

Learning Disruption among Elementary School Children Caused by Mobile Digital Games: A Literature Analysis of Parenting and Teaching Challenges

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ABSTRACT

The rapid proliferation of mobile digital games has introduced both opportunities and challenges for elementary education, as children increasingly integrate gaming into their daily routines and social interactions. This study investigates the extent to which mobile digital gaming disrupts learning among elementary school children and examines the associated challenges faced by parents and teachers in managing these activities. Employing a qualitative literature analysis, the research synthesizes findings from peer-reviewed journal articles and scholarly books published within the last ten years. Data were collected through systematic identification, screening, and extraction of relevant studies, followed by thematic content analysis to identify patterns in academic, behavioral, social, and cognitive impacts, as well as parenting and instructional challenges. The results reveal that excessive mobile gaming negatively affects attention spans, academic motivation, study habits, and adherence to school routines. Behavioral and social consequences include increased individualism, antisocial tendencies, and potential gaming addiction, while cognitive impacts encompass diminished problem-solving skills, decision-making, and executive functioning. Parents face difficulties in monitoring game usage, managing emotional pressures, and providing effective guidance, whereas teachers encounter challenges in adapting pedagogical strategies, maintaining classroom focus, and collaborating with families. The findings highlight the systemic nature of learning disruption caused by mobile gaming and emphasize the need for digital literacy, structured parental guidance, and home-school collaboration. The study contributes to understanding the interplay between digital media use, child development, and educational practice, offering insights for policies and strategies that promote balanced digital engagement, enhance learning outcomes, and support holistic development in elementary education.

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INTRODUCTION

The rapid expansion of mobile digital technology has transformed the daily lives of children, including those at the elementary school level. Mobile digital games, once viewed merely as entertainment, have become embedded in children's routines and social environments, influencing how they learn, interact, and construct meaning in their everyday experiences. Children's engagement with digital environments, including video games, is increasingly understood as part of identity formation and skills development rather than solely leisure activity, which implies the need for active adult mediation to ensure that digital experiences remain meaningful and educational (Shapiro, 2018). Likewise, digital media can support literacy and learning development when content selection and usage context are guided appropriately by parents and teachers (Guernsey & Levine, 2015). However, optimizing digital media for child development must be balanced with protective strategies against age-inappropriate content, making parental regulation of certain games an essential component of responsible caregiving (Digital Parenting, 2020). The effects of video gaming on children's well-being are therefore complex and shaped by patterns of use, game content, and social context, underscoring the crucial role of parents and educators in managing gaming experiences (King et al., 2024). Parental assistance in children's gadget use is also considered vital in preventing negative outcomes such as concentration problems and technology-related dependency (Digital Parenting, 2018).

At the international level, research indicates that mobile game-based learning presents both opportunities and risks. While such games can enhance engagement and motivation, highly stimulating design features may distract children from academic tasks if not properly regulated, posing management challenges for teachers and parents (Aguilar-Zamora et al., 2025). Concerns expressed by teachers and parents about time control and clarity of learning goals in game-based learning further illustrate the complexity of adult roles in regulating children's digital activities (Hidayat, 2022). Mobile games are often designed with reward systems and challenges that make disengagement difficult for children, reinforcing the importance of time restrictions to maintain a balance between learning and entertainment (Aguilar-Zamora et al., 2025). Teachers report that gamification elements may reduce students' ability to sustain attention in formal learning contexts (Hidayat, 2022), while parents frequently experience pressure in controlling children's gaming duration, particularly when screen time increases substantially (Hidayat, 2022). Digital literacy among teachers and parents is therefore essential to harness educational benefits while minimizing risks (Aguilar-Zamora et al., 2025), and clear educational policies regarding screen time and mobile game use are needed to prevent disruption of formal learning (Aguilar-Zamora et al., 2025).

