilitate human affairs. For example, computers or laptops, tablets, as well as mobile phones or smartphones. A study conducted by Sari (2020) stated that a few years ago, gadgets were only used by middle-to-lower businessmen. This is because the use of the gadget is to facilitate their affairs. But nowadays, gadgets are not only used by business owners but also owned by all walks of life including children who should not have the need to use them. This is because gadgets have various features and applications that are interesting, interactive and also flexible as an attraction.

The surroundings of the child are an external aspect that dictates how far each child can go in realizing their potential. The biophysical-psychosocial environment, which encompasses the family, the community, the physical environment, biology, culture, the political and economic spheres, and recent technological advancements, is another category of external variables. Children impacted by these outside variables may have temporary or permanent growth and development, which may have an impact on the overall quality of their development. Not only do adults and teenagers use gadgets, but preschoolers—who are typically only three to six years old—also utilize them. Preschoolers may now easily utilize electronics on their own due to their sophistication.

Children become comfortable playing with gadgets because of the variety of features and applications that are diverse and also fun (Suherman et al., 2021). Marifah and Suryantini (2019), explained in their study, very rapid and increasingly sophisticated technological progress has brought many changes to human life in various fields. Gadgets have also made a big impact in terms of cultural values nowadays. For example, everyone around the world must have a gadget. Gadgets not only affect the thinking or behavior of adults but also affect the behavior of children. Gadgets greatly influence the development of children, especially in the aspect of social development.

According to Fitriahadi and Tyastiti (2020) technology is increasingly used in children's lives. It is well known that children are in their golden age and in this phase, they like to imitate whatever they see, including what is displayed in gadgets like smartphones. Introducing gadgets too early to children can not only have positive but also negative effects. The statement is also supported by Suherman et al. (2021) in his study stated that preschool children are a period of "golden age" in growth. Children will quickly learn to respond to something new by exploring their surroundings.

Growth and development are supported at this time, including in the areas of physical prowess, intellect, talent, language, cognitive function, socioemotional skills, and spirituality. Future attitudes, behaviors, and personalities of children will be shaped during this stage. The brains of youngsters under the age of five are also in the most essential stage of development, according to a study by Abdul Hadi et al. (2022). Any extended exposure, like that of digital screens, can alter nerve development and have a number of negative effects. These days, a lot of young children use screens, some of them from as early as infancy.

Since 83.2% of internet users are youngsters between the ages of 5 and 17, the Malaysian Communications and Multimedia Commission (SKMM) determined that children's usage of devices is concerning (Zein et al., 2022). Furthermore, contemporary technology has a significant influence on global developments concerning the political, social, and economic spheres. When children used their free time for healthy pursuits like cycling, outdoor activities, and so on, things have changed. Today's kids are addicted to social media because they are exposed to a variety of technological devices like computers, smartphones, televisions, internet, and video games.

As many as 70% of parents give gadgets to children when they are doing housework, 65% of parents give gadgets to children to calm them and 25% of parents give gadgets as a medium to help their children sleep (Suherman et al., 2021). Children rely too much on smartphones and the internet to get information and entertainment, thus limiting the limits of socializing with the people around them. Children become not good at getting along with people around them because they do not use two-way communication and it is difficult to cooperate in solving a problem because there is no contact in social interaction. Obviously, the use of gadgets affects the social development problems of the Alfa generation.

Gadgets are one of the facilities that have an important role in society's life today. This is proven by the increasing number of gadget users over time. But there are some negative effects on children who often use gadgets for too long. In Malaysia, the use of gadgets is used with the purpose of either educating or entertaining children. However, addiction to the use of gadgets will affect children's health as well as their cognitive and social development. Addiction to the use of gadgets can cause deterioration in language development, reading skills, memory, and concentration. Uncontrolled use of gadgets will affect family and social relationships and lead to physical and mental illness. The purpose of this study was to examine the influence of gadget use in the development of social interaction of five-year-old children at work, Kuantan.

1.2 Importance of The Problem

These days, gadgets are widely available and practically every social group owns one. Modern youngsters and even newborns use devices in their daily lives. Adults are not the only ones who use them. Most parents start their babies off with electronics too young. In the eyes of parents, revealing gadgets at an early age is a common thing. According to Nahar et al. (2018) on average children spend eight hours a day on entertainment technology. 65% of them have televisions in their own bedrooms, while 50% of them have televisions in their homes.

Coupled with the use of smart phones, internet facilities and social media has caused the spread of the influence of technology in the life and social environment of a family. This shows the level of gadget dependency among children which is increasingly worrying. Dependence on gadgets from a young age has many negative effects on children, especially in terms of social growth. Wahyuni et al. (2019) in his study stated that children who are highly dependent on gadgets will have negative sentiments if they lose their gadgets.

According to Mahmood (2022), the majority of children will be angry, sad, and feel insecure when they don't get gadgets. Children who spend too much time on electronics may become more aggressive. Children also lose their sensitivity to their surroundings. The over-reliance of kids on technology might hinder their social development by preventing them from interacting or communicating with their families, friends, and other people. Numerous research have demonstrated the link between children's emotional feelings and device use.

When the use of gadgets increases, the risk of mental problems including depression, anxiety, attention deficit hyperactivity disorder (ADHD), mood disorders and even suicide can also increase. This shows the effects and risks of using gadgets in children's development. In addition, based on a study conducted by Keumala et al. (2019) found that the use of gadgets such as smartphones, tablets and electronic games by children may cause the child to experience delays in expressive speech. Lack of attention and mental disorders are also among the effects of excessive gadget use found in his study.

