



Parents' Perceptions and Actions on Digital Safety of Elementary School Students

Hamdan Husein Batubara*

*Madrasah Ibtidaiyah Teacher Education Study Program, Faculty of Tarbiyah and Teacher Training,
Universitas Islam Negeri Walisongo Semarang, Indonesia
E-mail: huseinbatubara@gmail.com

Ruruh Sarasati**

**Islamic Education Management Study Program, Faculty of Tarbiyah and Teacher Training,
Universitas Islam Negeri Walisongo Semarang, Indonesia
E-mail: ruruh.s@walisongo.ac.id

Amalia Risfianti***

***Madrasah Ibtidaiyah Teacher Education Study Program, Faculty of Tarbiyah and Teacher Training,
Universitas Islam Negeri Walisongo Semarang, Indonesia
E-mail: amalialisfianti@gmail.com

Selfi Dewi Rahmawati****

****Madrasah Ibtidaiyah Teacher Education Study Program, Faculty of Tarbiyah and Teacher Training,
Universitas Islam Negeri Walisongo Semarang, Indonesia
E-mail: selfidewirahmawati@gmail.com

Received: September 03rd, 2024. Accepted: October 06th, 2024. Published: October 30th, 2024.

Abstract

This study explores parents' perceptions and actions in ensuring the digital safety of elementary school children in Indonesia, where internet penetration is high. This study utilized a mixed methods approach using a convergent parallel design to collect data from 219 parents of elementary school students through closed and open-ended questions presented by Google Forms. Quantitative data was analyzed using mean score and Pearson correlation, whereas qualitative data was analyzed using content and descriptive analysis. The study found that parents generally perceive digital devices and the internet as beneficial tools for enhancing children's learning, creativity, and communication, though they also recognize risks such as exposure to harmful content and cyberbullying. To optimize the benefits and mitigate risks, parents employ strategies such as supervising device use, setting time limits, and educating children about online safety and digital etiquette. These findings highlight the importance of digital literacy for parents and children and the need for collaboration among families, educators, and policymakers to create a safe digital environment for children.

Keywords: *digital safety, digital literacy, children online risk, parental strategies, parental views.*

Abstrak

Penelitian ini mengeksplorasi persepsi dan tindakan orang tua dalam memastikan keamanan digital anak-anak sekolah dasar di Indonesia, yang memiliki penetrasi internet yang tinggi. Penelitian ini menggunakan pendekatan metode campuran dengan menggunakan desain paralel konvergen untuk mengumpulkan data dari 219 orang tua murid sekolah dasar melalui pertanyaan tertutup dan terbuka yang disajikan oleh Google Forms. Data kuantitatif dianalisis menggunakan nilai rata-rata dan korelasi Pearson, sedangkan data kuantitatif dianalisis menggunakan analisis isi dan deskriptif. Hasil penelitian ini menemukan bahwa orang tua umumnya menganggap perangkat digital dan internet sebagai alat yang bermanfaat untuk meningkatkan pembelajaran, kreativitas, dan komunikasi anak-anak, meskipun mereka juga menyadari adanya risiko seperti paparan terhadap konten berbahaya dan perundungan dunia maya. Untuk mengoptimalkan manfaat dan mengurangi risikonya, orang tua menerapkan strategi seperti mengawasi penggunaan perangkat, menetapkan batas waktu, dan mengedukasi anak-anak tentang keamanan online dan etika digital. Temuan ini menyoroti pentingnya literasi digital bagi orang tua dan anak serta perlunya kolaborasi di antara keluarga, pendidik, dan pembuat kebijakan untuk menciptakan lingkungan digital yang aman bagi anak-anak.

Kata kunci: *keamanan digital, literasi digital, risiko daring anak, strategi orang tua, pandangan orang tua.*

INTRODUCTION

Understanding digital safety and implementing effective strategies to protect children from online risks are fundamental to ensuring their well-being and future security (Auxier et al., 2020). In Indonesia, internet usage has exceeded 215,63 million users, which accounts for 78.19% of 275,77 million Indonesia people in 2023 (Pidada, 2023). Additionally, 76.8% of Indonesian children are allowed by their parents to use digital devices, including smartphones (Purnama et al., 2022). The increasing use of digital devices and the Internet among Indonesian children presents both opportunities and risks (Abdullah et al., 2024; Rasimin et al., 2024). Exposure to digital devices and the internet can develop children's learning, creativity, and technoliteracy skills when used appropriately (Falloon, 2024; Saidah & Damariswara, 2021). On the other hand, the potential for digital addiction, decreased eye health, impulsive behavior, and various psychological and social problems have been associated with the risks of poorly managed digital devices and internet use (Ika Sari et al., 2024; Pardhan et al., 2022; Schulz van Endert, 2021; Suriana, 2019).

In the family environment, parents play an important role in optimizing the benefits of digital and internet use to mitigate the risks it poses (Dumaru et al., 2024). Recent research shows that parents play an important role in fostering digital literacy, increasing digital safety, and shaping digital behavior in their children (Chen et al., 2023; Pons-Salvador et al., 2022; Zhao et al., 2024). In addition, the Qur'an through Surah At-Tahrim verse 6 has also emphasized the importance of the role of parents in maintaining the safety of their family members, including in using digital devices. Consequently, parents need a variety of appropriate strategies to enhance their children's digital safety while optimizing the positive benefits of digital technology (Alias & Mohamad Nasri, 2023; Ibrahim et al., 2024).

