

Transformation Of Parenting Patterns And Early Childhood Development Stimulation In The Digital Era: Challenges And Opportunities

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Abstract. The digital era has changed parenting patterns and the way parents stimulate early childhood development. Digital devices such as smartphones, tablets, and television are now widely used by families, including those who have young children. This condition creates both opportunities and challenges for children's growth and development. This article aims to analyze the transformation of parenting patterns and stimulation of early childhood development in the digital era. The method used is a literature study by reviewing recent scientific journals and books. The results show that digital media can support children's cognitive and language development if used properly. However, excessive and uncontrolled use may cause problems in social, emotional, and physical development. Therefore, parental guidance is very important in managing children's digital activities.

Keywords: Digital Era, Parenting Pattern, Early Childhood, Stimulation, Development

INTRODUCTION

Early childhood is a very important period for human development. At this stage, children experience rapid growth in physical, cognitive, language, social, and emotional aspects. Parenting patterns and stimulation given by parents greatly influence children's future development (Suryani & Lestari, 2021). In the digital era, technological devices such as smartphones, televisions, and tablets have become part of daily family life. Children are increasingly exposed to digital media from an early age. This phenomenon changes traditional parenting patterns into more digital-based parenting. Parents often use digital devices as learning tools, entertainment, and even as a way to calm children. On one side, digital technology offers many learning applications, educational videos, and interactive games that can stimulate children's development. On the other side, uncontrolled digital use can reduce physical activity, social interaction, and emotional sensitivity in children (Rahmawati, 2022). Previous studies show that digital media can improve children's vocabulary and cognitive abilities when used with parental assistance (Putri & Anwar, 2023). However, other studies report negative impacts such as attention disorders, speech delay, and social withdrawal due to excessive screen time (Wulandari, 2021). Therefore, this research focuses on analyzing the transformation of parenting patterns and stimulation of early childhood development in the digital era, as well as identifying challenges and opportunities that arise. The purpose of this article is to describe how parenting patterns change in the digital era and how digital media affects early childhood development stimulation. This study also highlights the importance of parental roles in managing digital exposure for children. The increasing use of digital devices among young children is closely related to changes in family lifestyles and parenting strategies. Many parents consider digital media as an effective solution to introduce learning materials in an attractive way. Digital platforms provide various educational contents that support early literacy, numeracy, and creativity. Yuliani (2019) states that technology-based learning can enrich children's learning experiences if it is adapted to their developmental stages. However, digital exposure at an early age must be managed carefully. Excessive screen time may limit children's opportunities to explore their physical environment, interact socially, and develop emotional regulation. According to Hasanah (2022), children who are frequently exposed to gadgets without adequate supervision tend to show decreased

attention span, irritability, and difficulty in social adjustment. In addition, parental awareness and digital literacy significantly affect the quality of stimulation given to children. Parents who have good digital literacy are more capable of selecting appropriate applications, supervising content, and providing interactive learning experiences. Pratiwi (2020) emphasizes that parental involvement in digital learning activities can increase children's motivation, learning outcomes, and emotional attachment within the family. Furthermore, the digital era also creates new challenges for early childhood education institutions. Teachers are required to collaborate with parents to ensure consistency between learning at school and at home. Nugroho (2023) explains that digital-based early childhood learning environments require coordination between educators and parents to maintain balanced stimulation and prevent negative effects of excessive digital use. Therefore, understanding the transformation of parenting patterns in the digital era is crucial to developing effective strategies for optimizing early childhood development. This research is expected to contribute to the development of digital parenting models that support children's cognitive, social, emotional, and physical growth in a balanced manner.

RESEARCH METHOD

This research employed a qualitative approach using a literature review (library research) method. This method was chosen because it allows researchers to comprehensively analyze theories, empirical findings, and recent research results related to digital-based parenting and early childhood development stimulation.

1.1 Research Design

The design of this study was a systematic literature review, aiming to collect, analyze, and synthesize scientific evidence concerning transformations in parenting patterns and digital stimulation in early childhood education. According to Creswell (2018), literature review is effective for identifying research gaps, trends, and conceptual frameworks that support theoretical development.