Children tend not to care about their surroundings when they use gadgets. They only focus on their gadget screen. In addition, five out of 18 children are likely to be more irritable if they are not allowed to use gadgets. In fact, there are some children who express their anger and act like what they see in the video or the game they play in the gadget. The increasing level of aggression among these children greatly affects their social development.

The increasing addiction to gadgets among children in Malaysia is also one of the things to worry about. Razak et al. (2021) stated in his study, based on World Internet Statistics (World Internet Statistics) revealed that almost 78.8% of internet users in Malaysia, especially children, suffer from serious addiction. This addiction is a worrying situation when two to three year old children are mostly allowed to play with gadgets such as tablets and mobile phones instead of parents or guardians.

According to the Cyber Security Awareness Benchmark Survey, which was carried out in 2016 by CyberSecurity and the Ministry of Education, 45% of youngsters in this country between the ages of seven and nine are adept internet users. However, 92.5% of kids and teenagers between the ages of 13 and 17 who use the internet frequently these days. Therefore, it is imperative that children receive early instruction in communication skills in order to develop their social abilities, which include observing, listening, conversing, and relating to others.

The use of gadgets among children gives various negative impacts in terms of their communication and social interaction activities with the people around them. In addition, dependence on gadgets at a young age also hinders the growth and development of children today. This will cause a decline in the growth aspect of children's social interaction, especially in the current generation. This point is supported by Ng et al. (2023) who stated that addiction to browsing the internet and gadgets can not only affect children's emotions, but it can also affect an individual's social relationships. In addition, it can also influence the formation of aggressive behavior and attitudes.

1.3 Research Objective and Research Question

This study was conducted to achieve three research objectives, namely:

1. Identify the frequency of gadget use among five-year-old children
2. Identify the level of development of social interaction among five-year-old children
3. Identify the relationship between gadgets and the development of social interaction in five-year-old children

In response to this research question, the investigator poses three pertinent queries that may aid in achieving the study's aims and objectives:

1. What is the level of frequency of gadget use among five-year-old children?
2. What is the level of development of social interaction among five-year-old children?
3. Is there a relationship between the frequency of gadget use and the development of social interaction in five-year-old children?

1.4 Research Hypothesis

The hypothesis of this study is used to examine the third objective of the study. Therefore, the research hypothesis set for this study is:
H_0 = There is no significant relationship between the use of gadgets among children on the social development of children (r=0).
H_1 = There is a significant relationship between the use of gadgets among children on the social development of children ($r \neq 0$).

1.5 Conceptual Frameworks

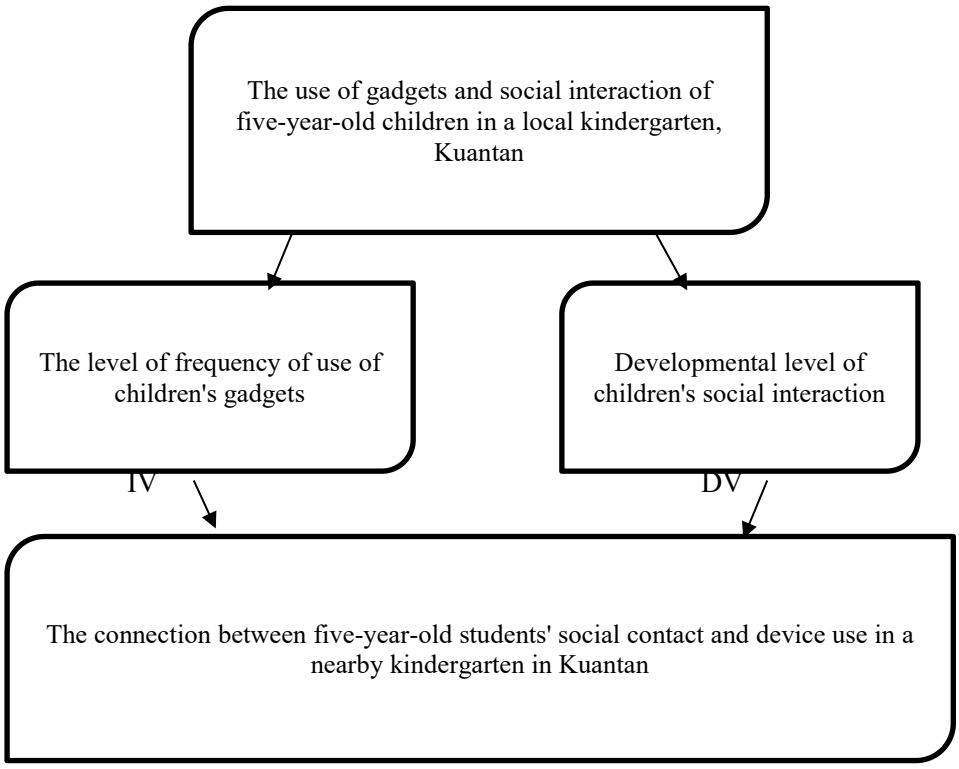

Figure 1. Conceptual framework (Source and adaptation Mat & Zain, 2022)

2. Literature Review

With the development of technology especially gadgets, parents are more dependent on gadgets to train their children. Parents make the gadget a practical and easy "nanny" to manage the growth and development of their children. Unbeknownst to them, gadgets can have a negative impact on children's language development. In addition, the use of gadgets for too long will result in early children experiencing speech disorders (Ali and Agustina, 2021).