Many parents of elementary school children face significant challenges in establishing secure content restrictions and implementing safety guidelines despite the increased digital

exposure of their children (N. Rahayu et al., 2022). Research indicates that parents with lower levels of digital literacy often find it difficult to guide their children and protect them effectively (D. Rahayu et al., 2023) from various risks, including online gaming addiction, digital eye strain, and related behavioral issues (Miranda et al., 2022; Neustroeva & Filippova, 2022).

Efforts to enhance digital literacy in Indonesia have included public seminars, outreach programs, and resources such as the websites <https://literasidigital.id> and <https://wethinkdigital.fb.com>, which were designed to educate individuals about personal safety while engaging on social media (Ika Sari et al., 2024; D. Rahayu et al., 2023). Nevertheless, a 2022 survey highlights that the overall digital security literacy among Indonesians requires further improvement, with an average score of 3.12 out of 5 (Ameliah et al., 2022).

Interviews conducted with parents of elementary school students highlight ongoing challenges in safeguarding children from online hazards, such as exposure to inappropriate content and the risks of gaming addiction. Parents express difficulty in effectively managing their children's access to online content and regulating screen time. Additionally, field observations suggest that a significant number of parents permit their children to engage with online gaming or social media for durations exceeding two hours each day. The findings align with existing research that indicates a correlation between incidents of personal data breaches, cyberbullying, and gaming addiction among children and the limited digital safety literacy of their parents (Hark Söylemez, 2023; Meates, 2020). Moreover, it is crucial to emphasize the significant roles that educators and digital service providers play in establishing a safe digital environment for children (Rahman Pir et al., 2023).

Previous research has identified various challenges faced by parents and children and emphasized the significance of communication in addressing problematic mobile phone use (Efrati et al., 2024; Marsh et al., 2024; N. Rahayu et al., 2022). However, there is a notable gap in the literature regarding an in-depth exploration of how parents' strategies can enhance the benefits of digital technology while mitigating its associated risks. This study aims to investigate parents' perspectives on the advantages, risks, and challenges related to their children's use of digital devices and the internet, specifically for elementary school students. Moreover, it seeks to uncover the strategies and tools that parents employ to maximize the benefits of digital engagement, minimize potential risks, and impart essential digital rules and etiquette to their children, thereby fostering effective digital literacy and safety.

METHODS

This study employs a mixed-methods approach utilizing a convergent parallel design, which integrates both quantitative and qualitative methodologies to examine parents' perspectives and strategies concerning the digital safety of elementary school students (Creswell, 2014). This methodology allows for the simultaneous collection of quantitative and qualitative data, thereby enabling direct comparisons that enhance our understanding of this important issue (Vebrianto et al., 2020). The research procedures include systematically developing and implementing an online questionnaire, reviewed by educational experts, and pre-tested with a pilot group. Quantitative data were analyzed using statistical methods such as mean calculations and Pearson correlation, while qualitative data were subjected to detailed

content analysis. These procedures ensure a robust integration of diverse data sources, contributing to a comprehensive exploration of parents' perceptions and actions on the digital safety of elementary school students.

The population involved in this study consists of parents of elementary school students who voluntarily participated. A total of 219 respondents completed the online survey developed by the researchers, selected based on the availability of participants. Among these respondents, there were 148 females and 71 males, with ages ranging from 29 to 61 years. The educational backgrounds of the participants varied widely, spanning from elementary education to postgraduate degrees. A significant majority (66%) of the respondents identified as educators, while the remainder comprised employees from various sectors, including healthcare, advocacy, trade, and homemaking.

Data collection was conducted utilizing an online questionnaire. The 5-point Likert scale about parental perspectives on the digital safety of elementary school students was developed based on Livingstone and Stoilova (2021), categorizing the children's risks in using digital devices and the internet. Open-ended questions about parental perspectives on the advantages, risks, and strategies to protect and enhance children's digital safety were developed based on some literature. To ensure the reliability and validity of the instrument, three experts in the educational field reviewed it, and pre-testing was performed with a pilot group.

The quantitative data regarding parents' perceptions of digital safety for elementary school students were analyzed by calculating the mean score. This score was then interpreted according to a categorization framework outlined in Table 1. Furthermore, Pearson correlation analysis was employed to explore the relationships among various digital safety indicators.

Table 1. Interpretation of Likert Scale mean scores in three categories

Mean	Interpretation
1,00 – 2,33	Low
2,34 – 3,67	Moderate
3,68 – 5,00	High

The qualitative data gathered from participants' responses to open-ended questions was thoroughly analyzed to reveal important insights. We systematically coded each informant's responses, labeling them as R1, R2, and so forth, as noted in R219. This analysis utilized a content analysis approach using Microsoft Excel, allowing us to create and quantify relevant categories that captured the varied parental perspectives on the benefits and risks of digital safety. Furthermore, the analysis illuminated effective strategies parents employ to protect and enhance their children's experiences in the online world. To ensure the reliability of our findings, we asked targeted questions directly to the respondents, which helped us fully grasp their viewpoints.

RESULTS AND DISCUSSION

Parents' Views on the Benefits of Digital Devices and Internet Use for Elementary School Students

The study identified seven significant advantages of digital devices and internet usage for elementary school students. The most frequently reported benefits by parents included the enhancement of their children's knowledge and understanding (f=67), support for their

learning activities (f=52), and the provision of a communication tool for children to connect with others (f=39). Additionally, parents recognized these technologies as a source of entertainment (f=24), a means to foster creative ideas (f=19), an aid in improving reading literacy (f=11), and a facilitator for enhancing language skills (f=7).