1.2 Data Sources

The data were obtained from national and international scientific journals, academic books, conference proceedings, and reputable online databases such as Google Scholar, DOAJ, and ScienceDirect. The inclusion criteria were:

1. Publications issued within the last ten years (2015–2025),
2. Articles discussing digital parenting, screen time, early childhood development, and digital learning,
3. Peer-reviewed and indexed publications.

A total of 25 scientific sources were selected as the main references after screening and relevance analysis.

1.3 Data Collection Techniques

Data collection was conducted using a documentation technique. The researchers identified, recorded, and categorized relevant information from each source. Important data were extracted based on keywords such as digital parenting, early childhood development, screen time, parental involvement, and digital learning media.

1.4 Data Analysis Techniques

Data analysis was carried out through the stages of:

1. **Data reduction** – selecting and simplifying relevant information.
2. **Data display** – organizing data in the form of thematic categories such as parenting transformation, cognitive development, language development, social-emotional impact, challenges, and opportunities.

3. **Conclusion drawing and verification** – interpreting findings and confirming patterns across different sources.

This analytical technique follows the model proposed by Miles, Huberman, and Saldaña (2019), which is widely used in qualitative research.

1.5 Validity of Data

To ensure data validity, this study applied source triangulation, by comparing findings from different journals and authors to confirm consistency and reliability of results (Sugiyono, 2022). Only publications with clear methodology and empirical evidence were used.

RESULT AND ANALYSIS

1.1 Transformation of Parenting Patterns in the Digital Era

Parenting patterns in the digital era have shifted from direct interaction to technology-assisted interaction. Parents increasingly use smartphones and digital applications to educate and entertain children. Learning activities such as reading stories, counting, and singing are now often done through digital platforms. This transformation makes parenting more practical but also reduces face-to-face communication between parents and children. According to Suryani and Lestari (2021), direct interaction is still very important for developing children's emotional bonds and social skills.

In addition, the transformation of parenting patterns is also marked by changes in parental roles in the learning process at home. Previously, parents acted mainly as caregivers and moral guides, but in the digital era they also function as learning facilitators, technology mediators, and digital supervisors. Parents are required to select appropriate applications, monitor screen time, and accompany children during digital activities to ensure that the content accessed is safe and educational.

Digital parenting has also changed family interaction patterns. Family activities that were previously dominated by direct communication, such as storytelling before bedtime, playing traditional games, and face-to-face conversations, are now increasingly replaced by digital interactions. Children tend to focus more on gadgets, which may reduce opportunities to practice social skills such as eye contact, turn-taking in conversations, and emotional expression. According to Hasanah (2022), decreased direct interaction can weaken children's social sensitivity and emotional attachment to parents.

Furthermore, socioeconomic factors influence the transformation of parenting patterns in the digital era. Families with higher economic and educational backgrounds generally have better access to digital devices and higher digital literacy, allowing them to use technology more productively. Conversely, families with limited digital literacy may use gadgets mainly as entertainment tools to keep children calm, without considering educational value or developmental impact. This condition may widen the gap in the quality of early childhood stimulation.

Another important change is the shift in parenting control strategies. In the past, parents mainly controlled children's behavior through direct supervision and verbal guidance. Today, control is often exercised through digital restrictions such as screen time limits, content filters, and parental control applications. Although these tools can help manage children's digital exposure, they cannot replace the importance of emotional closeness, dialogue, and direct guidance from parents.

Therefore, the transformation of parenting patterns in the digital era should be understood not only as a technological change, but also as a social and emotional change within the family. Effective digital parenting requires a balance between the use of technology and the maintenance of warm, responsive, and interactive parent-child relationships to ensure optimal early childhood development.

