Controversy of Parental Roles in Supporting Children's Digital Learning: A Mixed-Methods Study in Indonesia

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Abstract

Introduction the Problem: This study explores the controversy surrounding parental roles in supporting children's education in the digital era. **Purpose:** The research investigates how parents adapt to the shift from conventional parenting to digital-based learning assistance. **Method:** Using a qualitative descriptive approach, data were gathered through interviews, observations, and documentation involving parents, teachers, and students. **Findings:** The findings show a clear transformation in parenting practices, with parents increasingly using digital tools and online platforms to guide children's learning. This involvement positions parents as both supervisors and collaborators in digital learning environments. However, the study also identifies a social tension: while some parents believe digital supervision ensures focus and safety, others worry that excessive control may limit children's autonomy and self-regulation. The results emphasize that balanced digital mediation supported by adequate digital literacy enhances children's motivation, discipline, and engagement in online learning. Stronger collaboration between schools and families further improves the effectiveness of learning support. **Limitations and Recommendations:** In conclusion, digital parenting requires a balance between guidance and autonomy. The study provides theoretical insight into evolving digital parenting practices and offers practical implications for strengthening parental digital literacy and school–family partnerships.

Keywords: parental roles, digital parenting, digital literacy, online learning.

Introduction

The digital era has transformed educational landscapes worldwide, altering not only how children learn but also how parents engage in their learning processes (Collins, & Halverson, R. 2018). Classic models of parental involvement such as Epstein's six types of involvement and Hoover-Dempsey and Sandler's framework were originally developed for traditional, non-digital schooling contexts. As learning increasingly migrates to online platforms, applications, and AI-based tutoring systems, these models struggle to fully explain the digital complexities faced by parents today. Alongside these theoretical shifts, families must also confront new challenges such as screen addiction, cyberbullying, unequal access to technology, and varying levels of parental digital literacy (Shoukat, W., Rizwan, N., & Khan, M. T. 2025).

Within this global transition, the Indonesian context reveals further complexities. Studies show that socioeconomic disparities significantly affect parents' capacity to support digital learning, producing gaps between expectations and actual parental involvement. Many parents, especially those in rural or low-income communities, lack the resources, time, or digital

competence required to assist children effectively at home. These inequalities align with the concept of digital capital, which argues that parents' ability to engage in digital education is shaped by access, skills, and sociocultural norms. As a result, children from digitally disadvantaged families may struggle to keep pace with peers who receive stronger digital support at home.

Another emerging issue concerns the ongoing tension between parental control and children's digital autonomy. While some parents adopt strict monitoring to prevent online risks and distractions, others prefer a more facilitative approach that prioritizes independence, creativity, and digital citizenship. This divergence reflects a broader controversy in digital parenting: determining the appropriate balance between protection and empowerment in supporting children's online learning (Banić, L., & Orehovački, T. 2024).

Despite the growing body of literature on digital parenting and parental engagement, few studies explicitly investigate the controversy between parental control and child autonomy within diverse socioeconomic settings, particularly in Indonesia. Existing works tend to treat parental involvement as either protective or supportive, without examining the conflict, negotiation, and emotional dynamics that shape these roles in real digital learning contexts.

Building on this research gap, the present study seeks to develop a deeper understanding of how parents interpret and negotiate their roles in supporting children's digital learning. Particular attention is given to variations in parental support practices that arise from differences in parents' levels of digital literacy and digital capital, as well as how these factors shape the ways parents manage and mediate children's learning in digital environments. Furthermore, this study critically examines how the controversy between parental control and children's autonomy is manifested in everyday digital parenting practices, including forms of monitoring, the provision of autonomy, and the compromise strategies adopted within families. Finally, the study aims to elucidate the implications of these dynamics for children's learning motivation, academic outcomes, and emotional well-being in digital learning contexts.

