# The Controversy of Playing Metaverse Games for Preschoolers

**Dina Jauharotuz Zulfa *, Yudithia Dian Putra, Rosyi Damayani Twinsari Maningtyas, Ahmad Samawi**

State University of Malang, Jl. Semarang No. 5 Malang, East Java, Indonesia

*Author of correspondence, Email: dina.jauharotuz.2001536@students.um.ac.id

**Abstract**

This article provides an overview of the impact of playing metaverse games for pre-school children (4-6 years old), especially on their social and emotional development. Metaverse games are games played in a computer-generated world that is not real but user can see, experience, and interact as if they were in that world through a character called an avatar. We choose the metaverse games roblox, Minecraft, bus simulator, and Sakura school simulator, as well as social emotional development which focuses on interaction activities and expressing emotion. This focus was done based on literature review and children's habits obtained when playing online games. This study used quantitative correlation method with saturated sampling method. The research was conducted on 36 children at RA Baipas Roudlotul Jannah through an instrument in the form of a questionnaire distributed to parents. Our article offers a different perspective on the social-emotional impact of gaming on pre-school children.

**Keywords:** metaverse game, social emotional development, pre-school age children

## 1. Introduction

Playing games in one of the activities that many people enjoy. Usually someone plays games to relieve boredom after a long day of activities. Nowadays, games are very easy to get, even a variety of games is available for all groups. Only by installing on the cellphone through the play store then the game can be played. Based on the We Are Social report, the number of video game players in Indonesia as of January 2022 is the third largest in the world. Not only parents or teenagers, even many children also play games. The result of preliminary research conducted at RA Baipas Roudlotul Jannah by distributing questionnaires to student guardians and getting the results that as many as 34 children aged 4-6 years who attend school at the institution are familiar with games and even like to play metaverse games. This metaverse represents a virtual world created from computer graphics, which can be accessed and connected by users around the world. User are embodied in digital bodies called avatars (Mystakidis, 2022).

The benefits of playing games for children include: a) being able to recognize computer technology; b) being alternatives foster a disciplined attitude towards rules; c) being able to stimulate children's cognitive development such as problem solving and reasoning; d) being a means of stimulating the development of motor nerves and spatial abilities; e) being a means of interaction and creating a familiar atmosphere; f) playing games is entertaining and fun. Although it has many benefits, playing games can also be disastrous if its use is not controlled. As for the negative effects of playing games, namely: a) children can close themselves and only play games all day in their rooms; b) it can cause addiction and dependence; c) it can lead to

deviant behavior; d) it arouses trigger acts of violence due to the highly interactive, exciting nature of video games, and require player involvement (Henry, 2010).

Research conducted by Thaharah & Mayar (2022) describes the positive impact of playing games on children aged 5-6 years, namely cooperation. Games can also increase sympathy (Qalbi, 2022). As for the negative impact of playing games, namely making children close themselves from the surrounding environment, addiction, and triggering deviant behavior. Handila's research (2022) describes the negative impact of playing games on children aged 5-6 years such as children tend to be passive, do not want to socialize and play with friends and others, daily tasks and obligations are neglected.

Based on this phenomenon, games have been played by children aged 5-6 years, so it is necessary to conduct research related to the impact of playing games for pre-school children by adding research subjects, namely 4-5 years old children with social emotional development limited to interaction and expressing emotions. This study was conducted to determine whether or not there is a relationship between playing metaverse games and children's social emotional development and how strong the relationship is. The hypotheses proposed in this study include H0 (there in no relationship between the use of metaverse games on children's social emotional development, and Ha (there is a relationship between the use of metaverse games on children's social emotional development).

This research was conducted at RA Baipas Roudlotul Jannah using quantitative correlation methods through instruments in the form of questionnaires distributed to parents of students with a total sample of 36 children getting the results that r count (0,366) is greater than r table (0,329). The calculated r value of 0,366 is in the range of 0,21-0,41 which is included in the small correlation category (not close). The coefficient of determination is 13%. Thus, it can be stated that there is a not close and significant relationship between the use of metaverse games and children's social emotional development at RA Baipas Roudlotul Jannah.

## 2. Method

Contains the type of research, time and place of research, targets / targets, research subjects, procedures, instruments and data analysis techniques and other things related to the way of research that can be written in sub-subchapters, with sub-subheadings.

### 2.1. Type of research

This study uses a quantitative correlation method to determine whether or not there is a relationship between playing metaverse games and children's social emotional development.

### 2.2. Research subjects, procedures

The population of this study were children aged 4-6 years at RA Baipas Roudlotul Jannah who played metaverse games. There were 126 students consisting of 63 students group A and 63 students group B. The data of this study were obtained through questionnaires distributed to 76 parents of group A and group B students, 36 of which were appropriate for analysis.