1.2 Digital Media as Developmental Stimulation

Digital media can stimulate cognitive, language, and creativity development. Educational videos, interactive games, and digital storybooks help children recognize letters, numbers, and colors. Putri and Anwar (2023) stated that children who use educational applications with parental guidance show better language development. However, stimulation through digital media must be balanced with physical activities such as playing outside, drawing, and interacting with peers. Without balance, children may experience decreased motor skills and social abilities. Digital media also provides multisensory stimulation that can enhance children's learning experiences. Through animations, sound effects, music, and interactive features, children are able to receive visual and auditory stimulation simultaneously. This multisensory approach can increase children's attention span and motivation to learn, especially in recognizing shapes, animals, and simple problem-solving activities. Nugroho (2023) explains that interactive digital media encourages children to actively respond, make choices, and explore learning materials, which supports the development of critical thinking skills.

Furthermore, digital stimulation can support early literacy and numeracy skills. Digital storybooks introduce children to narrative structures, new vocabulary, and pronunciation, while number-based games help children understand counting concepts, number sequences, and basic mathematical operations. When accompanied by parents, children are more likely to ask questions, repeat words, and relate digital content to real-life experiences, which strengthens their comprehension and memory.

However, it is important to note that digital stimulation should not replace traditional play-based learning. Play is a natural learning medium for young children and plays a crucial role in developing imagination, emotional regulation, and social interaction. Excessive reliance on digital media may limit opportunities for children to engage in cooperative play, role play, and physical exploration. Therefore, digital media should be used as a complementary tool rather than the main source of stimulation.

In addition, the quality of digital content significantly affects the effectiveness of stimulation. Educational applications that are designed according to developmental stages and learning objectives provide more meaningful learning experiences compared to general entertainment content. Parents are encouraged to choose applications that are interactive, age-appropriate, free from violent elements, and aligned with early childhood learning principles.

Thus, digital media can be an effective developmental stimulation tool when used selectively, interactively, and in balance with physical and social activities to support holistic early childhood development.

1.3 Challenges in Digital-Based Parenting

The main challenges include excessive screen time, lack of parental supervision, and limited digital literacy among parents. Many parents give gadgets to children without setting time limits. This condition can cause addiction, reduced concentration, and emotional instability (Wulandari, 2021). Another major challenge in digital-based parenting is the difficulty of controlling the quality of digital content accessed by children. The internet provides unlimited access to various types of content, not all of which are appropriate for early childhood. Without proper content filtering, children may be exposed to violent scenes, inappropriate language, and advertisements that encourage consumptive behavior. Such exposure can negatively affect children's emotional development, behavior, and moral values.

In addition, many parents face challenges in maintaining consistency in implementing screen time rules. In busy family situations, gadgets are often used as a practical solution to keep children calm while parents are working or doing household tasks. This habit may gradually form children's dependence on gadgets and make it difficult for parents to reduce screen time later. Hasanah (2022) states that inconsistent parenting patterns related to digital media can increase the risk of gadget addiction in children.

Another challenge is the limited awareness of parents regarding the long-term effects of excessive digital exposure. Some parents assume that as long as children are using "educational" applications,

screen time does not need to be limited. In fact, prolonged screen exposure can still affect children's sleep patterns, eye health, physical activity levels, and social interactions.

Furthermore, differences in parents' educational background and digital literacy create unequal parenting quality. Parents with low digital literacy may have difficulty selecting appropriate applications, understanding privacy risks, and supervising children's online activities. This condition can increase the vulnerability of children to digital risks such as cyber content exposure and online exploitation.

Therefore, digital-based parenting requires not only technological tools but also continuous parental education, consistent rule enforcement, and strong awareness of the developmental needs of young children

1.4 Opportunities in the Digital Era

Despite challenges, digital technology offers opportunities for early childhood education. Parents can access online parenting education, learning videos, and digital libraries. Teachers can also use digital platforms to communicate with parents and share children's learning progress. The digital era provides broad opportunities to improve the quality of early childhood education both at home and at school. Various educational platforms offer interactive learning applications that support early literacy, numeracy, moral education, and creativity. These platforms allow parents to choose learning materials that suit their children's interests and developmental stages, making the learning process more enjoyable and personalized.

Digital technology also facilitates access to parenting knowledge. Through webinars, online seminars, digital books, and parenting communities on social media, parents can easily obtain information about effective parenting strategies, child development, and digital safety. This access helps parents improve their digital literacy and parenting competence, which directly affects the quality of stimulation given to children.

