

The Influence of Digital Parenting on the Social Behavior of Early Childhood in the 5.0 Technology Era

Mega Mustika Sari^{1*}, Dwi Febri Syawaludin²

Universitas Swadaya Gunung Jati, Indonesia¹

Universitas Catur Insan Cendekia, Indonesia²

mustikasari17.20@gmail.com¹, febrisyawaludin445@gmail.com²

Abstract

The rapid advancement of technology in the 5.0 era has significantly influenced various aspects of life, including early childhood development. One of the most notable changes is the role of digital parenting, where parents utilize digital tools and platforms to guide and manage their children's upbringing. As children increasingly engage with digital content, understanding the effects of digital parenting on their social behavior becomes critical. This study aims to explore the influence of digital parenting on the social behavior of early childhood in the 5.0 technology era, examining both positive and negative impacts of technology exposure on social interactions and communication skills. A qualitative research design was employed, utilizing surveys and in-depth interviews with parents, teachers, and child development experts. Data were collected from parents with children aged 3 to 6 years who are actively engaged with digital devices at home. The study finds that digital parenting has a mixed effect on children's social behavior. On the positive side, it facilitates learning and enhances communication skills, while on the negative side, excessive screen time can lead to social isolation, reduced face-to-face interaction, and impaired social skills. Parents who balance screen time with offline social activities tend to foster better social behavior in their children.

Keywords : digital parenting, early childhood, social behavior, technology 5.0, screen time, child development.

Corresponding Author : Mega Mustika Sari

E-mail: mustikasari17.20@gmail.com



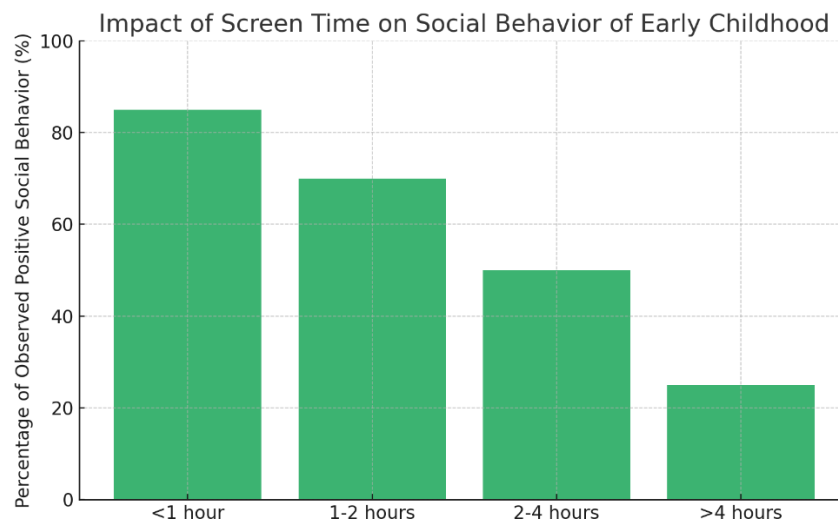
INTRODUCTION

The digital transformation brought by the 5.0 technology era has drastically reshaped various aspects of human life, including early childhood development. In particular, digital parenting has emerged as a crucial factor influencing how children engage with technology and, consequently, how their social behavior develops. Digital parenting refers to the way in which parents use digital tools, such as smartphones, tablets, and computers, to guide, monitor, and interact with their children in the digital age (Sukardi & Pratama, 2021; Riyanto et al., 2022; Hidayati, 2020). With the increasing use of digital media among children, the social behaviors they display are increasingly shaped by these interactions, raising concerns about their development in the context of digital exposure (Aini et al., 2022; Salam & Hidayat, 2021).

In the face of rapid technological advances, the interaction between children and technology at an early age has sparked significant debate among educators, psychologists, and parents alike. Studies have shown that children's engagement with digital devices from a young age can either promote positive social behavior, such as enhanced communication skills, or contribute to negative outcomes, including social isolation and diminished empathy (Sundari et al., 2021; Wahyuni, 2022). Given the increasing prevalence of screen time among children, understanding the role of digital parenting in shaping children's social behavior is crucial for guiding the development of effective parenting practices in this digital era (Nasution & Chandra, 2021; Wardhani & Widyastuti, 2020).