In a study conducted by Marifah and Suryantini (2019), they found that gadgets influence 40.2% of children's social development. The findings of their study also show that children who use gadgets for more than two hours a day have very minimal social development. This causes children to lack empathy and lack awareness of their environment. This is compounded by parents who rarely supervise the use of children's gadgets, causing children to spend more time with gadgets. Children no longer like to play with friends outside and no longer want to help with household chores. This is because children are too busy with gadgets that provide more interesting applications.

A study conducted by Keumala et al. (2019), concluded three negative effects of gadget use in children's social development are speech delay, lack of attention and mental disorders. The results of their study also found that six parents admitted that their children's speaking abilities were disturbed due to the use of gadgets from an early age. Problems in the ability to speak greatly affect the social development of children. This is because, speech is one of the important keys in communication and social.

Furthermore, children are particularly vulnerable to the negative effects of mental illness and inattention, particularly with regard to their social development. The findings of a study conducted by Srinahyanti et al. (2019) also corroborate this. They discovered that most kids who play with electronics for more than an hour

a day suffer from a deterioration in their social skills. Children who spend a lot of time on electronics will become aloof from their surroundings and more aggressive. As a result, kids who prefer to spend time with these devices will have worse social development later on.

Additionally, excessive gadget use led to a 10% increase in aggressive behavior towards classmates, a 13% reduction in weekend physical activity and a 9% reduction in engaging in physical activity. This clearly shows the effect of using gadgets in shaping the development of children's social interaction. Children who are too busy with gadgets will be less good at getting along with their friends and they will be less interested in doing physical activities.

Not only that, but gadgets can also make children indifferent to the environment around them, both the family environment and the surrounding community. This is because, they spend more of their time using gadgets. This matter is supported by Hidayati & Zaman (2021) who stated that the excessive use of gadgets will have a very significant impact on aspects of social development, especially in the aspect of speech delay and an increase in passive attitudes.

In a study conducted by Putri and Eliza (2021) concluded that there are 36.7% of preschool children experiencing worrying language development. In addition, they also stated that the excessive use of gadgets has a negative impact on the development and psychology of children, where children become less social and communicate with the people around them. When children are less socialized, this will indirectly affect other developments such as language development. Children's language development is also affected when they have less interaction and less socialization either with peers or teachers in the classroom.

Zain et al. (2022) stated in his study that children use gadgets as their main tool not only for learning but also for leisure time. This increases the level of acceptance of their gadgets and causes gadgets to become important items that are always by their side. Losing or being away from their device can cause children to lose their way. The results of their study found that the excessive use of devices can lead to some negative implications in terms of cognitive, health and social life where these three skills are interconnected with each other.

Even while kids use technology for information gathering and online learning, there are always drawbacks, particularly when use is prolonged. Health, social, physical, and mental growth, as well as cognitive abilities, are all impacted by this. According to Itsna & Rofi'ah (2021) found that children who are too engrossed with gadgets are more concerned with their gadgets than the activities they should be doing such as sleeping, bathing and studying. In addition, children become less alert when called and become emotional and angry when not allowed to use gadgets. Children also easily follow the negative things they watch on their gadgets.

Things like this obviously hinder children's social development because they become more passive and easily influenced by negative cultures from a very young age. The results of the Samsuddin & Md Yusof (2020) study found that 22.7% of parents think that social development will be affected due to excessive use of gadgets. Furthermore, in the study, it was found that the excessive use of gadgets has an effect of 18.3% on children's emotional problems and that 14.9% of children rebel and become aggressive when they are not given gadgets. Addiction to the use of these gadgets has a very dangerous impact on the social development of children. This will affect interactions with friends and people around them. Then have an effect in their association.

The influence of gadgets does not only limit children's interactions with their peers. In fact, children's relationships with their parents are also affected. Children are more fond of spending time with gadgets than spending time with their parents. Children who are used to spending time with gadgets will be less exposed to social interactions in society. This will cause children to potentially have speech problems and problems interacting when they become teenagers (Nahar et al., 2018).

2.1 Theory of Ecology Brofenbrenner

Several components of Bronfenbenner's Ecological Theory—the microsystem, mesosystem, ecosystem, macrosystem, and chronosystem—can affect a person's growth. The first component, the microsystem, consists of the child's immediate surroundings, which include their parents, siblings, friends, neighbours, and teachers, and with whom they interact directly and spend the majority of their time. Since the mesosystem deals with the interactions between microsystems, events inside it have the potential to impact those interactions. For example, a person's behaviour and social interactions at school can be influenced by their home environment.

Next, the ecosystem involves experiences with an environment that does not directly involve children but the decisions taken from that environment have an impact on the children and the adults involved with the children. This shows how significant social development is between children and the people around them.

Nowadays gadgets are an important item in daily life that controls every movement and growth for every age group of society. The existence of gadgets has affected aspects of communication and will indirectly restrict their social, emotional, physical, and cognitive development. For example, in terms of social interaction, children will get along less with their peers because they are too engrossed in using gadgets.

This can be linked to the elements of the mesosystem where children have less two-way interaction and more one-way engagement. While children's emotional development can be linked to the elements of the microsystem where children from childhood, emotional development can be linked to the microsystem where children from the young age need to spend time and also need enough love from parents, siblings or people around them But when parents expose their kids to technology too young, it might make them complacent and prevent them from loving until they reach puberty.