Furthermore, digital platforms enable more effective collaboration between parents and teachers. Teachers can share learning plans, children's progress reports, photos, and videos of classroom activities through messaging applications or learning management systems. This communication strengthens parental involvement in children's education and allows parents to continue stimulation activities at home consistently.

Digital technology also supports inclusive education. Children who live in remote areas or have limited access to quality early childhood education services can still obtain learning materials through online platforms. This condition helps reduce educational gaps and ensures that more children receive proper developmental stimulation.

Therefore, the digital era offers significant opportunities to enhance the quality, accessibility, and effectiveness of early childhood education when utilized wisely and responsibly.

1.5 The Role of Parents in Digital-Based Early Childhood Stimulation

Parents play a central role in determining whether digital technology becomes a beneficial or harmful tool for early childhood development. In the digital era, parents are not only caregivers but also facilitators, supervisors, and role models in children's digital activities. Parental involvement is needed to ensure that digital media is used in accordance with the child's developmental stage and learning needs. Parental assistance during children's use of digital devices helps improve the quality of stimulation provided. According to Pratiwi (2020), children who are accompanied by parents when using digital learning applications tend to have better comprehension, more focused attention, and stronger emotional bonds with parents. This indicates that digital stimulation is most effective when combined with direct interaction. In addition, parents must set clear rules regarding screen time, content selection, and digital behavior. The American Academy of Pediatrics recommends limiting screen time for early childhood and prioritizing interactive digital content rather than passive consumption such as watching random videos. Without parental control, children are at risk of becoming addicted to gadgets, experiencing reduced social interaction, and developing emotional instability. Therefore, parental digital literacy is a key factor in successful digital-based parenting.

Parents need to understand how to select age-appropriate applications, manage privacy settings, and balance digital activities with physical play, storytelling, and family interaction.

1.6 Impact of Digital Stimulation on Cognitive Development

Digital media can significantly influence children's cognitive development when used appropriately. Interactive educational applications can help children develop problem-solving skills, memory, attention, and early mathematical understanding. Nugroho (2023) found that digital-based learning environments can improve children's ability to recognize patterns, colors, numbers, and letters more effectively than conventional methods when combined with parental guidance. Educational games that require children to respond, choose answers, and solve puzzles stimulate critical thinking and decision-making skills. These activities also help develop children's self-confidence as they experience success in completing digital tasks. However, excessive exposure to digital media can reduce children's ability to concentrate for long periods and weaken their imaginative thinking. Children who are overly dependent on digital stimulation may become passive learners who rely heavily on visual stimuli rather than active exploration. Therefore, digital cognitive stimulation should be combined with hands-on activities such as building blocks, drawing, and storytelling to ensure balanced cognitive development.

1.7 Impact of Digital Media on Language and Communication Development

Language development is one of the most sensitive aspects affected by digital technology. Digital storybooks, animated videos, and language-learning applications can introduce new vocabulary and pronunciation to children. Anwar and Putri (2023) reported that children who frequently use interactive language applications under parental supervision show better vocabulary mastery and verbal expression. However, problems arise when children are exposed to digital media without interaction. Passive screen time, such as watching videos alone, limits opportunities for two-way communication, which is crucial for language acquisition. Wulandari (2021) explains that children who experience excessive unsupervised screen time are more likely to experience speech delays and reduced social communication skills. Therefore, parents are encouraged to engage in dialogic reading, ask questions, and encourage children to repeat words while using digital storybooks. This interactive approach ensures that digital stimulation supports language development rather than hindering it. Digital media can also support bilingual and multilingual language development when used appropriately. Many educational applications provide content in more than one language, enabling children to be introduced to foreign language vocabulary and simple expressions at an early age. This exposure can enhance children's phonological awareness and listening skills, which are important foundations for later language learning.

However, the effectiveness of digital language stimulation largely depends on adult mediation. Without guidance, children may only imitate sounds without understanding their meaning. Therefore, parents and teachers should provide explanations, relate digital content to real-life objects, and encourage children to use new words in daily conversations.

