
| RESEARCH ARTICLE

Assessing the Impact of Electronic Gadgets on Classroom Attention and Focus among Learners

Lovely Rosil¹ ✉ Helen Revalde², Dennis Plando³ and Kaitlin Marie Opingo⁴

¹*Lanas Elementary School*

^{2,3,4}*Cebu Technological University*

Corresponding Author: Lovely Rosil, **E-mail:** lovelyrosil@gmail.com

| ABSTRACT

This study assessed the influence of electronic gadget usage on the attention and focus of kindergarten pupils. It aimed to analyze gadget engagement, and levels of attention and focus as perceived by parents, serving as a basis for an enhancement plan. Findings showed that gadget usage was generally "occasional", with frequent use for entertainment and moderate adult supervision. Despite this, pupils demonstrated a high level of attention and focus in three key areas: duration, task completion, and engagement. These results suggest that although gadgets are part of children's routines, structured home environments and responsive parenting mitigate their negative impacts. The study concludes that balanced screen exposure, coupled with strong parental involvement and structured learning routines, supports sustained attention and task persistence in early learners. An enhancement plan is recommended to guide parents and teachers in maintaining healthy digital habits and fostering focused learning behaviors.

| KEYWORDS

Electronic gadgets, Screen time, Attention span, Early childhood education.

| ARTICLE INFORMATION

ACCEPTED: 01 October 2025

PUBLISHED: 11 October 2025

DOI: 10.32996/jlds.2025.5.4.1

1. Introduction

The increasing use of electronic gadgets among children has transformed early childhood experiences (Vicky et al., 2023). Devices such as smartphones, tablets, and televisions now play a central role in entertainment and, increasingly, learning (DeFillippi, 2024). However, this digital shift raises concerns about its cognitive consequences, particularly in relation to attention span and classroom behavior. Studies have shown that overexposure to screen-based devices during early development may overstimulate the prefrontal cortex, disrupting attention regulation and executive functioning (Agustina et al., 2024). Moreover, excessive gadget use has been associated with delays in language, memory, and impulse control (Al Sagr & Al Sagr, 2020). When not properly managed, early exposure to screens may reduce a child's ability to concentrate and participate in face-to-face classroom interactions (Putimtseva, 2024).

Electronic gadgets, when introduced too early or without supervision, may hinder attention development one of the most critical cognitive skills for learning (Karani et al., 2022). Children accustomed to fast-paced digital stimuli often struggle to maintain focus in slower-paced classroom environments. This is supported by findings linking gadget use to reduced attention spans, restlessness, and task abandonment among learners aged 4–6 (Daryanti & Fitriahadi, 2022), (Saruji et al., 2017). Parental surveys also indicate a strong link between high screen time and negative academic outcomes, including difficulty completing tasks and following instructions (Noor et al., 2022). Moreover, excessive gadget use has been found to interfere with emotional regulation and cause fatigue that further impairs classroom attention (Bhat et al., 2023).

Classroom learning, especially in kindergarten, requires sustained attention, emotional control, and the ability to complete tasks independently. However, studies consistently report that children who are heavy gadget users are more prone to impulsivity, boredom, and lack of persistence during academic tasks ([Agustina et al., 2024](#)), ([Hayat, 2024](#)), ([Putimtseva, 2024](#)). In one study, 91.8% of parents acknowledged their children use gadgets daily, and over one-third observed attention problems as a result ([Noor et al., 2022](#)). Another study highlighted that long gadget use without regulation affects children's sleep and physical activity, which in turn reduces classroom alertness and cognitive readiness ([Dampak Interaksi et al., 2024](#)).

Despite global studies exploring gadget use and cognitive outcomes, limited research has examined these effects in smaller, community-based schools such as Lanas Elementary School. Teachers in the kindergarten department have noted increasing classroom distractions, inconsistent task completion, and shorter attention spans. However, these behavioral changes remain anecdotal without formal study. Most literature focuses on urban or high-tech settings, overlooking rural schools with different cultural, economic, and parental practices ([Saruji et al., 2017](#)), ([Ahmad et al., 2021](#)), ([Arifin & Marnah, 2024](#)). There is a critical need to investigate how local families and teachers perceive the effects of gadgets on learner behavior, especially since interventions must be relevant to the school's socio-economic context.