This is proven by a study by Keumala et al. (2019) stated that the use of gadgets in daily activities makes children spend less time with their parents. Lack of social interaction makes children indifferent to their environment. This affects children both in terms of physical, motor, psychological and social development. They are no longer interested in playing with their peers because they are more interested in digital games. In addition, children will find it harder to focus on the real world because they are familiar with the digital world.

2.2 Theory of Erik Erikson

The next theory that can be linked to this study is Erik Erikson's theory. Erikson has divided the lifespan into eight stages which are also known as the "eight general human stages". Erikson hypothesizes that each psychosocial stage is accompanied by a crisis, which is a sign of individual life change that exists from the physiological maturity and social demands on people at that stage. Every psychosocial crisis has both positive and negative components. If the resolution of the conflict is satisfactory, then a large number of positive components permeate the formation of the ego and healthy development in the future is guaranteed.

On the other hand, if the conflict remains or is not resolved satisfactorily, the development of the ego will be destroyed, and a large number of negative components will merge with the ego. However, this does not mean that initial successes and failures are permanent. A person must solve every crisis faced in order to be able to advance to the next stage of development in a state of adaptation and maturity. Based on Erik Erikson's theory, the first stage is trust versus distrust. At this stage babies will begin to recognize their parents. Therefore, parents need to give enough love and attention to the baby.

If the baby is exposed to gadgets at this time, the baby will start to lose focus on the parent and focus on the gadget. In the second stage, which is autonomy versus shame, it involves more cognitive development, which is the power of the mind. As children are growing up, they do many things on their own. If children are supported in their actions, this can be linked in the use of gadgets. If children are encouraged to use gadgets, then they will be complacent about using the device. Children will feel that they are also capable of winning if they compete to play in gadgets such as video games.

They will follow the will and ability to make choices freely and have self-control when able to adapt themselves. A study by Nahar et al. (2018), which found that kids who like using technology will be more independent, supports this. If this personality is present in kindergarten or school, the child's socialization will be impacted. Children, for instance, will not want to share toys or school supplies with their peers; if they compete, they will find it difficult to accept defeat or failure; instead, they will strive to win and not let losing damage their relationships with their peers.

3. Method

The researcher used a quantitative approach in this study to explore the relationship between the frequency of gadget use by kindergarten children at work, Kuantan, age five, and the social interaction development of five-year-old children. The researcher believes that this study's design is appropriate for exploring this topic and offering a more thorough grasp of the phenomenon under examination. This is supported by Saidi (2019) who states that the quantitative approach is for researchers to analyze data to understand and solve problems regarding societal norms and human behavior.

For example, researchers assessed the increase in infant abandonment, drug addiction, moral decay and other social symptoms. The data obtained by the researcher through these methods for the sample or the entire population will be commented after all the documents of the study findings have been carefully analyzed. The researcher used descriptive and inferential quantitative methods. This method will make it easier for researchers to collect feedback data from a sample of parents. For inference, this method is used to test the research hypothesis. Spearman's correlation analysis was used in this study to evaluate and measure the study variables.

3.1 Populations and Sample

The researcher used the survey method in this study. This is because this study is suitable and can be used in educational research. This study was conducted in a kindergarten at the workplace in Kuantan district, Pahang. This is because each kindergarten has a different background and level of development of children that is in line with the purpose of this study.

The study population is significant in the study due to the population that will determine the method and number of samples taken. The population of this study involved parents of five-year-old children. The sample size of this study depends on the total number of kindergartens in workplaces around Kuantan. The involvement of parents of five-year-old children is a study sample to obtain more specific and accurate data.

The approach that the researcher has used in this study is a descriptive approach where the researcher wants to study the frequency of gadget use by five-year-old children and the social interaction skills of five-year-old children. The researcher uses a descriptive approach to evaluate the descriptive analysis and also inferential analysis for the researcher to evaluate the spearman correlation analysis.

3.2 Population and Sample Selection Procedures

The researcher used a simple random sampling method to select a study sample that was conducted based on the Krejcie and Morgan (1970) sample size determination table. According to Zaidi (2021), although Krejcie and Morgan's sample size calculation has been introduced for a long time, the method of determination in terms of sample size still refers to the determination table of their work because the confidence level is 5%. The researcher took the number of samples based on Krejcie and Morgan's (1970) sample size determination table which is N= 80 and the sample that will be taken from the mother or father of five-year-old children totals 66 people.

4. Results and Discussion

4.1 Descriptive Findings

The researcher describes the variables for descriptive statistics. This study uses the search of mean value, standard deviation, variance and percentage to express the level of frequency of children's gadget use and social interaction of five-year-old children in kindergartens at workplaces around Kuantan. The results of descriptive data analysis in detail are as follows.

4.1.1 Demographic analysis of gender

The study showed that 69.7% of the total sample, which is a total of 46 samples, were female while only 30.3% of the 66 samples were male. This comparison shows that the majority of children are sent to kindergarten by women. Table 1 shows a comparison of study samples based on gender.