Nationally, similar patterns emerge. Behavioral changes among elementary school students due to online game use affect learning discipline and social interaction, requiring active involvement of teachers and parents when gaming begins to interfere with study routines (Husna et al., 2021). Excessive online gaming among elementary students is associated with behavioral shifts, reduced learning discipline, and decreased academic motivation (Husna et al., 2021). Gadget and online game use also carries the risk of fostering antisocial tendencies, particularly when parental supervision is insufficient (Fajarini et al., 2025). Limited parental monitoring can increase the risk of digital game addiction and subsequent declines in academic achievement (Fajarini et al., 2025). Parental involvement in setting limits on gaming duration and content plays a key role in

minimizing negative impacts (Fajarini et al., 2025). Collaboration between schools and families is therefore necessary to establish healthy gadget-use rules that support students' learning concentration (Hidayat, 2022). At the same time, teachers must adapt instructional strategies to digital contexts, yet many still feel unprepared to integrate mobile games effectively into formal education (Hidayat, 2022).

Previous empirical studies reinforce these concerns. Mobile game use among elementary students has been linked to high playing time that may interfere with academic performance, study habits, and formal learning time when not limited (Husna, Jamin, & Juliandi, 2022). Online games have been found to negatively affect academic achievement, visual health, time management, and student behavior, highlighting the importance of parental and teacher guidance (Prasetyo, Rondli, & Ermawati, 2025). The impact of online gaming is not only academic but also social, with excessive players showing rebellious behavior, conflict, individualism, and reduced social concern (Izzah, Sari, Saputra, & Afandi, 2025). Higher intensity of online gaming is associated with greater disruption of learning concentration (Muflih & Santosa, 2025). Moreover, online game addiction significantly undermines both academic performance and social interaction among elementary students (Kristanti, Ristiana, & Iswatiningsih, 2025).

Despite the growing body of research, existing studies often examine academic, behavioral, or social impacts separately, with less integrative analysis of how mobile digital gaming simultaneously disrupts learning processes while creating interconnected parenting and teaching challenges. Few literature-based studies synthesize international perspectives, national evidence, and theoretical insights from digital parenting and child development frameworks into a unified understanding of learning disruption. This study offers novelty by integrating these strands through a focused literature analysis that positions mobile gaming not only as a child-related issue but as a systemic challenge involving home–school partnerships, digital literacy, and educational policy.

Accordingly, this study addresses the following questions: (1) How does mobile digital gaming contribute to learning disruption among elementary school children according to existing literature? (2) What parenting challenges emerge in regulating children's gaming activities? (3) What teaching and instructional challenges are faced by educators in this digital context? The objectives are to analyze patterns of learning disruption, identify key parenting and teaching barriers, and synthesize recommendations for balanced digital use in elementary education.

The significance of this research lies in its contribution to educational discourse on digital childhood, offering a comprehensive perspective that links child development, family mediation, and instructional practice. By clarifying how mobile digital games intersect with parenting and teaching roles, this study provides a foundation for developing policies, strategies, and collaborative practices that support children's learning while navigating the realities of the digital era.

METHODS

This study employed a qualitative literature analysis approach to explore the learning disruption among elementary school children caused by mobile digital games, as well as the related parenting and teaching challenges. A qualitative approach was deemed appropriate due to the exploratory nature of the research, allowing in-depth synthesis of findings from multiple sources,

including peer-reviewed journal articles and scholarly books published within the last ten years (Shapiro, 2018; Guernsey & Levine, 2015).

1. Research Design

A systematic literature review design was adopted to identify, evaluate, and synthesize relevant empirical and theoretical studies. This approach facilitated a comprehensive understanding of the phenomena by integrating international and national perspectives, theoretical frameworks on digital childhood, and empirical evidence on gaming impacts on elementary students (King et al., 2024; Aguilar-Zamora et al., 2025).

2. Sample Selection

The sample consisted of journal articles and books published between 2015 and 2025 that addressed mobile gaming in elementary education, its cognitive, social, and behavioral impacts, and the related parental and educational challenges. Studies were selected using purposive sampling to ensure relevance to the research questions and objectives. This included both international studies highlighting global trends and national studies reporting specific evidence from Indonesia (Husna, Jamin, & Juliandi, 2022; Fajarini et al., 2025).