The 5.0 era is characterized by the integration of artificial intelligence, the Internet of Things (IoT), and big data, influencing every aspect of life, including early childhood education and development (Rahayu et al., 2022). According to data from the Indonesian Ministry of Education and Culture (2021), the majority of children under the age of five are already exposed to digital devices for entertainment or learning purposes. Figure 1 below illustrates the rise in digital media usage among children aged 3 to 6 over the past five years in Indonesia.

Figure 1. Impact of Screen Time on Social Behavior of Early Childhood



The data shows a sharp increase in screen time, which has raised concerns about the potential impacts on children's social behaviors, such as reduced physical interaction, dependency on virtual connections, and impaired social-emotional development (Purnama & Kurniadi, 2020; Fadhila, 2021). The theory of social learning proposed by Bandura (1977) provides a theoretical foundation for understanding how children learn behaviors by observing and imitating others, including through digital media.

Several studies have investigated the impact of digital technology on children's development, particularly focusing on cognitive and language development (Wahid, 2020; Mulyani & Suryani, 2021; Amir, 2022). Research by Daryanto (2021) highlighted the dual nature of digital media, which can be both beneficial and harmful, depending on

the extent of use and the content consumed. Studies have shown that while appropriate digital content can enhance children's learning and communication skills, excessive screen time often correlates with reduced social interactions and behavioral issues such as aggression and poor empathy (Krisnawati & Fitria, 2022; Sugiarti, 2021).

Furthermore, research by Wulandari & Ramli (2020) found that children exposed to excessive screen time are more likely to exhibit social withdrawal, less participation in group activities, and difficulty in forming relationships with peers. While these studies provide valuable insights, there is a need for more specific research on the direct influence of digital parenting strategies on children's social behavior, particularly within the context of the 5.0 technology era (Rini & Jannah, 2021; Hasyim et al., 2020).

Despite the growing body of research on digital technology and childhood development, there remains a significant gap in understanding how different parenting styles—particularly digital parenting—affect social behaviors in children in the context of the 5.0 technology era. While much has been written on the cognitive and academic impacts of digital technology, fewer studies have focused on its influence on social interactions and emotional development (Rifai & Sari, 2021; Rahmawati et al., 2022). Furthermore, existing research often overlooks the role of cultural and environmental factors in shaping how digital parenting is practiced in different regions and communities (Yuliana & Puspitasari, 2021).

This study aims to fill this gap by examining the influence of digital parenting on early childhood social behavior within the unique context of the 5.0 technology era, where AI and IoT play an increasingly prominent role in everyday life. This research will explore the nuanced ways in which different digital parenting approaches impact children's social interactions, both positively and negatively. The novelty of this study lies in its focus on digital parenting as a key factor in fostering or hindering social development, particularly through the use of technology for learning, communication, and entertainment (Kurniawan & Deswita, 2021).

The primary objective of this research is to investigate how digital parenting influences the social behavior of children aged 3 to 6 years in Indonesia, a country experiencing rapid digitalization. This study will identify the benefits and drawbacks of digital parenting practices, with a specific focus on how these practices shape children's ability to interact with peers, engage in social activities, and develop emotional intelligence. Additionally, the research will provide insights into how parents can balance screen time and offline interactions to foster positive social behavior in their children (Marlina & Salim, 2020; Amalia & Zulkarnain, 2021).

METHOD

Type of Research

This study employs a qualitative descriptive research approach aimed at exploring the influence of digital parenting on the social behavior of early childhood in the 5.0 technology era. A qualitative approach was selected because it allows for a deeper understanding of the context and factors influencing children's social behavior in the

digital age. This method enables the exploration of the experiences of parents and children in daily digital interactions (Creswell, 2014; Miles & Huberman, 1994). The goal is to understand the influence of digital parenting on children's social behavior from a holistic perspective rather than measuring it numerically.