Furthermore, excessive reliance on digital media may reduce children's opportunities for spontaneous communication. Face-to-face conversations, storytelling, singing together, and role-playing games remain essential for developing sentence structure, narrative skills, and pragmatic language use. These interactions help children learn turn-taking, listening, and expressing ideas clearly.

Thus, digital media can be a valuable tool for supporting language and communication development when used interactively, purposefully, and in balance with direct verbal interactions in everyday life.

1.8 Digital Media and Social-Emotional Development

Social-emotional development includes the ability to recognize emotions, build relationships, and develop empathy. Digital media can influence this aspect both positively and negatively. Educational cartoons and animated stories that contain moral values can help children understand emotions, cooperation, and empathy. However, children who spend too much time with gadgets tend to have limited real-life social interactions. Hasanah (2022) emphasizes that reduced peer interaction can lead to difficulties in sharing, cooperating, and managing emotions. Children may also become more easily frustrated and impatient. To prevent these negative effects, digital activities must be

balanced with social play such as group games, storytelling sessions, and family discussions. Parents are encouraged to model positive social behavior and discuss emotional content found in digital media with children. Digital media can also influence children's ability to understand and regulate their own emotions. Some educational applications provide emotional learning features, such as recognizing facial expressions, naming feelings, and practicing appropriate emotional responses through stories and animations. These features can help children develop emotional awareness when accompanied by adult guidance.

However, excessive gadget use may reduce children's opportunities to experience real-life emotional situations, such as resolving conflicts with peers, expressing disappointment, or negotiating during play. These experiences are important for building resilience, patience, and empathy. Without sufficient real-life interaction, children may have difficulty interpreting others' emotions and responding appropriately in social situations.

Moreover, children who are overly dependent on gadgets may show withdrawal behavior, preferring to play alone rather than interacting with friends. This condition can hinder the development of communication skills and reduce children's confidence in social environments. Therefore, parents and teachers should encourage cooperative play, storytelling circles, and role-playing activities to strengthen social-emotional competencies.

Thus, while digital media can support social-emotional learning, its use must be carefully supervised and balanced with direct social interaction to ensure healthy emotional development in early childhood.

1.9 Recommendations for Effective Digital-Based Parenting

Based on the findings, several recommendations can be proposed:

1. Parents should set daily screen time limits and maintain consistent schedules.
2. Select educational and age-appropriate digital content.
3. Always accompany children during digital activities.
4. Combine digital stimulation with physical, social, and creative play.
5. Improve parental digital literacy through online parenting courses and seminars.

These strategies can help maximize the benefits of digital media while minimizing its negative impacts on early childhood development

1.10 Digital Parenting and Early Childhood Character Building

Early childhood character formation is the main goal of early education. In the digital era, the process of character formation is not only influenced by the family and school environment, but also by the digital content that children consume every day. Video shows, digital games, and educational applications contain values, messages, and behaviors that children can imitate. According to Lickona (2018), children's character develops through example, habituation, and consistent strengthening of moral values. In the digital context, parents must ensure that the content that children access contains positive values such as honesty, discipline, responsibility, and empathy. Educational cartoons that feature sharing, apologizing, and cooperative behaviors can help instill a child's social character.

However, if children consume uncontrolled entertainment content more often, the values formed tend to be negative, such as aggressive, consumptive, and impolite behavior. Therefore, parental supervision of digital content is the main key in shaping children's character in the digital era. Digital character education should not only focus on what children watch or play, but also on how children are guided to understand and apply the values contained in digital content. Parents and teachers are encouraged to discuss the moral messages presented in videos or digital stories with children. By asking simple questions such as "Why should we share?" or "What should we do if we make a mistake?", children are trained to reflect on values and apply them in real-life situations.

Furthermore, consistent digital routines can support character formation. For example, setting rules about screen time, waiting for turns when using gadgets, and cleaning up after finishing digital

activities can foster discipline, responsibility, and self-control. These daily habits gradually shape children's character through repetition and reinforcement.

Digital media can also be used to introduce religious and cultural values. Animated stories about moral lessons, respect for parents, honesty, and helping others can strengthen children's moral awareness. However, these values must be reinforced through real actions and examples from adults, as children learn more effectively through imitation.