Parents expressed the educational benefits of digital tools, stating, “Digital tools enhance school material and stimulate children’s intellectual growth (R53).” They also highlighted the role of these tools in supporting learning, noting, “Children show greater enthusiasm for learning with digital devices (R1).” Furthermore, parents reported the significance of digital technology in communication, particularly in staying connected with family and friends (R120, R141, R157).

This study highlights the advantages of digital devices and the Internet for primary school students, especially in enhancing their understanding of science and improving communication. These findings are consistent with previous research on the educational role of technology (Tinkler et al., 2023). Digital tools have been shown to enhance cognitive, emotional, and behavioral learning outcomes while fostering creativity (Tinkler et al., 2023). Despite facing challenges such as accessibility (Leung & Choi, 2024), parents generally perceive digital tools positively when it comes to supporting learning at home (Griffith et al., 2023).

Parents' Views on the Risks of Elementary School Students in Using Digital Devices and Internet Use

This study has identified six significant risks related to using digital devices and the Internet among elementary school students. The primary concern is exposure to harmful content, which includes hate speech, pornography, and profanity (f=73). Following this, there are concerns regarding reduced motivation to participate in academic activities (f=16) and occurrences of cyberbullying (f=16). Furthermore, parents expressed additional apprehensions about excessive gaming (f=9), a lack of discipline (f=9), and interactions with strangers (f=7).

Parents elaborated on these concerns in statements like: “Pornographic content can appear suddenly, and if clicked, it opens videos or images that are inappropriate (R94).” At the same time, another emphasized, “The content includes offensive language, which also poses a threat (R125).” Additionally, parents expressed concern over the potential for digital device use to lead to reduced academic motivation. One parent stated, “Playing on the phone needs supervision, as it can make children lazy to study (R44).” Another warned, “Without managing children’s smartphone use, it may cause laziness and reduce empathy towards their surroundings (R46).” Finally, parents highlighted other risks, including exposure to cyberbullying and inappropriate language, with one parent commenting on the threats of “pornography, cyberbullying, and offensive language, including insults and profanity (R57).”

This research identifies several significant threats to primary school students' use of digital devices and the internet. These threats include hate speech, pornography, abusive language, and cyberbullying, all of which can lead to serious psychological implications, such as anxiety and depression (Yosep et al., 2023). The findings are consistent with prior research indicating that exposure to negative content can diminish academic motivation, disrupt social bonds among children, and foster poor study habits attributed to excessive screen time (Fung & Wong, 2023). Furthermore, concerns regarding interactions with strangers online and the

risks associated with unsupervised online gaming reinforce the necessity for diligent parental supervision and enhanced digital regulation (Martin et al., 2023).

Parents' Views on the Digital Safety of Elementary School Students

This study reveals that parents of elementary school students generally perceive their children's digital safety as moderate, with an average score of 3.64 out of 5. Among the four evaluated aspects, the capacity of children to avoid exposure to criminal or inappropriate influences online was identified as the highest risk, receiving a score of 3.76. The other aspects, self-regulation concerning screen addiction and undesirable behavior (3.66), protection from harmful online content (3.64), and safeguarding personal data (3.51), were all classified as moderate risks.

The analysis of the relationship between the variables affecting children's digital safety shows a strong and moderate relationship between them. For example, children's safety against exposure to negative content has a strong relationship with children's safety against the influence of people who commit crimes ($r=0.77$), device addiction, and misbehavior ($r=0.66$). In addition, children's safety against the influence of people who commit crimes has a strong relationship with children's safety against device addiction and misbehavior ($r=0.70$) and children's safety in protecting their personal data ($r=0.61$). Furthermore, there is a moderate relationship between children's safety in protecting their personal data and safety against exposure to negative content ($r=0.58$) and device addiction (0.54).

The findings of this study align with previous research, indicating that parents possess a varying level of awareness regarding the benefits and risks associated with digital technology, alongside challenges in effectively implementing control measures (Pons-Salvador et al., 2018). Notably, the study reveals moderate to strong correlations between digital risks, such as exposure to criminal activities and drug addiction (Kanishevska & Lesyk, 2023; Mironova & Simonova, 2020). This highlights the need for a holistic approach to fostering collaboration among parents, educators, and policymakers (Livingstone & Smith, 2014). Additionally, the results indicate that moderate engagement with digital devices can enhance digital literacy and safety awareness, whereas prolonged excessive use is linked to an increased risk of addiction (Vankova, 2024). Furthermore, the weak correlation between parental digital literacy and child safety emphasizes the critical need for digital literacy training tailored to parents and children (Kurgansky et al., 2023).

Parental Strategies for Optimizing the Benefits of Digital Device and Internet Use for Elementary School Students

The study identified six parent strategies to optimize the benefits of digital devices and internet use for elementary school students. Parental strategies to optimize the benefits of digital devices and internet use for elementary school students include supervising and guiding their child ($f=61$), followed by allowing limited gaming time of 1-2 hours per day ($f=35$) and introducing educational applications ($f=17$). Other methods cited by parents include monitoring and assisting children in selecting appropriate content ($f=13$), limiting device usage on weekends to 2-3 hours ($f=9$), and employing parental control applications, such as Family Link ($f=1$).

Parents expressed their strategies in varying ways. For instance, one parent explained, "We allow our child to play games for about 1-2 hours daily after school. The game of choice

is often Roblox, which helps foster creativity. After gaming, the child is encouraged to take a nap, which helps reduce school-related stress. Additionally, we use technology to support our child's learning" (R76). Another parent emphasized supervision by stating, "Close monitoring is essential to ensure students use digital devices safely and wisely" (R9). Similarly, another parent noted, "Our child's account requires parental permission for access" (R72). A parent who introduced learning applications remarked, "We introduce features or educational applications" (R85).