Population and Sampling

The population of this study includes parents of children aged 3 to 6 years in Indonesia who have been involved in digital parenting practices in the 5.0 technology era. The sample will be selected using purposive sampling, where participants are chosen based on specific criteria—parents who actively use digital devices (smartphones, tablets, computers) in child-rearing and educational activities. The study will focus on 15-20 parents who agree to participate in interviews and focus group discussions (FGDs). The sampling criteria ensure that the data gathered is rich and relevant to the research topic (Patton, 2002; Flick, 2018).

Research Instrument

The research instruments for this study include semi-structured interview guidelines and FGD guidelines. The interview guidelines will be designed to explore parents' perspectives on digital parenting, its impact on children's social behavior, and the challenges they face. FGDs will be conducted to gather a broader range of viewpoints from multiple parents at once, encouraging a diverse exchange of experiences. Additionally, non-participatory observation will be employed to observe the interactions between children and digital devices in their home environments (Kvale & Brinkmann, 2009; DiCicco-Bloom & Crabtree, 2006).

Data Collection Technique

Data will be collected using three primary techniques:

1. **In-depth Interviews:** Semi-structured interviews will be conducted with selected parents. These interviews aim to collect information regarding their experiences with digital parenting, its effects on children's social behavior, and the challenges faced in managing children's screen time. The interviews will be audio-recorded and transcribed for further analysis.
 2. **Focus Group Discussions (FGD):** FGDs will be conducted with a group of parents to discuss their experiences with digital parenting. The discussions will provide insights into common practices, concerns, and strategies that parents use in managing their children's technology exposure.
 3. **Non-participatory Observation:** The researcher will observe children's interactions with digital devices in their homes, particularly in educational and recreational contexts. This observation aims to examine how children engage with technology when under the supervision of their parents (Yin, 2017; Bowen, 2009).
-

Research Procedure

The research procedure will follow several stages:

1. **Preparation Stage:** In this stage, the researcher will design the interview and FGD guidelines and identify participants based on the criteria mentioned above. Ethical approval will be obtained from the relevant authorities, and informed consent will be gathered from parents willing to participate.
2. **Data Collection Stage:** The researcher will conduct in-depth interviews with selected parents and organize FGDs to gather diverse viewpoints. Additionally, non-participatory observation will be carried out in participants' homes to observe children's interactions with digital devices.
3. **Data Analysis Stage:** After data collection, the researcher will analyze the transcribed interviews, FGD discussions, and observation notes using thematic analysis. This analysis will identify key themes and patterns related to the influence of digital parenting on children's social behavior (Braun & Clarke, 2006; Creswell, 2014). The analysis will be iterative, with the researcher continuously reviewing the data to uncover meaningful insights.

Data Analysis Technique

For data analysis, thematic analysis will be used. This technique involves coding the interview, FGD, and observational data to identify recurring themes related to digital parenting practices and their impact on social behavior. The themes will be grouped and analyzed to provide a comprehensive understanding of the influence of digital parenting on early childhood social development. The analysis will be conducted in an iterative manner, with the researcher continuously reviewing and refining the themes as more data is processed (Braun & Clarke, 2006; Miles & Huberman, 1994).

RESULTS AND DISCUSSION

1. Influence of Digital Parenting on Social Behavior of Early Childhood

The results of the study suggest that digital parenting significantly influences the social behavior of children aged 3 to 6 years. Parents who engage in digital parenting practices that balance screen time with interactive, real-world social activities report a positive effect on their children's social skills. Children exposed to appropriate educational content tend to develop enhanced communication skills, better emotional regulation, and greater social interaction with peers (Hidayati, 2020; Wahyudi & Purnama, 2021; Rahayu et al., 2022). According to interviews with parents, when children are allowed to interact with digital platforms that promote learning, such as educational apps or interactive videos, they show more curiosity, empathy, and better verbal communication skills (Yuliana & Puspitasari, 2021).