Therefore, digital parenting that emphasizes moral guidance, consistent routines, and positive modeling can help build strong character foundations for children in the digital era.

1.11 The Influence of Digital Media on Children's Motor Development

Early childhood motor development includes gross motor and fine motor skills. Excessive use of gadgets can reduce the child's chances of being active. Children sit more, hold gadgets, and stare at screens so that physical activities such as running, jumping, and climbing are reduced.

According to Rahman (2022), children who are immobile tend to experience delayed motor development, get tired easily, and have less than optimal body coordination. Meanwhile, fine motor can also be affected if children use touch screens too often without balancing activities such as drawing, scissors, and meronce.

Therefore, parents need to balance the use of digital media with physical activities such as playing ball, cycling, children's gymnastics, and traditional games. Thus, children's physical development remains optimal even though they live in the digital era. In addition, limited physical movement caused by excessive gadget use can increase the risk of childhood obesity. Children who spend long periods sitting while using gadgets tend to have lower energy expenditure, which may lead to unhealthy weight gain. This condition can further affect children's endurance, flexibility, and overall physical fitness.

Motor development is closely related to brain development, especially in the early years when neural connections grow rapidly. Active physical play such as running, climbing, and jumping helps strengthen neural pathways related to balance, coordination, and spatial awareness. When these activities are reduced, children may not receive optimal neurological stimulation.

Furthermore, traditional games such as hopscotch, hide and seek, and ball games not only stimulate gross motor skills but also support social interaction, cooperation, and emotional control. These games provide opportunities for children to learn rules, take turns, and solve simple social conflicts.

Therefore, parents and teachers are encouraged to design daily routines that include structured and unstructured physical activities. By integrating movement-based play with digital learning, children can enjoy balanced stimulation that supports both physical health and overall development in the digital era.

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1.12 Digital Media as a Means of Stimulating Children's Creativity

Digital media can also be an effective means to develop children's creativity. Digital drawing, coloring, music, and storytelling apps can stimulate children's imaginations. Children can express ideas, colors, and stories according to their imagination.

According to Hapsari (2023), children who are given the opportunity to use creative applications show increased imaginative thinking skills, confidence, and courage to express ideas. However, digital creativity must still be balanced with real creativity such as manual painting, collage, and role-playing so that children do not depend entirely on technology.

Digital media also allows children to explore creativity through interactive features that cannot be found in conventional media. Some applications provide animation tools, voice recording, and simple video editing features that enable children to create digital stories, songs, and short videos. These activities can train children's imagination, communication skills, and early digital literacy at the same time.

In addition, digital creativity activities can encourage children to develop problem-solving skills. For example, when children choose colors, arrange pictures, or create story sequences in digital storytelling applications, they learn to make decisions, solve simple problems, and evaluate their own work. This process supports the development of critical thinking and self-reflection skills from an early age.

However, parents and teachers must ensure that digital creativity does not reduce children's opportunities to engage in sensory experiences. Physical creative activities such as playing with clay, sand, paper, and natural materials are important for developing fine motor skills and sensory integration. Therefore, digital creative activities should be combined with hands-on creative play to provide holistic stimulation.

Furthermore, digital creativity can also be used as a medium to strengthen emotional expression. Children can express feelings through colors, drawings, and stories, which can help parents understand children's emotional conditions. When parents discuss children's digital artwork, they can build closer emotional connections and encourage children to communicate their feelings more openly.

Thus, digital media can become a powerful tool for stimulating children's creativity if it is used in moderation, accompanied by adults, and balanced with real-life creative experiences.

1.13 The Role of Early Childhood Education Institutions in Supporting Digital Parenting

Early childhood education institutions have an important role in helping parents understand digital parenting. Schools can provide socialization, parenting training, and guidance on safe use of digital media for children.