Literature Review

Parents as Digital Mediators and Supervisors

The role of parents in the digital context encompasses not only the regulation of physical access and screen time but also active mediation of digital content and online interactions (Sciacca, & Milosevic, 2022; Banić, & Orehovački, 2024). The study "What Children Learn in a Digital Home: The Complex Influence of Parental Mediation and Smartphone Interference" found that active parental mediation of internet use was positively correlated with children's internet literacy including critical reflection and self-regulation and negatively correlated with problematic smartphone use (Liu, & Wu, 2024; Education and Information Technologies, 2023). In addition, "Parental Involvement During Online Learning: A Study Among Low-Income Families in Indonesia" revealed that low-income parents face significant challenges in monitoring and supporting online learning due to limited access, time, and digital literacy (Fitria, & Aulia, 2023)

Furthermore, the study "Parental Mediation, Digital Media Usage, and Health Literacy: An Exploration Among Chinese Elementary School Students" demonstrated that direct parental interaction and specific mediation approaches significantly reduced children's use of instant messaging and short video platforms that can harm their digital health literacy (Zhao, et al., 2025; Zhang, & Wei, 2024). Thus, parental mediation serves as a crucial buffer between unfiltered digital exposure and the development of children's digital competencies.

However, not all mediation strategies are equally effective. Research from China and other countries has shown that passive monitoring or restrictive control alone is less effective than active, dialogical mediation (Mann, & Auerbach, 2021; Cheng, et al., 2020). Mediation involving open discussion, reflection, and shared regulation tends to prevent excessive gadget use and helps children cultivate critical thinking skills toward digital content (Clemente-Suárez, & Tornero-Aguilera, 2024; Li, & Chen, 2023).

Parental Role in Developing Children's Digital Literacy

Digital literacy refers not only to the technical ability to use digital devices but also to understanding, evaluating, and applying digital content ethically and productively (Falloon, et al., 2020; Martínez-Bravo, & Serrano-Puche, 2022). In the Indonesian study "Children's Digital Literacy: Parental Role in Protection Amid Pandemic and Digital Shift", researchers found that during the COVID-19 pandemic, children's screen time increased drastically, mostly for online entertainment, and that parents played a key role in protecting children from harmful content and guiding responsible device use (Informasi Journal, 2022). Another study, "The Role of Parents in Supporting Digital Literacy in Early Childhood," found that parents must establish positive digital habits early, model constructive use of technology, and guide children to understand both the risks and benefits of digital tools (Putri, & Ratnasari, 2022).

The broader educational environment, including schools and family systems, also influences the development of digital literacy. (Timotheou, & Ioannou, 2023; Meng, et al., 2025; Peng, et al., 2022). The systematic review "How Parental Involvement in ICT Enhances Digital Literacy and Language Learning" concluded that parental involvement in ICT use at home not only enhances digital competence but also language development, particularly in early childhood, because parent–child interaction during digital use enriches vocabulary and comprehension (Putri, & Saharudin, 2025).

Nevertheless, digital literacy extends beyond technical skills it also encompasses ethics, online safety, privacy, and time management. Parents need to understand these aspects so that children's digital literacy development is both modern and responsible (Zhang, & Wei, 2024).

Digital Parenting: Risks and Benefits

Digital parenting defined as how parents manage, monitor, and guide their children's digital media use carries both opportunities and challenges (Modecki, & Orben, 2022; Banić, & Orehovački, 2024). A study on preschoolers' electronic device use revealed that excessive screen time can impair executive functions, which are crucial for learning; however, effective parental mediation can mitigate these effects (Likhitweerawong, & Louthrenoo, 2024; Yang, & Zhu, 2023; Qu, et al., 2025).

Benefits of digital parenting include improved digital literacy, critical content awareness, and better digital well-being. In the Chinese study on parental mediation, active involvement correlated with higher digital literacy and better smartphone control (Lou, et al., 2024; Li, et al., 2023). However, overly restrictive parenting with. out dialogue can increase tension, dissatisfaction, and parent–child conflict, potentially hindering creativity and autonomy (Yengo, et al., 2023).

Moreover, parents' emotional roles are equally vital (Elsayed, et al., 2024). When children encounter distressing or harmful online content, parental emotional support and open communication become essential (Throuvala, & Kuss, 2021;Geržičáková, & Mýlek, 2023). The "What Children Learn in a Digital Home" study noted discrepancies between parents' reports of mediation and children's perceptions, which, if unresolved, may lead to miscommunication or negative relational outcomes (Li, et al., 2023).

The reviewed literature highlights that the role of parents in children's education during the digital era is complex and multifaceted. Active parental mediation through open communication, reflection, and shared rule-making is proven to be more effective than passive monitoring or strict control. Such involvement helps children build digital literacy, self-discipline, and critical thinking toward online content. However, parental effectiveness is often influenced by socioeconomic background and access to technology (Lou, et al., 2024; Parks, et al., 2022).