3. Instruments and Data Sources

Data were collected from peer-reviewed journals, scholarly books, and online academic databases such as Scopus, Web of Science, Google Scholar, and institutional repositories. Key search terms included “*mobile gaming*,” “*elementary school children*,” “*learning disruption*,” “*digital parenting*,” and “*instructional challenges*.” Books such as *The New Childhood* (Shapiro, 2018), *Tap, Click, Read* (Guernsey & Levine, 2015), and *Digital Parenting* (2018, 2020) provided theoretical insights, while empirical studies offered quantitative and qualitative evidence of gaming impacts (Prasetyo, Rondli, & Ermawati, 2025; Kristanti, Ristiana, & Iswatiningsih, 2025).

4. Data Collection Procedures

The data collection process involved three main steps: 1) Identification: Systematic search of literature based on the defined inclusion criteria; 2) Screening: Removal of duplicate studies and exclusion of articles not focused on elementary school students or mobile game impacts; 3) Extraction: Compilation of relevant findings, methodological details, and key thematic information from each selected source (Muflih & Santosa, 2025; Izzah, Sari, Saputra, & Afandi, 2025).

5. Data Analysis Techniques

The analysis was conducted using thematic content analysis, where extracted data were coded and categorized into key themes: cognitive disruption, behavioral and social impacts, parental challenges, and teaching strategies. Themes were cross-referenced with theoretical perspectives on digital parenting and child development to ensure consistency and interpretive depth (Digital Parenting, 2018; King et al., 2024; Aguilar-Zamora et al., 2025). The findings were synthesized narratively, highlighting patterns, similarities, and differences across international and national contexts, and linking empirical evidence with theoretical insights (Shapiro, 2018; Guernsey & Levine, 2015).

RESULTS

1. Contribution of Mobile Digital Gaming to Learning Disruption

a. Academic Impacts

Mobile digital gaming has been widely recognized as a double-edged phenomenon in elementary education. On the one hand, games can enhance engagement and motivation for learning; on the other, they pose substantial risks to formal educational outcomes. Research indicates that prolonged exposure to mobile games is associated with decreased attention span and diminished concentration during academic tasks (Aguilar-Zamora et al., 2025). Children often become preoccupied with game-related feedback mechanisms, such as immediate rewards and levels, which can distract from sustained learning efforts (Hidayat, 2022).

Furthermore, excessive gaming has been linked to reduced academic motivation and engagement. Husna et al. (2021) reported that students who spent significant time playing mobile games displayed lower enthusiasm for completing classroom assignments and participating actively in learning activities. Similarly, Prasetyo, Rondli, and Ermawati (2025) found that overexposure to online games disrupted study habits, reduced adherence to homework schedules, and ultimately interfered with formal learning time. These patterns suggest that while digital games can be leveraged for educational purposes, unregulated usage may compromise the cognitive and academic development of elementary students.

b. Behavioral and Social Impacts

Beyond academic performance, mobile digital gaming significantly affects students' behavioral and social development. Studies in Indonesia have documented changes in discipline and adherence to school routines among students who spend excessive time on online games (Husna et al., 2021). Children exhibit delayed task completion, reduced punctuality, and decreased compliance with classroom rules, highlighting the behavioral disruptions that can emerge from unmonitored gaming.

Additionally, there is evidence of increased likelihood of individualistic or antisocial behavior. Izzah et al. (2025) found that children excessively engaged in gaming often display rebellious attitudes, social withdrawal, and limited collaboration with peers. These behavioral tendencies can hinder the formation of positive social relationships and affect the broader classroom climate. Moreover, digital game addiction poses a serious risk to overall well-being, as noted by Kristanti, Ristiana, and Iswatiningsih (2025). Addiction to gaming not only negatively impacts social interactions but is also linked to emotional dysregulation and stress, creating a compounding effect on students' holistic development.

c. Cognitive and Developmental Impacts

From a cognitive perspective, over-engagement with mobile digital games can distract from the development of critical cognitive skills. Muflih and Santosa (2025) report that intense gaming reduces the time children allocate to problem-solving, analytical reasoning, and memory-intensive tasks, resulting in potential delays in the acquisition of foundational academic skills. Excessive gameplay can also influence decision-making processes, as children become accustomed to instant gratification and automated feedback in games rather than deliberate cognitive strategies (Shapiro, 2018).