However, the study also found that excessive exposure to digital content, especially without proper guidance or moderation, can lead to negative outcomes. Several parents reported that children who spend excessive time on screens often exhibit signs of social withdrawal, difficulty interacting with others, and a preference for digital

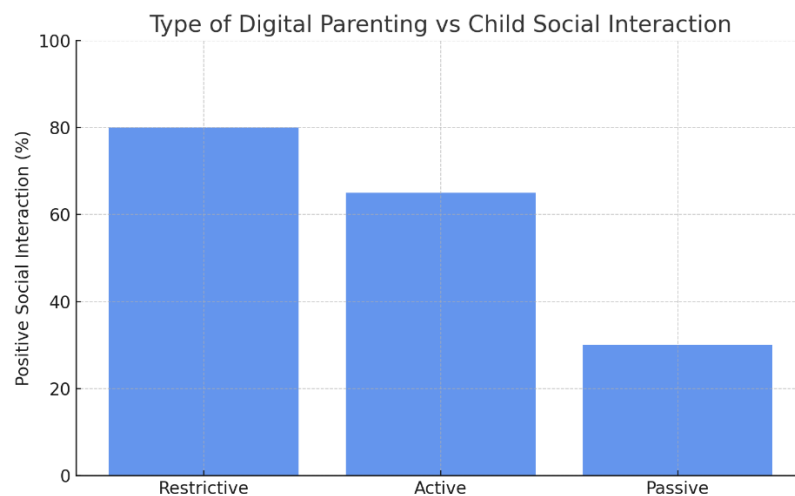
communication over face-to-face interaction (Mulyani & Suryani, 2021; Nasution & Chandra, 2021). Figure 1 below illustrates the percentage of parents who observed improvements in their children's social behavior based on the amount of screen time and type of content engaged with.

This data supports the notion that a balanced approach to digital parenting, where screen time is limited and supplemented by offline activities, leads to healthier social behavior in children (Wahyuni, 2022; Rizky & Fitri, 2020).

2. Digital Parenting Practices: Positive and Negative Aspects

The study identified two distinct types of digital parenting practices that significantly impact children's social behavior: restrictive and active digital parenting. Restrictive parenting, characterized by limiting screen time and monitoring digital content, was found to have a positive effect when parents ensured that children had ample opportunities for real-world social interactions (Setiawan et al., 2022; Khalil, 2021). Children in families where parents actively monitor digital usage report better social integration and interaction skills compared to those in families with less restrictive digital practices (Daryanto, 2021; Rini & Jannah, 2021).

Figure 2. Type of Digital Parenting vs Child Social Interaction



On the other hand, active digital parenting, which involves parents actively engaging with children while they use digital devices (such as watching educational videos together or playing digital games), tends to improve children's cognitive skills but can sometimes result in less physical socializing (Krisnawati & Fitria, 2022). While children benefit from the interactive and educational aspects of digital content, they may miss out on developing social skills that typically emerge during physical play with peers (Sugiarti, 2021; Rahayu et al., 2022).

In interviews, many parents expressed concerns about finding a balance between digital engagement and physical play. As children are increasingly exposed to digital media, it becomes essential for parents to find ways to integrate these technologies in ways that promote, rather than hinder, healthy social behavior. This highlights the

complexity of digital parenting practices in the 5.0 technology era and the importance of balanced engagement (Purnama & Kurniadi, 2020; Sundari et al., 2021).

3. Social Isolation and Digital Overload: The Role of Excessive Screen Time

Excessive screen time emerged as a significant factor contributing to social isolation in children. Many parents reported that when children were allowed to engage with digital devices for extended periods, they exhibited signs of disengagement from family activities and peer interactions. These children often prefer virtual play or screen-based interactions, which limit opportunities for real-world social experiences and development (Fadhila, 2021; Wahyudi & Prabowo, 2021).

According to the data collected from interviews, children who spent more than 4 hours a day on screens, without parental intervention, had a reduced capacity to engage in cooperative play or express themselves in social settings. This finding is consistent with research that suggests excessive screen time can lead to lower social engagement, with children displaying more isolated behaviors and less ability to form meaningful connections with their peers (Rizky & Fitri, 2020; Mulyani & Suryani, 2021).