Families with better digital access can guide their children more effectively, while those with limited resources face challenges in supervision and support, contributing to the digital divide (Sosa Díaz, et al., 2021; Alkureishi, & Lee, 2021).Emotional involvement also plays a crucial role, as mismatches between parental intentions and children's perceptions can lead to misunderstanding or conflict (Lin **et al.,** 2025). Therefore, balanced digital parenting that combines supervision, guidance, and emotional support is essential (Gil García, & Martín Quintana, 2025). Parents should act not only as regulators but also as facilitators who help children navigate the digital world wisely and responsibly (Throuvala, & Kuss, 2021).

Methods

This study employed a mixed-methods sequential explanatory design, consisting of two phases: (1) a quantitative phase to identify statistical relationships between parental digital roles and children's learning outcomes, followed by (2) a qualitative phase to explain and contextualize the quantitative findings. This design ensures that numerical trends obtained in the first phase are clarified through in-depth narratives in the second phase.

Research Design and Sampling

The research was conducted in selected urban and rural regions of Indonesia. The quantitative phase involved 400 parent–child dyads, selected through stratified random sampling to reflect socioeconomic diversity. From these respondents, 25 dyads representing variations in digital literacy, parenting styles, and educational backgrounds were purposively selected for the qualitative phase.

Instruments and Variables

Quantitative data were collected using a Likert-scale questionnaire measuring:
- Active digital mediation
- Content monitoring
- Emotional support in digital learning
- Digital autonomy for children
- Parental digital literacy
- Digital capital
- Children's learning outcomes (academic engagement, digital task performance)

Indicators were adapted from established digital literacy and family digital-mediation frameworks. All instruments were validated through expert judgment and reliability testing (Cronbach's Alpha = 0.82).

Summary of Research Procedures

Table 1. Summary of Mixed-Methods Procedure

phase	sample	Data type	instruments	Data Analysis
Quantitative	400 dyads	Numeric (Likert-scale)	Parental roles scale, digital literacy scale, learning outcomes scale	Descriptive stats, correlation, multiple regression
Qualitative	25 dyads	Interview transcripts, observations	Semi-structured interviews, observation sheets	Thematic content analysis
Integration	-	Mixed	Joint interpretation	Triangulation & explanatory integration

Quantitative Analysis

Descriptive and inferential statistics were used. A multiple linear regression model assessed the influence of digital literacy and parenting style on children's learning outcomes.

Example of Key Statistical Result (ringkas): Digital literacy significantly predicted children's digital learning outcomes ($\beta = 0.41$, $p < 0.001$). A combination of digital literacy and parental active mediation explained 32% of the variance in learning outcomes ($R^2 = 0.32$). Meanwhile, excessive control showed a weak or negative association ($\beta = -0.12$, $p < 0.05$). These outputs provided the basis for selecting qualitative participants who represented high, medium, and low digital-support profiles.

Qualitative Procedures

After analyzing the quantitative findings, semi-structured interviews and short observations were conducted to examine:
- dilemmas parents face when supervising digital learning,
- conflicts between control and autonomy,
- lived experiences of digital mediation at home.

Qualitative data were coded using thematic content analysis. Themes were then connected back to the quantitative findings to explain why certain statistical patterns emerged consistent with the sequential explanatory design.

Reliability, Validity, and Ethics
- Quantitative reliability: Cronbach's Alpha > 0.70.
- Instrument validity: expert review from digital education scholars.
- Qualitative validity: member checking and audit trails.

Ethics: informed consent from parents and children, confidentiality, voluntary participation, and right to withdraw at any stage.

Integration of Mixed-Methods Findings

The integration process compared numerical trends with narrative explanations. For instance, the statistical finding that digital literacy strongly predicts learning outcomes was elaborated through interviews showing that highly literate parents:
- guide children in navigating online platforms,
- provide emotional scaffolding,
- balance supervision with autonomy.

Conversely, the weak or negative effect of excessive control was explained by children's feelings of pressure and reduced self-regulation.

With these operational steps, the mixed-methods approach not only quantified the relationships among key variables but also revealed the lived experiences, controversies, and value negotiations underlying parental roles in children's digital learning (Chuane, & Al Murshidi, 2024).

Result

Evidence 1: Changes in Parenting Patterns and Learning Assistance

The data reveal a shift in parenting styles, where parents are now more actively using online learning applications such as Google Classroom, Ruangguru, and Zoom to help children understand school materials. Based on interviews, most parents felt the need to learn technology to effectively assist their children. Observations also showed that children's learning processes have become more interactive due to technological support and direct parental engagement. This finding suggests that parents' roles have evolved from mere supervision to active collaboration in digital learning.