The cumulative effect is that gaming interferes with developmental milestones, particularly in attention regulation, executive function, and strategic thinking, which are crucial for academic

success. King, Delfabbro, and Griffiths (2024) emphasize that the impact of video games on child well-being is multifactorial, influenced not only by the intensity of gaming but also by the content and social context, reinforcing the importance of parental and educational guidance in moderating cognitive outcomes.

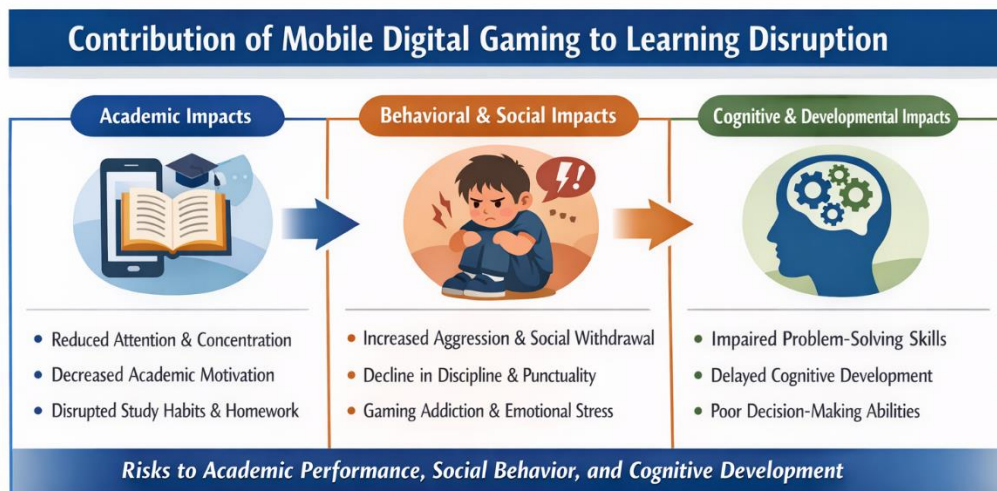


Figure 1: Contribution of Mobile Digital Gaming to Learning Disruption

Figure 1 summarizes the impact of mobile digital gaming on elementary students’ learning, showing how excessive gameplay affects three main areas: academic performance, social and behavioral development, and cognitive growth. It highlights decreased attention, lower motivation, disrupted study habits, behavioral changes, social withdrawal, and impaired problem-solving and decision-making skills, illustrating the interconnected risks of gaming on children’s overall learning and development.

2. Parenting Challenges in Regulating Children’s Gaming

a. Monitoring and Control

Parental monitoring of mobile digital game use among elementary students presents a significant challenge. Studies indicate that parents often struggle to regulate both the duration and content of gameplay effectively (Hidayat, 2022). Mobile games are frequently designed with highly engaging reward systems and levels, which can prolong playtime and make disengagement difficult for children (Aguilar-Zamora et al., 2025). As a result, parents must actively implement strategies to limit gaming duration and select appropriate content to prevent negative academic and behavioral outcomes (Fajarini et al., 2025).

b. Psychological and Emotional Pressure

Managing children’s digital gaming also imposes psychological and emotional pressures on parents. Hidayat (2022) reports that parents frequently experience stress and frustration when trying to control screen time, particularly during periods of high gaming intensity such as holidays or pandemic lockdowns. The constant need to mediate between children’s gaming interests and educational demands can create tension within families, emphasizing the critical role of digital literacy and parental guidance in fostering balanced usage (Guernsey & Levine, 2015).