The findings of this study indicate that parents employ various strategies to optimize the advantages of digital devices for primary school students, aligning with the principles of parental involvement in digital education. Strategies such as accompanying children during device usage and imposing limits on digital gaming time underscore the significance of active supervision and management in fostering learning and creativity (Gonzalez-DeHass et al., 2022). Additionally, parents emphasize careful content selection and utilize control applications, reflecting their concerns regarding digital risks and the necessity to maintain a balance between online and offline activities (Lunkenheimer et al., 2023; Pons-Salvador et al., 2022). This comprehensive approach demonstrates parents' vital role in cultivating a safe and developmentally conducive digital environment for their children (Komanchuk et al., 2023).

Parental Strategies to Protect Children from the Risks of Digital Device and Internet Use

This study identified six main categories of parental strategies to protect children from the risks of digital devices and internet use risks. The most applied strategies are limiting internet access (f=41), regulating and monitoring apps downloaded and used by children (f=35), and blocking harmful content (f=24). Additionally, other methods include supervising and guiding children during digital activities (f=21), educating them on mobile security (f=13), and fostering critical thinking and online ethics (f=8).

Parents expressed these strategies in their responses. For instance, one parent noted: "I limit my child's social media access by monitoring their smartphone use" (R50). Another mentioned: "I restrict gadget usage according to age appropriateness" (R16). Some parents also described steps like "setting and checking apps downloaded and used by children, providing guidance to be cautious while using them" (R14). In addition, "a parent shared their strategies of guiding children on appropriate content and issuing warnings if there is any indication of exposure to harmful content" (R57).

This study identified six methods parents use to protect children from the dangers of digital devices, with time restrictions and types of apps being the most common methods. These findings support the parental control theory in the literature, as proposed by Helsper et al. (2024), highlighting that parents with digital skills are more proactive in controlling children's online activities. Nagata et al. (2024) also found an association between parental monitoring and reduced screen use problems among adolescents. In addition, Dumaru et al. (2024) and Marsh et al. (2024) emphasized the importance of open communication, self-regulation, and technical control in guiding children to make appropriate online choices. Allison et al. (2024) added the importance of customized communication to address specific risks, while Mayer et al. (2024) emphasized the role of parents in digital education. This study reinforces the contribution that a combination of restrictions, monitoring, and education by parents is effective in protecting children in the digital age.

Parental Strategies for Teaching Digital Rules and Etiquette

The study identified six main categories of parental strategies for teaching digital rules and etiquette to elementary students. The most common strategies are setting limits on device usage (f=50), establishing agreed-upon time limits with children (f=30), and cautioning children about the potential consequences of excessive device use (f=27). Additional strategies include supervising and guiding children during device use (f=24), restricting access to inappropriate information channels (f=5), and applying educational consequences when digital rules are broken (f=3).

Parents described their strategies in various ways. One parent emphasized enforcing device time limits and instructing children on acceptable content: “I set strict limits on gadget usage and teach my child what can and cannot be watched (R3).” Another parent focused on supervision, stating, “I constantly monitor my child when using smartphones and provide guidance on appropriate content (R110).” Some parents specified negotiating terms with their children, such as allowing limited device use during weekends and adjusting for compliance (R1).

This study shows that elementary school parents teach children the rules and ethics of digital device use through six categories, mainly by setting time limits, limiting use, and giving directions about the consequences of excessive digital play. These findings support parental mediation theories that involve limiting and supervising digital use to reduce risks, such as addiction and exposure to inappropriate content (Gür & Türel, 2022; Helsper et al., 2024; Türen & Bağçeli Kahraman, 2024). Parental mediation which also includes discussions about digital content and privacy, contributes to children's digital literacy and safety (Durak & Kaygin, 2020), while active mediation helps foster healthy digital habits (Durak & Kaygin, 2020). In addition to restrictions, some parents apply educational punishments and information control to ensure children's digital safety, emphasizing the importance of a balanced strategy between restrictions and education (Lukavská & Gabrhelík, 2024).

Parental Media for Teaching Digital Rules and Etiquette

The study identifies six parental media used to instruct children on digital devices and internet usage. The most utilized media include videos (f=29), educational games (f=11), and digital books (f=10). Other media, such as web pages (f=7), Google (f=7), and social media (f=3), are also used, although less frequently.

Parents like visually engaging and interactive media that support children's comprehension. For instance, one parent describes using “safe learning platforms like YouTube Kids, IOTA Kids, and educational apps like ABC Spelling and Elsa Speak” (R38). Another mentions, “Video explanations combining narration, images, and animations enhance understanding” (R35). Parents using educational games highlight their effectiveness in catering to children's visual and kinesthetic learning styles. One parent comments, “Educational games engage children actively, helping them retain information better than passive listening” (R10). Digital books are also valued for presenting online safety concepts in an accessible, engaging manner: “Picture books on online safety simplify complex ideas for children” (R67).

The research found that videos, educational games, and digital books are the most frequently used media for parents to teach children the use of digital devices and the Internet, in line with studies on the importance of digital literacy in children's environments (Margolis

et al., 2024). The popularity of educational games such as Roblox and Minecraft underscores the potential of digital media for learning while raising challenges related to online safety (Buchan et al., 2024). Developing digital literacy for children is also relevant in improving digital navigation and safety skills, and early integration of technoliteracy has the potential to support children's school readiness and mental well-being (Falloon, 2024). Amidst the increasing role of technology in everyday life, education policies that support safe and inclusive digital spaces are essential to maximize the benefits of digital media in learning (Barr, 2022).