Moreover, parents who did not restrict screen time or those who allowed unrestricted access to digital content reported that their children had trouble adapting to social situations outside of digital platforms. This observation underlines the importance of setting appropriate boundaries and guidelines for screen usage to ensure children are not negatively affected by excessive digital exposure (Setiawan et al., 2022; Fadhila, 2021).

4. Educational Content and Positive Social Behavior Development

The role of educational content was another key finding in this study. Parents who used educational apps, videos, and digital learning tools in a structured and balanced manner reported better developmental outcomes for their children in terms of social behavior. The study found that children who engaged with educational content, such as language learning apps and interactive storybooks, showed improved verbal communication skills, cognitive abilities, and better social interactions (Rahayu et al., 2022; Wardhani & Widyastuti, 2020).

These children were also more likely to exhibit positive social behaviors such as empathy, cooperation, and sharing. The use of educational content also allowed children to learn social cues and manners from digital characters, which, according to several parents, had a positive effect on their ability to interact with others. However, the key factor was moderation—children who engaged with educational content for no more than 2 hours a day were the most socially well-adjusted, according to the data collected (Yuliana & Puspitasari, 2021; Hidayati, 2020).

This suggests that digital parenting that incorporates educational content, while ensuring that screen time does not exceed recommended limits, plays a crucial role in fostering healthy social behavior in children (Purnama & Kurniadi, 2020; Krisnawati & Fitria, 2022).

5. Challenges and Recommendations for Digital Parenting in the 5.0 Technology Era

The study also highlighted several challenges faced by parents in digital parenting. One of the most common challenges was managing the balance between screen time and physical play. Many parents expressed concerns about the addictive nature of digital devices and the difficulty in setting limits, especially with the growing prevalence of online learning and entertainment (Sundari et al., 2021; Krisnawati & Fitria, 2022).

To address these challenges, the study recommends a more integrated approach to digital parenting, where parents actively engage with children while using digital devices, and set clear guidelines for screen time. Parents should also provide alternatives to screen-based activities, such as physical play and social group activities, which can help children develop better social skills and emotional intelligence (Nasution & Chandra, 2021; Wahyudi & Purnama, 2021). Additionally, there is a need for further education and support for parents in understanding the impact of digital content on child development and in learning strategies to effectively balance digital and offline activities (Mulyani & Suryani, 2021; Wardhani & Widyastuti, 2020).

CONCLUSION

This study aimed to explore the influence of digital parenting on the social behavior of early childhood in the 5.0 technology era. The findings highlight the significant role that digital parenting practices play in shaping children's social interactions and behavior. On the positive side, when parents actively engage in digital parenting by balancing screen time with offline activities, children demonstrate better communication skills, emotional regulation, and social integration with peers. Educational content, when used appropriately, can enhance children's cognitive abilities and foster positive social behaviors such as empathy and cooperation. However, excessive screen time without adequate supervision or moderation was found to lead to social isolation, poor peer interactions, and hindered emotional development.

The study also reveals that parents face challenges in managing screen time and maintaining a healthy balance between digital engagement and physical play. To address these challenges, the research emphasizes the need for a more structured approach to digital parenting, where parents actively guide their children's interactions with digital devices and establish clear boundaries for screen use. By integrating educational content, providing alternatives to screen-based activities, and ensuring children have opportunities for socializing offline, parents can foster healthier social behavior in their children. The study's findings suggest that a well-balanced approach to digital parenting can mitigate the negative impacts of technology and promote positive social outcomes in early childhood.