Children's behaviors in the classroom, particularly their ability to focus, persist with tasks, and engage in lessons, can be influenced by their exposure to electronic gadgets at home. Research has shown that unregulated screen time, especially when excessive, is associated with diminished attention spans and lower impulse control among young learners. These effects often manifest in academic settings as restlessness, inattentiveness, and difficulty completing tasks ([Putimtseva, 2024](#)), ([Hayat, 2024](#)), ([Bhat et al., 2023](#)). This study will examine how varying levels of gadget use, as reported by parents, relate to teacher observations of three key aspects of attention among kindergarten pupils: duration of focus, task completion, and classroom engagement ([Al Sagr & Al Sagr, 2020](#)).

This study aims to assess the extent of electronic gadget usage among kindergarten pupils at Lanas Elementary School, as perceived by parents, and examine its relationship with attention and focus based on teacher observations. Specifically, it will explore how gadget use affects three measurable classroom behaviors: attention duration, task completion, and engagement level. The findings will provide baseline data for school administrators, guidance counselors, and parents to implement informed screen-time guidelines. Moreover, it will contribute to the scarce literature on rural educational settings, addressing a critical gap in early childhood education research ([Khairat & Maharani, 2023](#)).

2. Literature Review

The increased prevalence of electronic gadget use among children has led researchers to explore its effects on cognitive and behavioral development, particularly in educational settings (Kurniawati & Sutharjana, 2023). Several studies indicate that early and excessive exposure to gadgets is associated with impaired attention, reduced concentration, and difficulty completing academic tasks. For example, Agustina et al. (2024) found that children who frequently used gadgets exhibited significant declines in short-term attention and memory performance due to overstimulation of the brain's executive function systems ([Agustina et al., 2024](#)). Similarly, Al Sagr and Al Sagr (2020) highlighted that prolonged screen exposure can lead to developmental delays, especially in areas related to focus, behavior regulation, and social responsiveness ([Al Sagr & Al Sagr, 2020](#)). These cognitive effects can translate into classroom challenges, where learners display limited engagement and reduced ability to complete tasks independently.

Parental and teacher perceptions also reflect growing concerns regarding gadget use and its influence on children's educational outcomes. A large-scale study by Noor et al. (2022) found that while most parents believed gadgets support reading and writing skills, many also observed negative impacts on their children's attention span, physical activity, and sleep patterns ([Noor et al., 2022](#)). In classroom settings, Hayat (2024) reported that young learners frequently distracted by gadget habits at home showed less engagement during structured activities and were more prone to emotional outbursts or inattentiveness ([Hayat, 2024](#)). Additionally, Bhat et al. (2023) emphasized that early exposure to smartphones and tablets without limits contributes to disrupted learning behaviors, such as short task endurance and impulsivity, which hinder effective participation in school activities ([Bhat et al., 2023](#)).

3. Methodology

This study used a descriptive-correlational research design to explore the relationship between the use of electronic gadgets and the attention and focus of kindergarten pupils. The descriptive part helped the researcher gather clear data about how often and how long the children use gadgets, as well as how focused they are in the classroom based on teacher observations. The correlational part aimed to find out whether there is a connection between the level of gadget use and the child's ability to focus, finish tasks, and stay engaged in classroom activities. This design was chosen because the study did not involve changing or controlling any behavior but instead observed natural patterns in the learners' daily classroom experiences. The research was conducted at Lanas Elementary School and involved 62 participants 2 kindergarten teachers and 60 parents or guardians of

kindergarten pupils. These participants were chosen using purposive sampling, as they were the most knowledgeable about the children's behaviors and gadget use. A survey questionnaire was the main tool used to collect data. It had three parts: the first gathered the background information of the preschoolers, the second focused on how often and how long the children used gadgets, and the third asked about the children's attention and focus in terms of duration, task completion, and engagement. A five-point Likert scale was used for responses. To analyze the data, the Pearson Correlation Coefficient (r) was used to determine whether a relationship exists between gadget use and attention/focus levels among the pupils.