Table 1. Gender demographic analysis

	Frequency	Percentage (%)	Valid Percentage	Cumulative Percentage
Male	20	30.3	30.3	30.3
Female	46	69.7	69.7	100.0
Total	66	100.0	100.0	

4.1.2 Age level analysis

Table 2. Age group analysis

	Frequency	Percentage (%)	Valid Percentage	Cumulative Percentage
> 40	8	12.1	12.1	12.1
21-25	1	1.5	1.5	13.6
26-30	15	22.7	22.7	36.4
31-35	29	43.9	43.9	80.3

36-40	13	19.7	19.7	100.0
Total	66	100.0	100.0	

As a result of the analysis carried out by the researcher, the sample aged 31 to 35 years is the largest number recorded which is a total of 29 people. Meanwhile, the smallest number recorded is the sample aged 21 to 25 years which is one person. Furthermore, a total of 15 samples aged 26 to 30 years, 13 samples aged 36 to 40 years and 8 samples aged over 40 years. The age difference range of the sample is shown in table 4.1.2 below.

4.1.3 Ethnicity analysis

Based on the research conducted, 92.4% of the sample is Malay, which is a total of 61 people in the sample. While 4.5% of the Chinese race which is a total of 3 people followed by 3.0% of the Indian race which is a total of 2 people as shown in table 3.

Table 3. Ethnicity analysis

	Frequency	Percentage (%)	Valid Percentage	Cumulative Percentage
Chinese	3	4.5	4.5	4.5
Indian	2	3.0	3.0	7.6
Malay	61	92.4	92.4	100.0
Total	66	100.0	100.0	

4.1.4 Analysis of the parent/guardian relationship

Table 4 shows that the majority of the 66 study samples are mothers of children with a percentage of 66.7%. In addition, 33.3% are fathers of children.

Table 4. Analysis of parent/child guardian relationship

	Frequency	Percentage (%)	Valid Percentage	Cumulative Percentage
Father	22	33.3	33.3	33.3
Mother	44	66.7	66.7	100.0
Total	66	100.0	100.0	

4.1.5 Academic qualifications

The study shows that the highest percentage of the sample's academic qualifications are diploma graduates, which is 57.%. Next, followed by STPM by 16.7% and bachelor's degree by 9.1% respectively. In addition, 13.6% of the sample graduated with SPM and 3.0% with a master's degree. Table 5 below shows the highest academic qualifications for the sample.

Table 5. Analysis of academic qualifications

	Frequency	Percentage (%)	Valid Percentage	Cumulative Percentage
Diploma	38	57.6	57.6	57.6
Bachelor's Degree	2	3.0	3.0	60.6
Master's Degree	6	9.1	9.1	69.7
SPM	9	13.6	13.6	83.3
STPM	11	16.7	16.7	100.0
Total	66	100.0	100.0	

4.1.6 Analysis of the frequency of gadget use by five-year-old children

The results of this study are divided into three scales, namely low, medium and high in order to obtain more accurate and clear study results. Overall, the findings of the study found that a total of 12 children representing 18.2% have a high level of gadget use while a total of 14 children with a percentage of 21.2% have a low level of gadget use. In addition, the majority of children, 40 children with 60.6% are at a medium level. This shows that the average level of frequency of gadget use among children is at a moderate level with (mean = 1.20, sp = 0.626). Table 4.1.6 shows the frequency and percentage level of gadget use among children. Table 6 shows the descriptive statistics of the study.

Table 6. Level of frequency of gadget use

	Frequency	Percentage (%)	Valid Percentage	Cumulative Percentage
Low	14	21.2	21.2	21.2
Medium	40	60.6	60.6	81.8
High	12	18.2	18.2	100.0
Total	66	100.0	100.0	

4.1.7 Descriptive statistics

Table 7. Descriptive Statistics

	N	Minimum	Maximum	Average	Standard Deviation	Contortion		Kurtosis	
	statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Standard Error	statistics	Standard Error
Frequency of gadget use	66	1.20	3.95	2.4917	.62577	.027	.295	-.048	.582
N value	66								

4.1.8 Analysis of social interaction of five-year-old children

The analysis results of this study are divided into two scales, namely medium and high. Table 8 found that 86.4% of children have a moderate level of social interaction skills. Whereas, only 13.6% of children are at a high level in social interaction skills. The results of the study found that the majority of children were at a moderate level in social interaction skills with (mean = 2.10, sp = 0.308). Table 7 shows a comparison of the level of social interaction skills among children. Table 9 shows the descriptive statistics of the study.

Table 8. Analysis of the level of social interaction

	Kekerapan	peratusan	Peratusan Sah	Peratusan Kumulatif
Medium	57	86.4	86.4	86.4
High	9	13.6	13.6	100.0
Total	66	100.0	100.0	

Table 9. Descriptive statistics

	N	Minimum	Maximum	Average	Standard Deviation	Contortion		Kurtosis	
	statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Standard Error	statistics	Statistics
Social Interaction Skills	66	2.10	3.70	2.7773	.30799	.575	.295	1.058	.582
N Value	66								

4.1.9 Inference Results (Correlation)

The study sample collected from the data will describe the characteristics of the population for inferential analysis. The purpose of this inference analysis is to test the research hypothesis. The researcher used the spearman correlation method to identify the relationship between gadgets and the development of social interaction in five-year-old children. In addition, spearman correlation analysis is also to identify the relationship between variables and for researchers to refer to spearman correlation to see whether the relationship is weak or strong. The following is the research hypothesis:

H_0 = There is no significant relationship between the use of gadgets among children on the social development of children (r=0).

H_1 = There is a significant relationship between the use of gadgets among children on the social development of children

The above hypothesis was analyzed using Spearman Rho correlation to study the relationship between the use of gadgets among children and the social development of children. The sample in this study is (n = 66), (r_s = 0.266), (P = 0.031). Based on table 4.2, the correlation value for these two variables is equal to 0.266. This proves that there is a relationship between these two variables on a low scale. Furthermore, the significant value obtained in this analysis is 0.031, indicating that this study is significant and the hypothesis H_0 is not accepted. In conclusion, hypothesis H_1 is accepted. Table 9 shows the correlation analysis for this study.