Parental Challenges in Guiding and Monitoring Digital Device and Internet Usage among Elementary School Students

This study revealed six key parents' challenges in guiding and supervising the use of digital devices among elementary school children. The most significant challenges faced by parents include gadget addiction and excessive use (f=23), inability to supervise at all times (f=15), and sudden exposure to inappropriate content (f=13). Additional challenges include peer influence (f=12), children's irritability (f=12), difficulty in controlling gadget use (f=6), and reluctance to restrict their children (f=4).

Parents expressed their concerns with statements such as: "The challenge arises when the child becomes addicted because I forget to remind them of time limits (R24)." Another parent noted, "I struggle to protect my child from exposure to inappropriate content, gadget addiction, and excessive use (R10)." Moreover, parents' busy schedules were highlighted, as one stated, "I cannot supervise all the time because parents have other commitments (R1)." Another echoed this sentiment: "When I leave for work, I cannot directly monitor my children's use of gadgets (R200)." Concerns about inappropriate advertisements or videos that appear unexpectedly were also raised, with one parent commenting, "My challenge is the sudden appearance of pornographic ads from the games my child plays. I advise my child to watch safe content to avoid such ads (R82)." Another parent said, "The challenge we face is the frequent emergence of adult or inappropriate content, despite using age-appropriate accounts (R23)."

This study shows that parents' challenges in guiding their primary school-aged children's digital device use include screen addiction, inappropriate content, and peer influence, which is in line with previous research on the negative impact of excessive screen time on children's behavior (Gür & Türel, 2022; Iliopoulou & Koutras, 2022). In addition, some parents' lack of digital literacy and technical skills makes it difficult for them to provide effective supervision, whereas parents with better literacy tend to be more proactive (Lunkenheimer et al., 2023; Pons-Salvador et al., 2022). These challenges emphasize the importance of digital education for parents to support their role in managing children's digital interactions and the need for collaboration between schools and policymakers to create safe and beneficial technology uses for children (Martin et al., 2021).

Parental Strategies for Addressing Challenges in Guiding and Monitoring Digital Device and Internet Usage among Elementary School Students

This study reveals six parental strategies for addressing challenges in guiding and supervising the use of digital devices and the Internet among elementary school students (Table 9). The most frequently employed strategies include setting time limits (f=21),

providing understanding (f=10), and monitoring and accompanying their children (f=7). Other strategies identified include offering additional activities (f=6), providing beneficial viewing options (f=2), and gradually building trust (f=1).

Parents expressed their strategies in various ways, such as: "I check my child's phone and limit their usage" (R26). One parent elaborated on the challenges: "Our challenge is guiding our son to remain consistent with the smartphone usage rules we established. The biggest temptation comes from his friends, who are more active with smartphones, playing games and watching age-inappropriate and non-educational videos. We address this by guiding our son to encourage his friends to use smartphones responsibly" (R42). Additionally, another parent noted, "I address it by explaining to them that they need to focus on learning first" (R18). Another emphasized the importance of direct guidance: "Parents must directly mentor and explain to children who accidentally watch negative content on YouTube Shorts" (R47). Another parent mentioned, "We handle this by continuing to accompany them and setting time limits for digital device usage" (R23). Lastly, different parents say: "Explaining the impact of excessive cellphone use and providing additional activities, such as Quran lessons and swimming."

The findings of this study identifying screen time restriction as the primary of six strategies parents use to address challenges in guiding and supervising digital device use among elementary school children align with previous findings (Lunkenheimer et al., 2023; Marsh et al., 2024). Active mediation involving child understanding and supervision reflects trends in responsible digital education (Gür & Türel, 2022; Pons-Salvador et al., 2022). In addition, the strategy of offering alternative activities aims to distract children from harmful content (Heaselgrave, 2023; Soyoof, 2024), granting limited autonomy shows the importance of a gradual approach to protecting children and improving their digital literacy skills (Bang & Mackey, 2024). The results of this study provide insight into the complexity of parental strategies in the digital age to balance protection with safe technology utilization (Gür & Türel, 2022; Head, 2020).

CONCLUSION

The research highlights both the benefits and risks associated with digital device use among elementary school students and the strategies parents employ to navigate these challenges. Parents generally acknowledge the positive impacts of digital devices, such as enhancing knowledge, supporting learning, and improving communication. However, they also express concerns about risks, including exposure to harmful content, reduced academic motivation, and cyberbullying. To mitigate these risks, parents use various strategies, such as limiting screen time, supervising digital activities, and utilizing parental control tools. The study also underscores the importance of educating parents and children on digital safety and etiquette, emphasizing the need for a balanced approach to technology use. These findings suggest that while digital devices offer educational and communicative benefits, proactive parental involvement and digital literacy education are essential in safeguarding children from online risks. This study contributes valuable insights for developing policies and fostering collaboration between parents, schools, and policymakers to create a safe and beneficial digital environment that supports children's development.