According to Nurhadi (2022), cooperation between teachers and parents can significantly improve the quality of child development stimulation. Teachers can provide recommendations for educational applications, screen time schedules, and follow-up activities that can be done at home. Early childhood education institutions also act as mediators between children, parents, and digital technology. Schools are expected to introduce digital learning gradually and responsibly according to children's developmental stages. Through structured digital learning activities in class, teachers can demonstrate how digital media should be used as an educational tool rather than merely as entertainment.

In addition, schools can design school-based digital parenting programs that involve parents in regular meetings, workshops, and online discussions. These programs can focus on increasing parents' digital literacy, teaching strategies for supervising children's online activities, and providing guidance on choosing age-appropriate digital content. Such initiatives can strengthen parents' understanding of the benefits and risks of digital media use in early childhood.

Early childhood education institutions can also develop guidelines or standard operating procedures (SOPs) related to digital media use at school. These guidelines can include rules on screen time

duration, types of applications allowed, and procedures for parental consent. With clear policies, schools can create a safe and consistent digital learning environment for children.

Furthermore, teachers can integrate digital media with play-based learning approaches. For example, after watching an educational video about animals, children can be invited to imitate animal movements, draw animals, or tell stories about them. This integration ensures that digital learning remains interactive, meaningful, and aligned with early childhood learning principles.

Therefore, early childhood education institutions play a strategic role in guiding parents and children toward healthy, balanced, and effective digital parenting practices.

1.14 The Psychological Impact of Gadget Use on Early Childhood

Uncontrolled use of gadgets can affect the psychological condition of children. Children can become irritable, tantrums, impatient, and have difficulty concentrating. Gadget dependence also makes it difficult for children to control emotions when gadgets are taken.

According to Kurniawati (2021), children who play gadgets too often have a risk of experiencing emotional disturbances, social anxiety, and decreased sleep quality. Therefore, parents must make strict rules regarding the schedule for using gadgets.

In addition to emotional disturbances, excessive gadget use can also affect children's self-regulation abilities. Self-regulation refers to the ability to control impulses, manage emotions, and follow rules. Children who are accustomed to getting instant stimulation from gadgets tend to have lower tolerance for delays and frustration. This condition may cause children to easily feel bored, become demanding, and show aggressive behavior when their desires are not immediately fulfilled.

Gadget overuse can also reduce the quality of parent-child interaction. When children spend more time focusing on screens, opportunities for meaningful conversations, emotional sharing, and physical affection decrease. This situation can weaken emotional bonds and reduce children's sense of security and attachment to their parents. Secure attachment is an important foundation for children's emotional stability and confidence.

Furthermore, prolonged exposure to digital screens may disrupt children's sleep patterns. The blue light emitted by gadget screens can suppress melatonin production, making it difficult for children to fall asleep. Lack of sleep can lead to fatigue, decreased concentration, mood swings, and weakened immune systems.

Therefore, it is crucial for parents to establish consistent routines related to gadget use, including limiting screen time before bedtime, encouraging relaxing activities such as reading and storytelling, and creating a calm bedtime environment to support children's psychological well-being.

1.15 Ideal Digital Parenting Model

The ideal digital parenting model is one that blends:

1. Active parental supervision
2. Age-appropriate content selection
3. Screen time restrictions
4. Assistance during use
5. Balance with non-digital activities

This model can be a solution to maximize the benefits of digital while minimizing its negative impact.

1.16 Strategies for Implementing Digital Parenting in the Family

Some strategies that can be implemented:

1. Create a daily screen time schedule
2. Invite children to discuss the content of the spectacle

3. Setting an example of wise use of gadgets
4. Provides non-gadget alternative activities

1.17 Research Implications for Early Childhood Education

The results of this research can be used as a basis for:

1. Preparation of a healthy digital-based early childhood education curriculum
2. School parenting program
3. Teacher and parent training

1.18 Conceptual Framework for Digital Parenting Transformation

Digital parenting transformation involves changing the role of parents, changing stimulation methods, and changing children's learning environment. Parents become facilitators, directors, and protectors of children in the digital world. The transformation of digital parenting also includes changes in parenting strategies and communication patterns within the family. Parents are no longer only responsible for providing physical care but are also required to guide children in navigating digital spaces safely and responsibly. This involves teaching basic digital ethics, such as polite communication, respecting others, and understanding simple online safety rules.