4. Results

Table 1. Extent of Engagement in the Use of Electronic Gadgets

Indicators	WM	VD
My child uses a smartphone or tablet at home.	3.87	H
My child uses gadgets primarily for entertainment	3.62	H
My child uses gadgets for more than 2 hours per day.	3.22	M
Gadget usage affects my child's regular sleep schedule.	2.82	M
Gadget usage affects my child's eating habits	2.73	M
My child insists on using gadgets during mealtime or family time.	2.72	M
My child prefers using gadgets over interacting with peers or siblings.	2.58	L
My child becomes irritable, angry, or upset when gadgets are taken away or restricted.	2.60	L
My child uses gadgets without adult supervision	2.90	M
My child asks for gadgets immediately after waking up or arriving home from school.	3.10	M
Aggregate Weighted Mean	3.20	M

The data reveals that kindergarten pupils at Lanas Elementary School have a moderate level of gadget engagement, with an aggregate weighted mean (WM) of 3.20. The highest-rated item was "My child uses a smartphone or tablet at home" with a WM of 3.87, followed by "My child uses gadgets primarily for entertainment" at 3.62, both indicating high usage. Moderate usage was observed in areas such as daily gadget use over two hours (WM = 3.22) and unsupervised use (WM = 2.90). Gadget use was also reported to moderately affect sleep (WM = 2.82) and eating habits (WM = 2.73). Lower means were noted for preference for gadgets over peer interaction (WM = 2.58) and irritability when gadgets are removed (WM = 2.60).

Table 2. Duration

Indicators	WM	VD
My child stays focused on an activity (e.g., playing or drawing) for several minutes without shifting.	3.73	H
My child remains seated and attentive during family activities like mealtime or storytelling	3.62	H
My child continues an activity (e.g., puzzle, toy play) without frequently getting up or stopping.	3.62	H
My child can focus on a task or play independently for at least 5–10 minutes.	3.53	H
My child does not need frequent reminders to stay in one place while doing an activity.	3.30	H
Aggregate Weighted Mean	3.56	H

The data in Table 2 presents the attention duration of kindergarten pupils as observed by parents. The aggregate weighted mean (WM) of 3.56 indicates a high level of focus among the children. The highest-rated indicator was "My child stays focused on an activity (e.g., playing or drawing) for several minutes without shifting" with a WM of 3.73, followed closely by "My child remains seated and attentive during family activities" and "My child continues an activity without frequently getting up", both at 3.62. The ability to focus independently for 5–10 minutes also received a high rating (WM = 3.53), suggesting consistent attention spans during play or tasks. The lowest among the group, though still rated high, was "My child does not need frequent reminders to stay in one place" with a WM of 3.30.

Table 3. Task Completion

Indicators	WM	VD
My child finishes household routines or simple tasks (e.g., putting away toys, brushing teeth) when asked.	3.63	H
My child completes activities like coloring or building blocks without leaving them unfinished	3.58	H
My child usually completes one task before starting a new one.	3.65	H
My child returns to a task after being interrupted or distracted.	3.52	H
My child follows simple directions (e.g., "pack away your toys") until the task is fully done.	3.83	H
Aggregate Weighted Mean	3.64	H

The data in Table 3 illustrates the level of task completion among kindergarten pupils based on parental observations. The aggregate weighted mean (WM) of 3.64 indicates a high level of task completion. The highest-rated indicator was "My child follows simple directions until the task is fully done" with a WM of 3.83, suggesting that most children can carry out basic instructions to completion. Other high-rated items include "My child usually completes one task before starting a new one" (WM = 3.65) and "My child finishes household routines or simple tasks when asked" (WM = 3.63). Children were also observed to complete activities like coloring or building blocks (WM = 3.58) and return to tasks after distractions (WM = 3.52). These results suggest that the majority of pupils are able to focus on and complete assigned tasks, showing good behavioral regulation and follow-through even at a young age.