Table 10. Correlation value

			Frequency of Gadget Use	Social Interaction Skills
Spearman's rho	Frequency of Gadget Use	Correlation coefficient	1.000	.266*
		Significant (‘’2-tailed test’’)	.	.031
		N	66	66
	Social Interaction Skills	Correlation coefficient	.266*	1.000
		Significant (‘’2-tailed test’’)	.031	.
		N	66	66

*. Correlation is significant in value 0.05 (‘’2-tailed test”).

4.2 Discussion

4.2.1 Discussion of the results of the study on the level of frequency of gadget use among five-year-old children

The discussion about the frequency of gadget use by five-year-old children at workplace kindergartens in Kuantan is something that needs to be emphasized. Descriptive analysis was used for the researcher to see the

level of frequency of gadget use among five-year-old children in Kuantan workplace kindergartens. The research findings in Chapter 4 show that there are three levels, the lowest level being at a mean rate < 1.00. Medium level is at the rate of mean value which is 1.01 – 2.00, and the highest is in the rate of mean value which is > 2.01. Based on the findings of the descriptive analysis, it shows that the highest frequency is at a medium level, which is 40 samples with 60.6%.

While the level of medium frequency is at the lowest level with 12 people in the sample with 21.2%. Furthermore, the lowest frequency of gadget use is at the highest level of 12 sampled people with 18.2%. It is clear here that in conclusion, the frequency of children's use of gadgets in workplace kindergartens in Kuantan is at a moderate and controlled level. This point is supported by Husin et al. (2023) who stated that the addiction to the use of digital technology devices by children with learning problems is at a moderate level.

Authoritative parents found that children did not often resume using digital technology devices immediately after a break and children did not often go to bed with digital technology devices still in hand. However, this style is widely practiced by parents because they are able to communicate and interact well. While according to Jalil et al. (2020) stated that for the study participants, although gadgets are a necessity nowadays, the use of gadgets for children is not a must and there are limitations.

4.2.2 Discussion of the results of the study on the level of social interaction development of five-year-old children

Based on the discussion about the level of social interaction development of five-year-old children at workplace kindergartens in Kuantan, it was found that the development of children's social interaction needs to be monitored by parents and teachers. Descriptive analysis was used by the researcher for the level of social interaction development of five-year-old children at workplace kindergartens in Kuantan. The findings of the study in Chapter 4 show that there are only two levels for the development of social interaction, which is at a medium level at a mean value rate of 1.01 - 2.00, and the highest is at a mean value rate that is > 2.01.

Based on the findings of the descriptive analysis study, it shows that the highest frequency is at a moderate level with a frequency of 57 sample people (86.4%) while the lowest is the highest level with 9 sample people (13.6%). This shows that the development of social interaction among five-year-old children in workplace kindergartens is at a moderate level. This point is supported by Ibrahim et al. (2023) who said that children obtain various types of information through the exploration of gadgets and indirectly this can improve children's knowledge.

Children also store information and information where this will affect children's behavior and actions. However, negative effects can occur to children if the use of gadgets among children is not controlled. This is shown in the study of Makantal et al. (2020) where the pattern of social interaction in terms of sharing games shows that the frequency of social interaction is the highest or positive which is in terms of using game tools, behavior, sharing ideas with friends, waiting for turns, working together when there are two or more friends while playing, talking or giving symbols to friends while playing either verbally or non-verbally, asking questions or showing symbols asking friends about play activities.

While the frequency of the lowest or negative social behavior is explaining to friends how to use toys. Referring to this study, the behavior of social interaction in terms of sharing toys can be seen in the types of social play which are solitary play, parallel play, associative play and cooperative play. This can have an impact in terms of the child's social interaction behavior. Furthermore, according to Makantal et al. (2020) also says that children who are five and six years old already understand and know how to share toys.

This is because children need friends to play with. The categories of children's social interaction positively and negatively can be seen through their behavior while they are playing. Overall, social interaction is simple in that social interaction among children can be positive and negative. This is because the development of social interaction of five-year-old children at workplace kindergartens around Kuantan is influenced by the use of gadgets given by parents to children. Some parents use gadgets to attract children's attention while some parents prefer two-way interaction with their children rather than using gadgets. In addition, children are also monitored by kindergarten teachers at work while children carry out teaching activities and learning in the classroom so that children are balanced in terms of the development of social interaction.

4.2.3 Discussion of the results of the study on the relationship between the frequency of gadget use and the development of social interaction in 5-year-old children

As a result of the research that has been done, there is a significant relationship between the relationship between the use of gadgets and the development of social interaction of five-year-old children in kindergartens at the workplace in Kuantan. The use of gadgets and the development of social interaction in

this study shows that the majority of five-year-old children in kindergartens in Kuantan workplaces are positive but the significance of the study is weak. This is because based on this study, most children and overall parents agree that children like to use YouTube to watch their favorite entertainment.

However, the parents of the five-year-old children at the workplace kindergarten in Kuantan also disagree about the children's frequent use of gadgets to socialize. This is proven that although older children often use gadgets, children also often interact socially with their peers. This matter is supported by Jalil et al. (2020) in their study saying that among working parents they think that the use of gadgets among children nowadays has already become a necessity. But the use of gadgets needs to be controlled because the use of gadgets that are not controlled will have a bad effect on children.