### 2.3. Instrument, data analysis technique

The questions in this study were based on the following indicators: a) where to play metaverse games; b) frequency of playing metaverse games; c) cooperation; d) communication; e) happy expression; f) sad expression; and g) angry expression. The questionnaire on the social-emotional development to children who play online games aims to assess the habits and attitudes that arise when children play games. This questionnaire required respondents to select answers on a 4-point scale consisting of responses that had high gaming habits and expressed emotions well were given 4 points, while those that had low gaming habits and expressed emotions poorly were scored 1 point. Statistical analysis was conducted using SPSS version 24. The Pearson correlation validity test, Cronbach's Alpha reliability test, and Pearson correlation analysis are used to determine if there are differences and/or relationships between variables. The hypotheses we put forward include H0, which means there is no correlation between playing online games and the social emotional development of preschool children, and Ha, which means there is a correlation between playing online games and the social emotional development of preschool children.

## 3. Results and Discussion

### 3.1 Result

Data on the use of metaverse games is obtained from a questionnaire that has been given answer choices and scores given to parents of students in groups A and B of RA Baipas Roudlotul Jannah. Based on the results of data collection, it was obtained that 8 (22%) children were in the frequent category, 23 (64%) children were in the moderate category, and 5 (14%) children were in the rare category. The statement can be illustrated with a graph as follows.

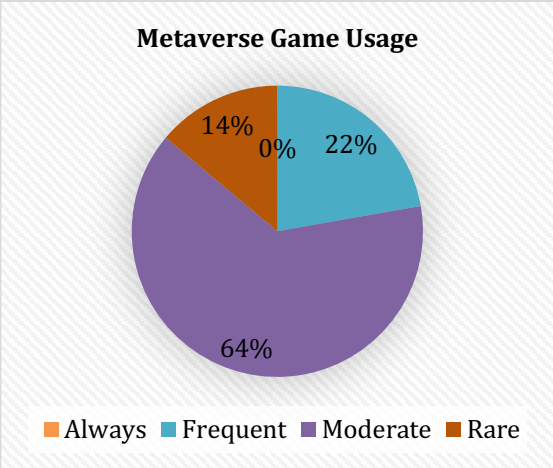


**Figure 1 Graph of Metaverse Game Usage**

Data on children's social emotional development was obtained from a questionnaire on children's social emotional development that has been scored on each answer choice given to parents of RA Baipas Roudlotul Jannah students. Based on the results of data collection, 1 child (3%) is in the very good category, 19 (53%) children are in the good category, 14 (39%) children are in the fair category, and 2 (5%) children are in the bad category. The statement can be illustrated with a graph as follows.

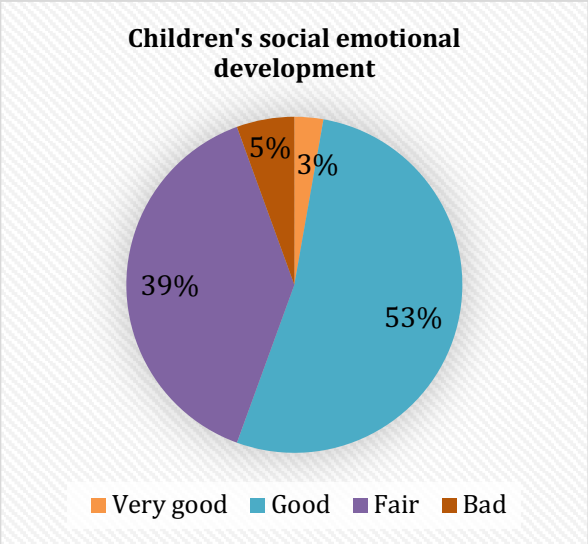


**Figure 2 Graph of Children's Social Emotional Development**

In this study, the type of relationship between two variables, namely the variable of metaverse game use (X) and the variable of children's social emotional development (Y) was ascertained through hypothesis testing. The decision in Pearson correlation analysis or known as product moment correlation is taken based on: 1) there is a significant relationship if the sig. value is less than 0.05; 2) there is no significant relationship if the sig. value is more than 0.05.

Based on the calculation of Pearson correlation analysis with the SPSS 24.0 Windows version application, the following results were obtained.

**Tabel 1 Summary of Pearson Correlation Test Results**

| Correlations | | |
|---|---|---|
| | Metaverse Game Usage | Children's social emotional development |
| Pearson Correlation | 0,366 | 0,366 |
| Sig. (2-tailed) | 0,028 | 0,028 |
| N | 36 | 36 |

### 3.2 Discussion

Figure 1 shows that the use of metaverse games is dominated by the moderate category as many as 23 children (64%). The sufficient category here is defined as children playing metaverse games with a duration of 1-2 hours. The utilization of this metaverse game can be said to be not excessive considering that gamers usually spend more than 3 hours playing games as stated by Taufik in Pangestika (2017). This is also supported by the research of Oktafia et al. (2021) which states that the ideal time for pre-school children to play games is 1-2 hours per day. Thus, the use of metaverse games should not be prohibited because it can have a positive impact on children if its use is not excessive. Efforts that can be made to prevent excessive use of games are to involve parents in supervising and controlling children when playing games.