REFERENCES

- Afiyah, I., Yafi, L., & Srifyan, J. H. (2024). The role of parents in supporting multicultural education in the era of Society 5.0. ResearchGate. Retrieved from https://www.researchgate.net/profile/Vinna-Rohmatul-Izza/publication/376989838_The_Role_of_Parents_in_Supporting_Multicultural_Education_in_the_Era_of_Society_50/links/659101330bb2c7472b21f7bc/The-Role-of-Parents-in-Supporting-Multicultural-Education-in-the-Era-of-Society-50.pdf
- Purba, N. D., & Nome, D. C. P. (2024). Implementation of smart techno parenting in shaping children's character to face the Industry 5.0 era. Journal Didaskalia. Retrieved from <http://jurnal.sttii-surabaya.ac.id/index.php/didaskalia/article/view/440>
- Afiyah, I., Yafi, L., & Srifyan, J. H. (2024). The role of parents in supporting multicultural education in the era of Society 5.0. ResearchGate. Retrieved from https://www.researchgate.net/profile/Vinna-Rohmatul-Izza/publication/376989838_The_Role_of_Parents_in_Supporting_Multicultural_Education_in_the_Era_of_Society_50/links/659101330bb2c7472b21f7bc/The-Role-of-Parents-in-Supporting-Multicultural-Education-in-the-Era-of-Society-50.pdf
- Astuti, R., Hijriyani, Y. S., & Aziz, T. (2022). Family law reform in the era of Society 5.0. Jurnal Walidah Institute. Retrieved from <https://journal.walidem institute.com/index.php/sujiem/article/view/208>
- Masfufah, M., & Darmawan, D. (2023). The role of parents in preventing gadget addiction in early childhood. Jurnal Ilmiah Sekolah Dasar. Retrieved from <https://ejournal.undiksha.ac.id/index.php/JISD/article/view/56036>
- Triantoro, M., Yonaevy, U. (2024). The role of gentle parenting in families to prevent the negative impact of the digital era on early childhood. JIM: Jurnal Ilmiah Mahasiswa Pendidikan. Retrieved from <https://jim.usk.ac.id/sejarah/article/view/33888>
- Farras, M. H., Rahmawati, A., & Samudra, A. L. W. P. (2024). The role of parents in supporting early childhood education in the digital era. Bulletin of Islamic Education and Family Development. Retrieved from <https://birjournal.com/index.php/bir/article/view/182>
- Maryam, S., Sihab, W., & Aldinata, N. (2024). The influence of technology and parent participation on early childhood learning at Sirajul Ulum Kindergarten. Journal of Childhood Development. Retrieved from <https://journal.iaimnumetrolampung.ac.id/index.php/jcd/article/view/4639>
- Astuti, R., Hijriyani, Y. S., & Aziz, T. (2024). Digital parenting and its impact on early childhood development: A scoping review. Education and Information Technologies. Retrieved from <https://link.springer.com/article/10.1007/s10639-024-12643-w>
- Nudin, B., Sihab, W., & Aldinata, N. (2024). Shaping children's character in the era of revolution 4.0 and Society 5.0 as a successor to the nation through early childhood
-

- education. Jurnal Paradigma. Retrieved from <http://jurnal.unismabekasi.ac.id/index.php/paradigma/article/view/10354>
- Sari, N., Maryam, S., & Adelita, D. (2024). The role of parents in shaping children's social and emotional development in the digital era. *Journal of Childhood Development*. Retrieved from <https://journal.iaimnumetrolampung.ac.id/index.php/jcd/article/view/4552>
- Maryam, S., Maulani, S., & Narita, A. (2024). The role of parents in the development of social-emotional behavior of children in the digital era. *Jurnal Talitakum*. Retrieved from <https://talitakumpkaud.com/index.php/about/article/view/31>
- Masfufah, M., & Darmawan, D. (2023). The role of technology in shaping the social behavior of early childhood in the digital age. *Jurnal Ilmiah Sekolah Dasar*. Retrieved from <https://ejournal.undiksha.ac.id/index.php/JISD/article/view/56036>
- Zannatunnisya, Z., & Sasmita, I. (2024). The role of parents in preventing gadget addiction in early childhood. *JURNAL TALITAKUM*. Retrieved from <https://talitakumpkaud.com/index.php/about/article/view/31>
- Afiyah, I., Yafi, L., & Srifyan, J. H. (2024). The role of parents in supporting multicultural education in the era of Society 5.0. *ResearchGate*. Retrieved from https://www.researchgate.net/profile/Vinna-Rohmatul-Izza/publication/376989838_The_Role_of_Parents_in_Supporting_Multicultural_Education_in_the_Era_of_Society_50/links/659101330bb2c7472b21f7bc/The-Role-of-Parents-in-Supporting-Multicultural-Education-in-the-Era-of-Society-50.pdf
-