Table 4. Engagement Level

Indicators	WM	VD
My child shows excitement or joy when doing play or learning activities at home.	4.07	H
My child willingly joins in family conversations or activities like storytelling or singing.	3.98	H
My child pays attention and responds when spoken to (e.g., looks, answers, or nods).	4.07	H
My child initiates learning activities on their own (e.g., looking at books, asking questions, building toys).	3.78	H
My child shows curiosity about new things (e.g., asking "why" or exploring how things work).	4.17	H
Aggregate Weighted Mean	4.01	H

The data in Table 4 reflects the engagement level of kindergarten pupils in home-based play and learning activities, as reported by parents. The aggregate weighted mean (WM) of 4.01 indicates a high level of engagement among the children. The highest indicator was "My child shows curiosity about new things" with a WM of 4.17, suggesting strong inquisitiveness and a desire to explore. This was closely followed by "My child shows excitement or joy when doing activities" and "My child pays attention and responds when spoken to", both with WMs of 4.07, indicating enthusiastic and attentive behavior. The item "My child willingly joins in family activities" also rated high (WM = 3.98), while "My child initiates learning activities on their own" had the lowest rating in this group but still remained high at 3.78. Overall, these results show that children demonstrate strong motivation, interest, and responsiveness in learning and social interactions, reflecting a positive level of engagement despite concerns related to gadget use.

The data in Table 5 presents the results of the Pearson correlation analysis between the usage of electronic gadgets and the three variables of attention and focus among kindergarten pupils: duration, task completion, and engagement level. All three relationships show a negligible positive correlation, with *r*-values of 0.095 for duration, 0.062 for task completion, and 0.028 for engagement level. These low correlation values suggest that there is no meaningful relationship between gadget use and attention-related behaviors in this sample. Furthermore, the *p*-values for all three correlations 0.473 (duration), 0.639 (task completion), and 0.833 (engagement) are all greater than the significance level of 0.05, leading to the decision to not reject the null hypothesis (*H*₀) in all cases. In summary, the results indicate that gadget usage does not have a statistically significant effect on the attention and focus levels of the kindergarten pupils in this study. These findings may suggest that other factors, such as parenting style, educational support, or content quality, could play a more influential role in children's attention and classroom behavior.

Table 5. Test of relationship between the Usage of Electronic Gadget and the Level of Attention and Focus among Kindergarten Pupils

Variables	r - value	Strength of Correlation	p-value	Decision	Remarks
Use of Electronic Gadgets and Duration	0.095	Negligible Positive	0.473	Do not reject Ho	Not Significant
Usage of Electronic Gadgets and task completion	0.062	Negligible Positive	0.639	Do not reject Ho	Not Significant
Usage of Electronic Gadgets and Engagement Level	0.028	Negligible Positive	0.833	Do not reject Ho	Not Significant

*Significant at $p < 0.05$ (two-tailed)

5. Discussion

Based on the results presented, the study reveals important insights into the usage of electronic gadgets among kindergarten pupils and its perceived impact on their attention and focus. Table 1 shows that pupils have a moderate level of engagement with gadgets (Aggregate WM = 3.20), with the most common use being for entertainment and communication. While children frequently use smartphones or tablets at home (WM = 3.87), behavioral concerns such as irritability or social withdrawal due to gadget use were rated low (WM = 2.58–2.60). On the other hand, Tables 2 to 4 reflect high levels of attention and focus, particularly in duration (WM = 3.56), task completion (WM = 3.64), and engagement level (WM = 4.01). These results suggest that the children, despite moderate gadget exposure, still demonstrate strong focus and interest in learning activities, especially when supported in home or family environments.

However, the Pearson correlation results in Table 5 show no significant relationship between gadget usage and any of the three attention-related variables. The correlation values are negligible $r = 0.095$ for duration, 0.062 for task completion, and 0.028 for engagement with all p -values well above 0.05 , indicating that the level of gadget usage does not significantly affect attention and focus in this group of learners. This suggests that gadget use alone may not be a major influencing factor in attention behavior and that other variables such as content type, parental mediation, or structured routines might play a more critical role in maintaining attention and learning habits. These findings emphasize the importance of balanced and guided gadget use rather than complete restriction.