According to Fisch (2004) in children's learning from educational television: Sesame Street and beyond; states that programs in the form of educational entertainment targeted at children such as Mr Rogers' Neighborhood or Sesame Street shows will have an impact which is positive for children. If children watch programs in the form of entertainment education continuously, it can improve children's ability in the form of solving a task, working together, learning the skills to accept and engage with others, as well as increasing interest in being involved in creativity.

In addition, children who watch entertainment educational programs are also said to be able to promote virtues such as kindness, cooperation, social integration among shy children or other prosocial traits. If there is clear evidence to us about studies on the potential negative effects of social media that encourage aggressive and antisocial actions in children, then we also assume the potential positive or good effects of media on children that can enrich the song of interaction behavior. children's social. It is clear here that although children have positive elements in the use of gadgets, the use of gadgets also needs to be monitored by parents of five-year-old children in kindergartens at work, Kuantan. In this study, parents support that children need to be supervised when using gadgets and children ask for my permission before using gadgets.

5. Conclusion

The current study can be seen that the development of children's social interaction is one of the most important aspects of development for children's development process. A positive environment in terms of parental attention to children is important for children to adapt themselves to the process of social interaction. This process is important to achieve the optimal level of child development for individual social interaction with others in an appropriate way. However, the development of social interaction is also influenced by the use of gadgets in children's daily lives.

Gadgets can have a positive impact on children in terms of creating interactive learning. For example, children watch educational entertainment on social media sites that can provide input to children. However, excessive use of gadgets can have a negative effect on children's social interaction skills such as not wanting to cooperate with peers, disrespecting friends and not socializing with peers or family. This can cause a lack of social interaction at home or with peers if children are often given excessive gadgets.

However, if the use of gadgets is well monitored by parents, children are able to balance social interaction and the use of gadgets in daily life. In conclusion, the use of gadgets that are controlled and have elements of education and entertainment can have a positive effect on children. On the other hand, if the use of gadgets is excessive and not monitored by parents, the use of gadgets can have a negative impact on the development of children's social interactions.

References

Abdul Hadi, A., Roslan, S. R., Mohammad Aidid, E., Abdullah, N., & Musa, R. (2022). Development and Validation of a New Gadget Addiction Scale (Screen Dependency Scale) among Pre-School Children in Malaysia. *International Journal of Environmental Research and Public Health*, *19*(24), Article 24. https://doi.org/10.3390/ijerph192416916

Ali, R. F., & Agustina, A. (2021). Gadget phenomenon: the effect toward language disorders and social interaction of early childhood. *Journal of Cultura and Lingua*, *2*(2), Article 2. https://doi.org/10.37301/culingua.v2i2.47

Ibrahim, A., Samsudin, M. A., Wahid, N. F. A., & Yue, S. B. (2023). *Implikasi Gajet terhadap perkembangan sosial dalam pendidikan awal Kanak-Kanak*. ResearchGate. https://www.researchgate.net/publication/374631097_Implikasi_Gajet_Terhadap_Perkembangan_Sosial_Dalam_Pendidikan_Awal_Kanak-Kanak

World Health Organization: WHO. (2019, April 24). To grow up healthy, children need to sit less and play more. *Academic Rigour, Journalistic Flair*. https://www.who.int/news/item/24-04-2019-to-grow-up-healthy-children-need-to-sit-less-and-play-more

Ng, H. Y., Surat, S., & Rahman, S. (2023). Pengaruh ketagihan internet: perubahan tingkah laku murid sekolah rendah. *Malaysian Journal of Social Sciences and Humanities, 8*(5), e002340. https://doi.org/10.47405/mjssh.v8i5.2340

Makantal, J. B. (2020, October 27). *Corak Interaksi Sosial Kanak-Kanak Dengan Rakan Sebaya Semasa Main Bebas Di Prasekolah.* https://mojc.um.edu.my/index.php/JUKU/article/view/26840

Husin, F.N.C., Yasin, M.H.M., & Surat, S. (2021, April 01). Gaya Keibubapaan Dan Ketagihan Penggunaan Peranti Teknologi Digital Kanak-Kanak Bermasalah Pembelajaran. (2021). *Jurnal Penyelidikan Pendidikan Dan Teknologi Malaysia (JPPTM), 1*(1). https://www.jppt.my/wp-content/uploads/2023/04/5-1.pdf

Saidi, M. Z. I. (2019). *Pendekatan Kuantitatif dalam Penggunaan* R. ResearchGate. https://www.researchgate.net/publication/337593143_Pendekatan_Kuantitatif_dalam_Penggunaan_R

Jalil, H.J.A., Bakar, N.A., & Hassan, J. (2020). *Pengawalan Ibu Bapa Berkerjaya Terhadap Penggunaan Gajet Dalam Kalangan Kanak-Kanak: Satu Kajian Kes* https://www.ukm.my/bicaradakwah/wp-content/uploads/2020/11/BD21-6.pdf

Fisch, S. M. (2004). *Children's learning from educational television: Sesame Street and beyond.* Lawrence Erlbaum Associates Publishers.