c. Guidance and Support Strategies

Effective parenting strategies are central to mitigating the risks associated with mobile digital games. Research underscores the importance of setting explicit rules for gaming usage, including designated time limits, content restrictions, and supervision of online interactions (Digital Parenting, 2018; Digital Parenting, 2020). Active involvement in children's digital experiences not only prevents overexposure to potentially harmful content but also supports meaningful and educational engagement (Shapiro, 2018). Parents who actively engage with children in selecting appropriate games and discussing in-game challenges help enhance both cognitive and social development, reinforcing positive gaming habits while reducing negative impacts on learning (Fajarini et al., 2025).

Collectively, these findings illustrate that parenting in the digital era requires a combination of monitoring, emotional support, and proactive guidance to ensure that mobile gaming contributes positively to development rather than disrupting academic and social outcomes.

Table 1: Parenting Challenges in Regulating Children's Gaming

Parenting Challenge	Description	Implications
Monitoring and Control	Difficulty in regulating game duration and content due to engaging reward systems in games.	Requires active strategies to limit playtime and ensure age-appropriate content to protect learning and behavior.
Psychological and Emotional Pressure	Parents experience stress and frustration managing children's gaming, especially during high-intensity periods.	Highlights the need for digital literacy and supportive guidance to maintain balance between gaming and educational demands.
Guidance and Support Strategies	Setting rules, supervising online interactions, and actively engaging in children's gaming.	Enhances cognitive and social development, reinforces positive gaming habits, and mitigates negative learning impacts.

The table 1 summarizes key parenting challenges in managing children's mobile gaming. Parents often struggle to monitor and control both the duration and content of gameplay due to the highly engaging design of digital games, which can extend playtime and distract from academic tasks. This difficulty is compounded by psychological and emotional pressures, as parents frequently experience stress and frustration when balancing children's gaming interests with educational demands. Effective guidance and support strategies, such as setting clear rules, supervising online interactions, and actively engaging with children during gameplay, are essential to promote positive cognitive and social development while mitigating the potential negative impacts of excessive gaming.

3. Teaching and Instructional Challenges

a. Pedagogical Adaptation

The rapid integration of mobile digital games into children's daily routines has posed significant challenges for educators in elementary schools. Teachers often struggle to adapt traditional pedagogical methods to a digital context, where students' attention spans are influenced by the instant gratification and reward structures inherent in games (Hidayat, 2022; Aguilar-Zamora et al., 2025). Gamification elements that attract student engagement can inadvertently reduce their capacity to focus on structured classroom activities, creating a need for educators to develop strategies that balance digital engagement with formal learning objectives.

b. Teacher Preparedness and Digital Literacy

Teacher preparedness and digital literacy are critical factors in addressing the disruptive effects of mobile gaming. Many educators report feeling unprepared to integrate or manage digital gaming in classroom settings (Hidayat, 2022). Without sufficient training, teachers may struggle to leverage the educational potential of games or mitigate their negative impacts. Studies suggest that professional development in digital literacy and instructional strategies that incorporate game-based learning can enhance teachers' capacity to maintain academic engagement while minimizing distraction (Guernsey & Levine, 2015; Shapiro, 2018).

c. Collaboration with Parents

Effective management of gaming-related learning disruption requires active collaboration between schools and families. Establishing consistent rules and guidelines for digital game usage both at home and at school can help maintain students' focus on learning tasks (Hidayat, 2022; Digital Parenting, 2018). Parents and teachers need to communicate regularly to monitor game usage, address behavioral issues, and reinforce positive gaming habits that support learning objectives. This partnership ensures that children receive coherent guidance across both educational and domestic environments, reducing the likelihood of gaming-related disruption in academic performance (Digital Parenting, 2020).

In summary, teaching in the era of mobile digital gaming necessitates adaptation of instructional practices, enhancement of teacher digital literacy, and strong home–school collaboration to ensure that gaming does not interfere with academic and developmental outcomes.