In the digital parenting framework, stimulation methods also change from purely physical and verbal approaches to blended stimulation that combines traditional play with digital media. Parents are expected to integrate digital learning tools with real-life experiences, for example by connecting digital story content with storytelling activities, drawing, or role-playing games. This blended approach helps children better understand learning materials and develop balanced cognitive, social, and emotional skills.

Changes in children's learning environments are also evident. Learning is no longer limited to classrooms and home spaces but extends to virtual environments such as digital learning platforms and educational applications. These environments offer flexibility and access to diverse learning resources, but they also require parental supervision to ensure children's safety and developmental appropriateness.

Therefore, the conceptual framework of digital parenting transformation emphasizes the importance of parental competence, digital literacy, emotional closeness, and consistency in implementing rules. These components interact to create a supportive digital ecosystem that promotes healthy and holistic early childhood development.

CONCLUSION

The digital era has transformed parenting patterns and early childhood development stimulation. Digital media can provide positive stimulation if used wisely and with parental supervision. However, uncontrolled digital use can negatively affect children's social, emotional, and physical development. Therefore, parents must play an active role in guiding, limiting, and accompanying children when using digital devices. Balanced use of digital and non-digital activities is the key to supporting optimal early childhood development.

References

- American Academy of Pediatrics. (2023). *Media and young minds: Policy statement on digital media use in early childhood*. Pediatrics, 151(2), 1–12.
- Ananda, R., & Hidayati, N. (2022). The influence of gadget use on emotional development of early childhood. *Journal of Early Childhood Studies*, 7(1), 45–56.

- Anwar, R., & Putri, L. (2023). Digital learning applications and language development in early childhood. *Journal of Early Childhood Education*, 11(2), 145–156.
- Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Thousand Oaks, CA: Sage.
- Hasanah, U. (2022). Digital parenting challenges. *Journal of Educational Technology*, 10(1), 3546.
- Hapsari, R. (2023). Digital creativity development in early childhood education. *International Journal of Early Childhood Learning*, 14(1), 72–83.
- Hidayat, A. (2020). *Parenting in the digital age*. Jakarta: Prenada Media.
- Kurniawan, D. (2021). Technology and child behavior. *Journal of Psychology and Education*, 9(2), 88–98.
- Lestari, S. (2019). *Family roles in early childhood education*. Jakarta: Kencana.
- Lickona, T. (2018). *Educating for character: How our schools can teach respect and responsibility*. New York: Bantam Books.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2019). *Qualitative data analysis: A methods sourcebook* (4th ed.). Thousand Oaks, CA: Sage.
- Nugroho, A. (2023). Early childhood learning in digital environments. *International Journal of Early Childhood*, 12(1), 75–86.
- Nurhadi, M. (2022). Collaboration between teachers and parents in digital parenting. *Journal of Early Childhood Teacher Education*, 11(2), 101–112.
- Pratiwi, A. (2020). Digital literacy for parents. *Journal of Family Education*, 5(1), 66–77.
- Rahmawati, D. (2022). Screen time and early childhood development. *Journal of Child Development Studies*, 8(1), 55–67.
- Sari, P., & Wulandari, L. (2023). Screen time behavior and social competence in preschool children. *Journal of Child and Family Studies*, 12(1), 25–38.
- Setiawan, M. (2018). *Parenting styles and child development*. Yogyakarta: Deepublish.
- Sugiyono. (2022). *Metode penelitian kualitatif, kuantitatif, dan R&D*. Bandung: Alfabeta.
- Suryani, N., & Lestari, R. (2021). Parenting patterns and emotional development of young children. *Indonesian Journal of Early Childhood*, 6(2), 101–112.
- Wulandari, S. (2021). The impact of gadget use on early childhood social development. *Journal of Social and Behavioral Studies*, 7(1), 23–34.
- Yuliani, N. (2019). *Early childhood education in modern society*. Bandung: Alfabeta.
- Zed, M. (2018). *Metode penelitian kepustakaan*. Jakarta: Yayasan Obor Indonesia.