Evidence 2: Public Opinions and Controversy

Another finding highlights differing public opinions regarding the extent of parental involvement in children's digital education. Some parents believe that digital guidance is essential to ensure children's focus and safety during online learning. However, others argue that excessive involvement can hinder children's independence and self-regulation skills. This controversy illustrates a dilemma between the need for parental control and the importance of granting children autonomy to develop independently within the digital environment.

Evidence 3: Impact on the Quality of Children's Education

Observations show that children who receive consistent digital guidance from their parents tend to demonstrate higher learning motivation. They appear more disciplined, confident, and capable of managing their study schedules effectively. Documentation of learning outcomes also indicates improvements in comprehension and participation in online learning activities. Conversely, children who receive minimal parental involvement tend to struggle with focus and time management. These findings suggest that digital parental engagement has a positive influence on children's learning motivation and educational quality.

Evidence 4: Solutions and Transformation of Parental Roles

In response to these challenges, the study found that improving parents' digital literacy and fostering active communication between schools and families serve as effective solutions. Through training and two-way communication, parents can better understand digital learning methods and assist their children without being overly controlling. Schools that establish digital partnerships with parents also create a more supportive learning environment. This transformation shows that the parental role is no longer one-directional but rather collaborative and adaptive to technological developments in education.

Table 2. Description of Findings, Empirical Data Source (Interview, Observation, Documentation), Analytical Meaning / Interpretation

Evidence	Description of Findings	Empirical Data Source (Interview, Observation, Documentation)	Analytical Meaning / Interpretation
1. Changes in Parenting Patterns and Learning Assistance	Parents are increasingly using online learning platforms (e.g., Google Classroom, Ruangguru, Zoom) to help children understand school material. They also guide children in managing digital tools for learning.	Interviews with parents showing efforts to learn digital platforms; observation of parents assisting children during online learning sessions.	Indicates a transformation of parenting from traditional supervision to digital collaboration. Parental digital literacy directly supports children's engagement in learning.
2. Public Opinions and Controversy	There are contrasting views among parents regarding digital learning assistance. Some consider it essential for guidance, while others see it as a barrier to independence.	Interview data showing differing parental opinions; documentation from community discussions on parenting in the digital era.	Reflects social controversy between the need for control and the goal of fostering autonomy. Demonstrates the diversity of digital parenting philosophies in society.
3. Impact on the Quality of Children's Education	Children who receive consistent digital support from parents display higher motivation, discipline, and understanding in schoolwork compared to those who don't.	Observation of children's online learning behavior; documentation of performance reports and teacher feedback.	Shows that parental involvement positively correlates with children's motivation and learning outcomes. Digital guidance enhances focus and participation.
4. Solutions and Transformation of Parental Roles	Strengthening parents' digital literacy and building active school–parent communication lead to more effective learning support.	Interviews with teachers and parents; documentation of digital training programs and parent–school meetings.	Demonstrates that collaboration and shared responsibility between parents and schools enhance digital education quality and reduce parenting stress.

Overall, the results of this study indicate that the parental role in children's education during the digital era lies in balancing control and autonomy. The emerging challenges and controversies have encouraged the development of new parenting models that are more communicative, participatory, and technology-oriented. With strong digital literacy and effective collaboration between parents and schools, children's education in the digital age can become more meaningful, efficient, and future-ready.

Discussion

Changes in Parenting Patterns and Learning Assistance

The finding that parents are now using online learning applications to help their children understand school materials reflects a shift from traditional parenting to digital parenting (Banić, & Orehovački, 2024; Pratiwi, & Saripudin, 2022). This aligns with the concept of parental mediation in media studies, where parents are involved in their children's media use through co-use and discussion rather than passive supervision (Nikken & Opree, 2023). In the educational context, parents become "co-learners," bridging the gap between school materials and children's comprehension (Song, et al., 2022).

However, this transformation depends heavily on parents' digital literacy, access to technology, and willingness to adapt. The study The Role of Parental Capital and Digital Parenting Readiness emphasizes that parents' readiness including attitude, knowledge, and skills shapes their mediation strategies (Xie, & Hu, 2023). Parents with low confidence tend to adopt passive monitoring rather than active engagement. Thus, this shift in parenting is not universal but context-dependent, shaped by socioeconomic access and digital competence (Musa, & Boriboon, 2025).