Figure 2 shows that children's social emotional development is dominated by the good category as many as 19 children (52.8%). Children's social-emotional development in the good category means that the process of social interaction and expression of children's emotions can be channeled in everyday life. Children show their social development through social interaction activities which include cooperation and communication, and show emotional development through expressing happy, sad, and angry emotions that can be displayed through facial expressions, voice, and attitude. This statement is in accordance with the characteristics of socio-emotional development of children aged 4-6 years, which include children being able to cooperate with friends, and being able to control and show emotions according to conditions (Anzani et al., 2020). Although children's social emotional development is classified as good, there are still social emotional developments that have not been channeled appropriately in everyday life so that guidance from parents is needed so that children's social emotional development can develop according to their age.

The variables of metaverse game use and social emotional development have a significant (real) relationship as indicated by the significance value or Sig. (2-tailed) of 0.028 <0.05, according to the results of the Pearson correlation test conducted above. Thus, Ha (there is a significant relationship between metaverse games and children's social emotional development) is accepted while H0 (there is no significant relationship between metaverse games and children's social emotional development) is rejected. The results of this study are supported by the research of D. A. Sari & Nurjanah (2020) and the research of Jannah (2023). One of the things that has an impact on children's social emotional development is the Metaverse Game. This is in line with the opinion of Henry (2010) and Hadisaputra (2022) who state that games become a means of intimacy and support interaction between players. This player can mean children with their friends or children with parents. However, games can also cause children to become less concerned about the environment, and games can even trigger acts of violence and other deviant behaviors.

The calculated r value (Pearson Correlation) for the relationship between metaverse games (X) and social emotional development (Y) is 0.366, so it is concluded that there is a small relationship (not close) between the utilization of metaverse games and social emotional development. Based on the results of a preliminary study from Jannah (2023) through interviews, children who play games with a duration of more than 3 hours often say harsh words and become lazy to do other activities. Pangestika's research, 2017 explained that the common time used by gamers to play a game is 3-5 hours. Research by Rizky et al., (2022) also states that games have a positive impact if used reasonably, but if excessive use can cause harm. Thus, researchers argue that the relationship between the use of metaverse games and children's social-emotional development at RA Baipas Roudlotul Jannah is in the category of not close because the average duration of children playing games is 1-2 hours.

The relationship between the two variables is unidirectional or it can be interpreted that as the use of metaverse games increases, children's social emotional development also increases because r count or Pearson Correlation is positive. According to data analysis, group A children who fall into the category of lacking in the utilization of metaverse games are dominated by poor cooperation skills, excellent communication, expressing positive emotions well, and expressing negative emotions very well. While group B children who fall into the category of lacking in the utilization of metaverse games are dominated by sufficient cooperation skills, sufficient communication, expressing positive emotions well, and

expressing negative emotions very well. Group A children who fall into the sufficient category in the utilization of metaverse games are dominated by poor cooperation skills, good communication, expressing positive emotions fairly well, and expressing negative emotions very well. While group B children who fall into the sufficient category in the utilization of metaverse games are dominated by sufficient cooperation skills, good communication, expressing positive emotions well, and expressing negative emotions very well. Group A children who are included in the frequent category in the utilization of metaverse games are dominated by good cooperation skills, sufficient communication, expressing positive emotions well, and expressing negative emotions very well. While group B children who are included in the frequent category in the utilization of metaverse games are dominated by sufficient cooperation skills, sufficient communication, expressing positive emotions very well, and expressing negative emotions well. It can be concluded that the increase in children's social emotional development is a positive development (good behavior). As the duration of using the metaverse game increases, the child's ability to interact with others will also develop, and can express the emotions very well.

The result of the coefficient of determination (r2) shows how much children's social emotional development (Y) at RA Baipas Roudlotul Jannah is affected by the use of metaverse games (X). The coefficient of determination for r calculated 0.366 is 0.3662 x 100% = 0.134, it can be seen that the metaverse game has an influence of 13%. The influence of playing games is not too great because a number of other factors such as parenting, social factors, economic factors, education, etc. It also has an impact on children's social emotional development (Mufidah et al., 2023). The use of games should not be prohibited. Given that games have a positive impact, namely fostering cooperation and sympathy for children as described by Thaharah & Mayar (2022) and Qalbi, (2022). However, games can also have a negative impact, including making children apathetic, unwilling to interact and play with others, and neglecting their daily duties and obligations as described by Handila (2022). In addition, Wirawan's research, 2021 states that online games cause children to often speak harshly, get angry, lie, and ignore advice. Thus, parents bear an important responsibility in supervising and controlling the use of metaverse games in children.

## 4. Conclusion

Students in groups A and B of RA Baipas Roudlotul Jannah have characteristics of using metaverse games in the moderate category and good category of social emotional development. The results of data analysis using Pearson correlation analysis show that the significance value between the variable of metaverse game usage and the variable of children's social emotional development is 0.028 < 0.05. The calculated r value is 0.366, so it can be concluded that there is a significant and not close relationship between the use of metaverse games and children's social emotional development at RA Baipas Roudlotul Jannah.

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