REFERENCES

- Abdullah, S., Mufid, M., Ju'subaidi, J., & Purwanto, P. (2024). Religious confusion and emptiness: Evaluating the impact of online Islamic learning among Indonesian Muslim adolescents. *HTS Teologiese Studies / Theological Studies*, 80(1). <https://doi.org/10.4102/hts.v80i1.9510>
- Alias, A., & Mohamad Nasri, N. (2023). Children and Parents' Understanding on Online Privacy and Its Relationship With the Internet Parental Strategies. *International Journal of Academic Research in Business and Social Sciences*, 13(12). <https://doi.org/10.6007/IJARBSS/v13-i12/20158>
- Allison, K., Dawson, R. M., Messias, D. K. H., Culley, J. M., & Brown, N. (2024). Early Adolescent Online Sexual Risks on Smartphones and Social Media: Parental Awareness and Protective Practices. *The Journal of Early Adolescence*, 44(7), 882–908. <https://doi.org/10.1177/02724316231212560>
- Ameliah, R., Negara, R. A., Minarto, B., Manurung, T. M., & Akbar, M. (2022). *Status Literasi Digital di Indonesia 2022*. Kementerian Komunikasi dan Informatika Republik Indonesia.
- Auxier, B., Anderson, M., Perrin, A., & Turner, E. (2020). *Parenting children in the age of screens*. Pew Research Center: Internet, Science & Tech. <https://doi.org/https://doi.org/20.500.12592/3594wd>
- Bang, H. J., & Mackey, A. (2024). Chinese parents' involvement in their young children's app-based language learning. *Language Teaching for Young Learners*. <https://doi.org/10.1075/ltyl.00052.ban>
- Barr, R. (2022). Building Equitable Access and Inclusion for Children Growing up in the Digital Age. *Policy Insights from the Behavioral and Brain Sciences*, 9(1), 73–80. <https://doi.org/10.1177/23727322211068388>
- Buchan, M. C., Bhawra, J., & Katapally, T. R. (2024). Navigating the digital world: development of an evidence-based digital literacy program and assessment tool for youth. *Smart Learning Environments*, 11(1), 8. <https://doi.org/10.1186/s40561-024-00293-x>
- Chen, L., Liu, X., & Tang, H. (2023). The Interactive Effects of Parental Mediation Strategies in Preventing Cyberbullying on Social Media. *Psychology Research and Behavior Management, Volume 16*, 1009–1022. <https://doi.org/10.2147/PRBM.S386968>
- Creswell, J. W. (2014). *Research Design qualitative, quantitative, and mixed methods approaches* (Fourth edi). Sage Publication.
- Dumar, P., Atashpanjeh, H., & Al-Ameen, M. N. (2024). “It’s hard for him to make choices sometimes and he needs guidance”: Re-orienting Parental Control for Children. *Proceedings of the ACM on Human-Computer Interaction*, 8(CSCW1), 1–51. <https://doi.org/10.1145/3637359>
- Durak, A., & Kaygin, H. (2020). Parental mediation of young children's internet use: Adaptation of parental mediation scale and review of parental mediation based on the demographic variables and digital data security awareness. *Education and Information Technologies*, 25(3), 2275–2296. <https://doi.org/10.1007/s10639-019-10079-1>
- Efrati, Y., Rosenberg, H., & Ophir, Y. (2024). Effective parental strategies against problematic smartphone use among adolescents: A 6-month prospective study.

- Addictive Behaviors*, 154, 108024. <https://doi.org/10.1016/j.addbeh.2024.108024>
- Falloon, G. (2024). An exploration of online technoliteracy capability teaching and learning in early years classrooms. *Education and Information Technologies*, 29(1), 625–654. <https://doi.org/10.1007/s10639-023-12239-w>
- Fung, A. C. H., & Wong, K. K. Y. (2023). Tick-tock: now is the time for regulating social media for child protection. *BMJ Paediatrics Open*, 7(1), e002093. <https://doi.org/10.1136/bmjpo-2023-002093>
- Gonzalez-DeHass, A. R., Willems, P. P., Powers, J. R., & Musgrove, A. T. (2022). Parental involvement in supporting students' digital learning. *Educational Psychologist*, 57(4), 281–294. <https://doi.org/10.1080/00461520.2022.2129647>
- Griffith, S. F., Delisle, J. H., & Casanova, S. M. (2023). Parent perceptions of technology-facilitated learning for young children: Associations with parent and child characteristics. *Journal of Research on Technology in Education*, 1–15. <https://doi.org/10.1080/15391523.2023.2224594>
- Gür, D., & Türel, Y. K. (2022). Parenting in the digital age: Attitudes, controls and limitations regarding children's use of ICT. *Computers & Education*, 183, 104504. <https://doi.org/10.1016/j.compedu.2022.104504>
- Hark Söylemez, N. (2023). An Investigation of Processes of Children's Digital Technologies Usage from the Perspective of Digital Age Parents. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 50, 63–77. <https://doi.org/10.52642/susbed.1219439>
- Head, E. (2020). Digital technologies and parental involvement in education: the experiences of mothers of primary school-aged children. *British Journal of Sociology of Education*, 41(5), 593–607. <https://doi.org/10.1080/01425692.2020.1776594>
- Heaselgrave, F. (2023). Unpaid digital care work: Unmasking the parental mediation practices of contemporary mothers. *New Media & Society*. <https://doi.org/10.1177/14614448231174420>
- Helsper, E. J., Veltri, G. A., & Livingstone, S. (2024). Parental mediation of children's online risks: The role of parental risk perception, digital skills and risk experiences. *New Media & Society*. <https://doi.org/10.1177/14614448241261945>
- Ibrahim, E. M., Zaki, S. M., & Abdelwahab, A. A. (2024). Effect of implementing parental strategies on preventing digital overdependence among their preschool children. *Tanta Scientific Nursing Journal*, 33(2), 0–0. <https://doi.org/10.21608/tsnj.2024.361844>
- Ika Sari, G., Winasis, S., Pratiwi, I., Wildan Nuryanto, U., & Basrowi. (2024). Strengthening digital literacy in Indonesia: Collaboration, innovation, and sustainability education. *Social Sciences & Humanities Open*, 10, 101100. <https://doi.org/10.1016/j.ssaho.2024.101100>
- Iliopoulou, L., & Koutras, V. (2022). Problematic internet use among elementary school students during the Covid – 19 pandemic. *European Psychiatry*, 65(S1), S190–S191. <https://doi.org/10.1192/j.eurpsy.2022.501>
- Kanishevska, L., & Lesyk, A. (2023). Formation of safe behaviour of primary school students in the digital space. *Scientific Papers of Berdiansk State Pedagogical University Series Pedagogical Sciences*, 1(1), 115–121. <https://doi.org/10.31494/2412-9208-2023-1-1-115-121>
- Komanchuk, J., Toews, A. J., Marshall, S., Mackay, L. J., Hayden, K. A., Cameron, J. L.,