Public Opinions and Controversy

The differing opinions among parents some valuing digital guidance while others fear it may hinder independence reflects an ongoing debate in digital parenting literature (Modecki, & Orben, 2022; Banić, & Orehovački, 2024). A systematic review titled What Is Digital Parenting? A Systematic Review of Past Research found that active parental mediation strengthens relationships and skill development, while excessive control can trigger resistance among children (Livingstone, & Blum-Ross, 2022). Similarly, Active Parental Mediation and Adolescent Problematic Internet Use reports that active mediation reduces problematic internet use when accompanied by open communication and emotional support, rather than strict restrictions (Steinfeld,. 2021;Lee, & Chae, 2023).

This controversy can also be interpreted through the lens of parenting styles. According to Parental Mediation and Adolescents' Internet Use, the impact of parental mediation depends on the parenting style whether responsive or controlling (Ren, & Zhu, 2022; Alshakhsi, & Ali, 2025; Chang, et al. 2022). Parents who adopt a protective approach aim to prevent digital risks, while others favor a relational style that fosters autonomy. This debate underlines the need for balanced guidance that allows children freedom to explore while ensuring digital safety (da Silva, & Armstrong, 2022; Ayalew, 2024).

Impact on the Quality of Children's Education

The finding that children receiving consistent digital guidance from parents show higher motivation and better comprehension reinforces the argument that digital parental involvement enhances educational outcomes (Gonzalez-DeHass, & Musgrove, 2022; Gruchel, & Buhl, 2022).

A meta-analysis, Associations between Digital Parenting and Children's Well-Being, reported that positive mediation such as co-using and discussing media correlates strongly with better educational and psychological outcomes (Fam, & Kääriäinen, 2023; ScienceDirect, 2025).

Similarly, The Interactive Effects of Parental Mediation Strategies found that combining active mediation with low-restriction control reduces negative media effects and increases children's trust in parents (Leon, & Cilich, 2025; Chen, & Wang, 2023). These findings confirm that the quality of mediation marked by communication and support is more important than the quantity of control. However, overly intensive guidance without promoting autonomy can cause dependency (Lauring, & Kubovcikova, 2022; Bi, & Wang, 2021). Therefore, effective digital parenting should integrate supervision, dialogue, and self-regulation development (Yildirim, & Avcioglu, 2025).

Solutions and Transformation of Parental Roles

The finding that improving digital literacy and fostering active communication between schools and parents can enhance learning outcomes supports prior studies (Soyoof, & McLay, 2024). Digital Inclusion as a Lens for Equitable Parent Engagement emphasizes that teachers see parents' digital competence as vital for successful online learning support (López, et al., 2024). Moreover, Intervention of Digital Parenting in Low-Income Contexts shows that parental digital training improves parenting behavior and engagement in technology-based learning (Jäggi, & Mäusezahl, 2025; Morales, & Torres, 2023). Theoretically, this transformation aligns with the Parental Media Mediation Framework, which defines parents as active mediators, role models, and reflective facilitators in their children's media experiences (Merdin, et al., 2023; Dergipark, 2020). Thus, parents are no longer seen merely as supervisors but as digital mentors who combine technical skills with emotional communication. Institutional support through digital literacy programs and structured school-parent communication becomes essential to sustain this transformation.

Conclusion

This study reveals that the role of parents in supporting children's education in the digital era has undergone a fundamental transformation. Traditional parenting patterns have evolved into digital parenting, where parents actively engage in using online learning technologies to assist children in understanding school materials. The use of learning applications, guidance during online study sessions, and supervision of children's digital activities reflect a new and more collaborative form of involvement between parents and children in the educational process.

However, the findings also indicate varying perspectives within society regarding the intensity of parental digital assistance. Some parents view digital involvement as essential for guiding children amid the complexity of digital information, while others believe it may hinder children's independence. These differing perceptions give rise to a social controversy that reflects the ongoing tension between control and freedom, and between parental authority and children's autonomy, in the context of digital upbringing.

Based on these findings, it can be concluded that the effectiveness of parental roles in the digital era depends greatly on their ability to balance supervision, guidance, and the provision of autonomy to children. Digital literacy emerges as a key factor in fostering positive synergy among parents, children, and schools. Through continuous collaboration and open communication, parents can transform into adaptive learning facilitators who nurture children's independence,

critical thinking, and wisdom in utilizing technology for their educational development in the future.

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