Table 2: Teaching and Instructional Challenges

Dimension	Description of Challenges	Implications
Pedagogical Adaptation	Teachers struggle to adapt traditional methods to a digital context. Gamification and instant-reward structures in games reduce students' attention to structured learning.	Need for strategies that balance digital engagement with formal learning objectives.
Teacher Preparedness & Digital Literacy	Many educators feel unprepared to manage or integrate mobile games. Lack of training limits their ability to harness educational potential or mitigate negative impacts.	Professional development in digital literacy and game-based instructional strategies is essential.
Collaboration with Parents	Schools must coordinate with families to establish consistent rules and monitor gaming behavior. Communication gaps can hinder managing learning disruption.	Active home–school collaboration ensures coherent guidance and reduces gaming-related academic interference.

The table 2 illustrates the main teaching and instructional challenges associated with mobile digital gaming in elementary schools. Educators face difficulties in adapting traditional pedagogical methods to digital contexts, as gamified elements and instant-reward mechanisms in games can diminish students' focus on structured learning. Many teachers also report insufficient preparedness and limited digital literacy, which constrain their ability to leverage the educational potential of games while minimizing distractions. Furthermore, effective management of gaming-related learning disruption requires close collaboration with parents, including consistent rules, regular communication, and monitoring of students' gameplay. Collectively, these findings highlight the need for professional development in digital literacy, adaptive instructional strategies,

and strong home–school partnerships to ensure that mobile gaming supports, rather than hinders, students’ academic and developmental outcomes.

DISCUSSION

1. Analysis of Results

The findings of this study indicate that mobile digital gaming exerts multi-dimensional impacts on elementary school children, affecting academic performance, behavioral and social development, as well as cognitive and developmental processes. Academic impacts manifest through decreased attention spans, lower motivation, and interference with study habits, aligning with the first research question on the contribution of mobile gaming to learning disruption (Aguilar-Zamora et al., 2025; Husna et al., 2021; Prasetyo, Rondli, & Ermawati, 2025). Children’s engagement with highly stimulating game features, such as immediate rewards and levels, creates challenges in sustaining focus on formal learning tasks (Hidayat, 2022).

Behavioral and social disruptions were also evident, including diminished adherence to school routines, increased individualistic tendencies, and potential antisocial behaviors (Izzah, Sari, Saputra, & Afandi, 2025; Kristanti, Ristiana, & Iswatiningsih, 2025). The risk of digital gaming addiction further compounds these effects, contributing to emotional dysregulation and reduced social interaction, highlighting the complex interplay between gaming intensity, content, and social context (King, Delfabbro, & Griffiths, 2024). Cognitive and developmental impacts include decreased time for problem-solving and analytical reasoning, indicating that excessive gaming may interfere with the development of executive functions and strategic thinking skills (Muflih & Santosa, 2025; Shapiro, 2018).

Parenting challenges emerged as a critical factor mediating these disruptions. Parents frequently reported difficulties in regulating both the duration and content of children’s gaming, experiencing stress and frustration when attempting to control screen time (Hidayat, 2022). Effective strategies, such as setting explicit rules, monitoring game content, and actively engaging with children during gameplay, were shown to mitigate negative impacts and promote meaningful, educational use of digital media (Digital Parenting, 2018; Digital Parenting, 2020; Fajarini et al., 2025).

Teaching and instructional challenges were equally prominent. Educators often struggle to adapt pedagogical approaches to digital contexts where students’ attention and engagement are influenced by gamified mechanisms (Hidayat, 2022; Aguilar-Zamora et al., 2025). Teacher digital literacy and preparedness are essential to leverage the educational potential of games while preventing learning disruption (Guernsey & Levine, 2015; Shapiro, 2018). Collaboration between schools and parents is necessary to create consistent rules for digital media use, supporting learning continuity and reducing the adverse effects of unregulated gaming (Digital Parenting, 2018; Digital Parenting, 2020).