- Duffett-Leger, L., & Letourneau, N. (2023). Impacts of Parental Technoference on Parent–Child Relationships and Child Health and Developmental Outcomes: A Scoping Review. *Cyberpsychology, Behavior, and Social Networking*, 26(8), 579–603. <https://doi.org/10.1089/cyber.2022.0278>
- Kurgansky, A. M., Guryanova, M. P., & Khramtsov, P. I. (2023). Medical and Socio-Pedagogical Risks of Primary School Children Using Digital Devices: An Empirical Study. *RUDN Journal of Psychology and Pedagogics*, 20(3), 501–525. <https://doi.org/10.22363/2313-1683-2023-20-3-501-525>
- Leung, S. K. Y., & Choi, K. W. Y. (2024). Teachers' perceptions of technical affordances in early visual arts education. *European Early Childhood Education Research Journal*, 32(1), 147–166. <https://doi.org/10.1080/1350293X.2023.2227367>
- Livingstone, S., & Smith, P. K. (2014). Annual Research Review: Harms experienced by child users of online and mobile technologies: the nature, prevalence and management of sexual and aggressive risks in the digital age. *Journal of Child Psychology and Psychiatry*, 55(6), 635–654. <https://doi.org/10.1111/jcpp.12197>
- Livingstone, S., & Stoilova, M. (2021). *The 4Cs: Classifying Online Risk to Children. (CO:RE Short Report Series on Key Topics)*. Leibniz-Institut für Medienforschung | Hans-Bredow-Institut (HBI); CO:RE - Children Online: Research and Evidence. <https://doi.org/https://doi.org/10.21241/ssoar.71817>
- Lukavská, K., & Gabrhelík, R. (2024). Parental views on their children's smartphone use during personal and relational activities. *PLOS ONE*, 19(8), e0308258. <https://doi.org/10.1371/journal.pone.0308258>
- Lunkenheimer, E., Dunning, E. D., Diercks, C. M., & Kelm, M. R. (2023). Parental regulation of parent and child screen-based device use. *International Journal of Behavioral Development*, 47(5), 410–422. <https://doi.org/10.1177/01650254231179978>
- Margolis, A., Barile, J., Cason, G., & Milanaik, R. (2024). Caring for screenagers (part 2): a pediatrician's primer on popular games and educational tools. *Current Opinion in Pediatrics*, 36(3), 325–330. <https://doi.org/10.1097/MOP.0000000000001341>
- Marsh, S., Chu, J. T. W., & Calder, A. J. (2024). 'I tried to take my phone off my daughter, and i got hit in the face': a qualitative study of parents' challenges with adolescents' screen use and a toolbox of their tips. *BMC Public Health*, 24(1), 217. <https://doi.org/10.1186/s12889-024-17690-z>
- Martin, F., Bacak, J., Polly, D., Wang, W., & Ahlgrim-Delzell, L. (2023). Teacher and School Concerns and Actions on Elementary School Children Digital Safety. *TechTrends*, 67(3), 561–571. <https://doi.org/10.1007/s11528-022-00803-z>
- Martin, F., Gezer, T., Anderson, J., Polly, D., & Wang, W. (2021). Examining Parents Perception on Elementary School Children Digital Safety. *Educational Media International*, 58(1), 60–77. <https://doi.org/10.1080/09523987.2021.1908500>
- Mayer, Y., Cohen-Eilig, M., Chan, J., Kuzyk, N., Glodjo, A., & Jarus, T. (2024). Digital citizenship of children and youth with autism: Developing guidelines and strategies for caregivers and clinicians to support healthy use of screens. *Autism*, 28(4), 1010–1028. <https://doi.org/10.1177/13623613231192870>
- Meates, J. (2020). Problematic digital technology use of children and adolescents: Psychological impact. *Teachers and Curriculum*, 20.