Fitriahadi, E. F. E., & Tyastiti, V. H. (2020). The impacts of the use of gadgets on the development of children 3-6 years of age. *Seajom: The Southeast Asia Journal of Midwifery*, *6*(1), Article 1. https://doi.org/10.36749/seajom.v6i1.83

Hidayati, N., & Zaman, B. (2021). Is it Necessary to Ban Gadget in Early Childhood?: *5th International Conference on Early Childhood Education (ICECE 2020)*, Bandung, Indonesia. https://doi.org/10.2991/assehr.k.210322.057

Itsna, N. M., & Rofi'ah, R. (2021). Dampak Penggunaan Gadget pada Interaksi Sosial Anak Usia Dini. *Ummul Qura: Jurnal Institut Pesantren Sunan Drajat (INSUD) Lamongan*, *16*(1), Article 1. https://doi.org/10.55352/uq.v16i1.254

Keumala, M., Yoestara, M., & Putri, Z. (2019). The impacts of gadget and internet on the implementation of character education on early childhood. *International Conference on Early Childhood Education*, *0*, Article 0.

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610.

Mahmood, F. (2022). *Kesan Negatif Penggunaan Gajet Kepada Anak: Cara Atasi Masalah.* https://www.ikma.edu.my/images/dokumen/penerbitan/demensi/demensi-koop-70/Dimensi-KOOP-Bil-70-13.pdf

Marifah, A., & Suryantini, N. P. (2019). Reduce the use of gadgets: Parent's coping strategies for children's social development. *International Journal of Nursing And Midwifery Science (IJNMS)*, *3*(3), 165–173. https://doi.org/10.29082/IJNMS/2019/Vol3/Iss3/239

Mat, H., & Zain, A. (2022). The effects of gadget use on children during teaching and learning in new norms. *Jurnal Pendidikan Bitara UPSI*, *15*, 29–37. https://doi.org/10.37134/bitara.vol15.sp.4.2022

Nahar, N., Sangi, S., Baniear Salvam, D. A., Rosli, N., & Abdullah, A. H. (2018). IMPAK negatif teknologi moden dalam kehidupan dan perkembangan kanak-kanak hingga usia remaja (negative impact of modern technology to the children's life and their development). *UMRAN - International Journal of Islamic and Civilizational Studies*, *5*(1). https://doi.org/10.11113/umran2018.5n1.181

Ng, H. Y., Surat, S. & Saemah (2023) Pengaruh ketagihan internet: perubahan tingkah laku murid sekolah rendah. *Malaysian Journal of Social Sciences and Humanities (MJSSH), 8*(5), e002340. https://doi.org/10.47405/mjssh.v8i

Putri, V. M., & Eliza, D. (2021). The Impact of Gadget Use on the Aspects of Early Childhood Language Development during Covid-19. *International Journal of Emerging Issues in Early Childhood Education*, *3*(1), 01–07. https://doi.org/10.31098/ijeiece.v3i1.414

Razak, A. A., Wan Khairuldin, W. M. K. F., Md. Reshad, H. F., Mat@Mohamad, M. Z. B., & Anas, W. N. I. W. N. (2021). Gadget Addiction Factors in Malaysia: A Literature Review. *International Journal*

of Academic Research in Business and Social Sciences, *11*(2), Pages 151-156. https://doi.org/10.6007/IJARBSS/v11-i2/8650

Samsuddin, A. R., & Md Yusof, H. (2020). Penggunaan gajet terhadap perkembangan kanak-kanak prasekolah: Gadget usage on the development of preschool children. *Jurnal Pendidikan Awal Kanak-Kanak Kebangsaan*, *9*, 113–126. Retrieved from https://ojs.upsi.edu.my/index.php/JPAK/article/view/4543.

Sari, D. N. (2020). An Analysis of the Impact of the Use of Gadget on Children's Language and Social Development. *Proceedings of the International Conference of Early Childhood Education (ICECE 2019)*. International Conference of Early Childhood Education (ICECE 2019), Padang, Indonesia. https://doi.org/10.2991/assehr.k.200715.041

Setiani, D. (2020). The Effect of Gadget Usage on the Social Development of Children Aged 3-5 Years: Literature Review. *STRADA Jurnal Ilmiah Kesehatan*, *9*(2), 1732–1739. https://doi.org/10.30994/sjik.v9i2.526

Srinahyanti, S., Wau, Y., Manurung, I., & Arjani, N. (2019). Influence of Gadget: A Positive and Negative Impact of Smartphone Usage for Early Child. *Proceedings of the Proceedings of the 2nd Annual Conference of Engineering and Implementation on Vocational Education (ACEIVE 2018), 3rd November 2018, North Sumatra, Indonesia*. Proceedings of the 2nd Annual Conference of Engineering and Implementation on Vocational Education (ACEIVE 2018), 3rd November 2018, North Sumatra, Indonesia, Medan, Indonesia. https://doi.org/10.4108/eai.3-11-2018.2285692

Suherman, R. N., Saidah, Q., Nurhayati, C., Susanto, T., & Huda, N. (2021). *The Relationship Between Parenting Style and Gadget Addiction Among Preschoolers*.

Wahyuni, A. S., Siahaan, F. B., Arfa, M., Alona, I., & Nerdy, N. (2019). The Relationship between the Duration of Playing Gadget and Mental Emotional State of Elementary School Students. *Open Access Macedonian Journal of Medical Sciences*, *7*(1), 148–151. https://doi.org/10.3889/oamjms.2019.037

Zain, Z. M., Jasmani, F. N. N., Haris, N. H., & Nurudin, S. M. (2022). Gadgets and Their Impact on Child Development. *Proceedings*, *82*(1), Article 1. https://doi.org/10.3390/proceedings2022082006

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