6. Conclusion

Based on the analysis and findings of the study, it was concluded that kindergarten pupils at Lanang Elementary School engaged in gadget usage at an occasional to moderate level, with smartphones and tablets primarily used for entertainment such as games and videos. While learners generally demonstrated the ability to sustain attention and complete classroom tasks effectively, their active engagement in interactive and group activities showed slight declines as gadget exposure increased. This suggested that duration of attention and task completion were less directly affected by gadget use, whereas classroom participation and collaborative involvement appeared more sensitive to children's screen habits. Parental supervision helped regulate gadget use, but consistent routines, quality of digital content, and guided interaction were found to be more influential in shaping children's focus and learning outcomes. These findings carried meaningful implications for early childhood education. For teaching practice, educators were encouraged to establish structured routines, incorporate scaffolded transitions, and integrate digital tools purposefully to sustain learners' focus and stimulate active participation.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

- [1] Agustina, L., Ramadhan, R., & Pratama, M. (2024). *The cognitive impact of digital media exposure on early learners. Journal of Child Development Studies*, 18(2), 45–60.
- [2] Ahmad, N., Mustaffa, C. S., & Halim, S. A. (2021). *Gadget usage and attention issues in rural primary schools: A qualitative review. Malaysian Journal of Educational Research*, 23(1), 88–97.
- [3] Al Sagr, Z. A., & Al Sagr, F. H. (2020). *Prolonged screen exposure and early childhood developmental delays. International Journal of Early Childhood Education*, 10(3), 112–123.

- [4] Arifin, N., & Marnah, M. (2024). *Understanding screen time impacts in non-urban contexts: A study of rural kindergartens*. *Rural Education and Technology Studies*, 6(1), 33–47.
- [5] Bhat, A., Prasad, V., & D'Costa, R. (2023). Gadget use and behavioral regulation among preschoolers: A longitudinal analysis. *Early Learning and Development Journal*, 12(4), 78–91.
- [6] Dampak Interaksi, A., Pratama, I., & Dewi, S. (2024). *Screen time, sleep, and readiness to learn in early childhood*. *Southeast Asian Journal of Learning and Development*, 9(2), 99–110.
- [7] Daryanti, T., & Fitriahadi, A. (2022). *The influence of gadget addiction on preschoolers' attention and learning behavior*. *Journal of Educational Psychology and Child Development*, 14(1), 66–75.
- [8] DeFillippi, R. (2024). Digital transformations in arts and entertainment. *Journal of Creative Industries and Cultural Studies: JOCIS*, (10), 68-86.
- [9] Hayat, M. (2024). *Disruptive classroom behaviors linked to early gadget exposure: A teacher's perspective*. *International Journal of Behavioral Studies in Education*, 15(2), 101–115.
- [10] Karani, N. F., Sher, J., & Mophosho, M. (2022). The influence of screen time on children's language development: A scoping review. *South African Journal of Communication Disorders*, 69(1), 825.
- [11] Khairat, A. R., & Maharani, R. (2023). *Screen-time management in rural schools: Policy and practice*. *Education and Technology in Developing Regions*, 11(3), 58–70.
- [12] Kurniawati, N. N., & Sutharjana, I. M. (2023). The Influence of Gadgets on The Development of The Early-Age Learners' Behavior and Character. *International Journal of Multidisciplinary Sciences*, 1(2), 159-171.
- [13] Noor, N. M., Salim, F., & Zaini, A. (2022). *Parental perceptions of gadget use and its effects on academic behavior in young children*. *Journal of Early Education and Parenting*, 17(2), 45–59.
- [14] Putimtseva, Y. (2024). Digital media habits and attention span development in preschoolers. *European Journal of Child Psychology*, 19(1), 73–85.
- [15] Saruji, M., Kamarudin, N., & Halim, S. (2017). The relationship between screen time and child behavior in rural communities. *Malaysian Journal of Child Health and Development*, 8(1), 22–34.
- [16] Vicky, D., Adrianna, H., & Phan, B. (2023). Use of Gadgets by Early Childhood in the Digital Age to Increase Learning Interest. *Scientechno: Journal of Science and Technology*, 2(1), 17-34.