<https://doi.org/10.15663/tandc.v20i1.349>

- Miranda, D., R., M., Linarsih, A., & Amalia, A. (2022). Pengenalan Keterampilan Literasi Digital pada Anak Usia Dini. *EDUKATIF: JURNAL ILMU PENDIDIKAN*, 4(3), 3844–3851. <https://doi.org/10.31004/edukatif.v4i3.2767>
- Mironova, S., & Simonova, S. (2020). Protection of the Rights and Freedoms of Minors in the Digital Space. *Russian Journal of Criminology*, 14(2), 234–241. [https://doi.org/10.17150/2500-4255.2020.14\(2\).234-241](https://doi.org/10.17150/2500-4255.2020.14(2).234-241)
- Neustroeva, A. B., & Filippova, L. D. (2022). Competence and safety of digital environment consumption by children and parents. *Digital Sociology*, 5(1), 107–116. <https://doi.org/10.26425/2658-347X-2022-5-1-107-116>
- Pardhan, S., Parkin, J., Trott, M., & Driscoll, R. (2022). Risks of Digital Screen Time and Recommendations for Mitigating Adverse Outcomes in Children and Adolescents. *Journal of School Health*, 92(8), 765–773. <https://doi.org/10.1111/josh.13170>
- Pidada, I. A. Y. S. D. U. (2023). Digital marketing communication strategy of rinjani trekking tour packages at Muji Trekker Tour & Travel. *International Journal of Social Science*, 3(2), 223–240. <https://doi.org/10.53625/ijss.v3i2.6305>
- Pons-Salvador, G., Zubieta-Méndez, X., & Frias-Navarro, D. (2018). Internet Use by Children Aged six to nine: Parents' Beliefs and Knowledge about Risk Prevention. *Child Indicators Research*, 11(6), 1983–2000. <https://doi.org/10.1007/s12187-018-9529-4>
- Pons-Salvador, G., Zubieta-Méndez, X., & Frias-Navarro, D. (2022). Parents' digital competence in guiding and supervising young children's use of the Internet. *European Journal of Communication*, 37(4), 443–459. <https://doi.org/10.1177/02673231211072669>
- Purnama, S., Wibowo, A., Narmaditya, B. S., Fitriyah, Q. F., & Aziz, H. (2022). Do parenting styles and religious beliefs matter for child behavioral problem? The mediating role of digital literacy. *Heliyon*, 8(6). <https://doi.org/10.1016/j.heliyon.2022.e09788>
- Rahayu, D., Nugraha, Y., & Rosliani, E. (2023). Seminar Literasi Digital Sebagai Upaya Peningkatan Kecakapan Teknologi Dalam Membangun Masyarakat Digital di Desa Galihpakuwon Balubur Limbangan. *Jurnal Pengabdian Literasi Digital Indonesia*, 2(2), 69–76. <https://doi.org/10.57119/abdimas.v2i2.43>
- Rahayu, N., Putri H, S., Nunlehu, M., Madi Ludgardis, M. S., & Sudarya, A. (2022). Pendidikan Anak Usia Dini Pada Lingkungan Keluarga. *Jurnal Pendidikan Indonesia*, 3(10), 886–894. <https://doi.org/10.59141/japendi.v3i10.1211>
- Rahman Pir, R. M. S., Rabbi, M. F., & Islam, M. J. (2023). Applying a machine learning model to forecast the risks to children's online privacy and security. *2023 International Conference on Intelligent Systems, Advanced Computing and Communication (ISACC)*, 1–8. <https://doi.org/10.1109/ISACC56298.2023.10084054>
- Rasimin, Semma, A. B., Zakiyuddin, Ali, M., & Helmy, M. I. (2024). Multi-dimensional challenges in the Indonesian social science information technology-based learning: A systematic literature review. *Heliyon*, 10(7), e28706. <https://doi.org/10.1016/j.heliyon.2024.e28706>
- Saidah, K., & Damariswara, R. (2021). Development of Interactive Folklore Based on Android Oriented to Local Wisdom to Improve Reading Comprehension of

- Elementary School Students. *Al Ibtida: Jurnal Pendidikan Guru MI*, 8(2), 276. <https://doi.org/10.24235/al.ibtida.snj.v8i2.7035>
- Schulz van Endert, T. (2021). Addictive use of digital devices in young children: Associations with delay discounting, self-control and academic performance. *PLOS ONE*, 16(6), e0253058. <https://doi.org/10.1371/journal.pone.0253058>
- Soyoof, A. (2024). Unearthing Iranian mothers' mediation strategies during their children's home digital literacy practices in English. *Interactive Learning Environments*, 32(4), 1518–1532. <https://doi.org/10.1080/10494820.2022.2121732>
- Suriana, S. (2019). Teachers' Control System on Negative Impact of Smartphone at Madrasah Ibtidaiyah. In *Al Ibtida: Jurnal Pendidikan Guru MI* (Vol. 6, Issue 2, p. 204). IAIN Syekh Nurjati Cirebon. <https://doi.org/10.24235/al.ibtida.snj.v6i2.3746>
- Tinkler, J., Murphy, S., Danaia, L., & Collins, F. (2023). Transformative rhetoric and educational technologies: digital technologies for schooling during the COVID-19 pandemic. *Technology, Pedagogy and Education*, 32(5), 667–681. <https://doi.org/10.1080/1475939X.2023.2222731>
- Türen, Ş., & Bağçeli Kahraman, P. (2024). The predictive relationships between children's digital game addiction tendencies and mothers' digital parenting awareness and digital literacy levels. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-12932-4>
- Vankova, K. (2024). Possible social Risk and Risks arising from Information and Telecommunication Tools in the Hands of second primary Education Stage Pupils in Slovakia. *Clinical Social Work and Health Intervention*, 15(2), 74–82. https://doi.org/10.22359/cswhi_15_2_11
- Vebrianto, R., Thahir, M., Putriani, Z., Mahartika, I., Ilhami, A., & Diniya. (2020). Mixed Methods Research: Trends and Issues in Research Methodology. *Bedelau: Journal of Education and Learning*, 1(2), 63–73. <https://doi.org/10.55748/bjel.v1i2.35>
- Yosep, I., Hikmat, R., & Mardhiyah, A. (2023). Preventing Cyberbullying and Reducing Its Negative Impact on Students Using E-Parenting: A Scoping Review. *Sustainability*, 15(3), 1752. <https://doi.org/10.3390/su15031752>
- Zhao, Z., Zhu, L., Liao, J., Xia, J., & Pu, X. (2024). Parental Mediation, Digital Media Usage, and Health Literacy: An Exploration Among Chinese Elementary School Students. *Health Communication*, 1–13. <https://doi.org/10.1080/10410236.2024.2387389>