2. Comparison with Previous Studies

The results of this study are consistent with prior international research demonstrating the dual nature of mobile game–based learning. Aguilar-Zamora et al. (2025) highlighted that while mobile games can foster engagement and motivation, their design may distract students from formal academic tasks. Similarly, Hidayat (2022) emphasized teachers’ concerns regarding students’ diminished attention due to gamification features. National studies corroborate these findings:

Husna et al. (2021) and Fajarini et al. (2025) found that excessive online gaming negatively influences discipline, social interaction, and academic achievement among elementary students in Indonesia.

The present findings extend prior research by integrating international and national perspectives with theoretical insights from digital parenting and child development frameworks. Unlike studies that focus solely on academic or behavioral outcomes, this research synthesizes evidence to reveal the interconnected nature of gaming-induced learning disruption, parental challenges, and instructional difficulties, offering a holistic understanding of the phenomenon.

3. Implications of Findings

The study has several practical and theoretical implications. First, it underscores the importance of digital literacy for both educators and parents to manage mobile gaming effectively while leveraging its educational potential. Second, it highlights the necessity of developing policies and structured guidelines on screen time and content selection, ensuring that mobile gaming supports learning rather than hinders it (Aguilar-Zamora et al., 2025; Digital Parenting, 2018). Third, the findings demonstrate the critical role of home–school collaboration in regulating digital media use, promoting consistent guidance, and enhancing students’ cognitive, social, and emotional development (Hidayat, 2022).

Theoretically, this research contributes to digital childhood and educational development discourse by linking mobile gaming with learning disruption, parenting practices, and teaching strategies, emphasizing the systemic nature of the challenge.

4. Limitations of the Study

Despite the comprehensive literature synthesis, the study has limitations. First, as a qualitative literature analysis, it relies on secondary data and does not include primary empirical observation or experimental verification. Second, the review focuses on studies published within the last ten years, potentially excluding relevant older research that could provide additional insights. Third, the study emphasizes elementary school contexts, limiting generalizability to other educational levels or cultural contexts. Future research could address these limitations by conducting longitudinal studies, experimental designs, or cross-cultural comparisons.

The discussion reveals that mobile digital gaming significantly disrupts learning among elementary students through academic, behavioral, social, and cognitive pathways. These disruptions are mediated by parental and instructional challenges, highlighting the necessity of active adult guidance, digital literacy, and home–school collaboration. The study confirms that mobile gaming is not merely an individual child-related issue but a systemic challenge requiring coordinated strategies across family, school, and policy domains.

CONCLUSION

This study demonstrates that mobile digital gaming significantly disrupts learning among elementary school children through multiple pathways, including academic, behavioral, social, and cognitive dimensions. Excessive gaming reduces attention spans, lowers academic motivation, and interferes with study habits. It also influences social behavior, fostering individualistic or antisocial tendencies, and may contribute to digital gaming addiction. Cognitively, over-engagement with games limits opportunities for problem-solving, decision-making, and executive function

development, affecting overall child development. Parental challenges include monitoring gameplay duration and content, managing emotional pressures, and providing guidance to ensure that digital experiences remain meaningful and educational. Teachers face difficulties in adapting pedagogical approaches to the digital context, maintaining students' focus in class, and collaborating effectively with parents to support consistent rules and learning objectives.

The findings highlight the systemic nature of learning disruption caused by mobile digital gaming, emphasizing the need for coordinated strategies involving both parents and educators. Practically, the study underscores the importance of digital literacy, structured guidance, and home–school collaboration to mitigate negative effects. Theoretically, the research advances understanding of the interplay between child development, digital media use, and educational practice. Future studies should explore causal relationships between mobile gaming and learning disruption through longitudinal or experimental designs. Research across diverse cultural and educational contexts can enhance the generalizability of findings. Investigating specific pedagogical strategies and parental interventions to reduce gaming-related disruption is also recommended.

In conclusion, mobile digital gaming is a critical factor influencing learning, behavior, and development among elementary students. Addressing its challenges requires coordinated efforts from parents, educators, and policymakers to foster balanced digital engagement that promotes academic success, social development, and cognitive growth in the digital era.

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