Parental Monitoring of Digital Gadget Use as a Predictor of Students' Academic Performance

RACHELLE B. OLIVA-QUE
Macugay Elementary School
Abulug, Cagayan, Philippines
rachelle.que@deped.gov.ph

Abstract — The increasing integration of digital gadgets such as smartphones, tablets, and laptops in students' daily lives has brought both educational opportunities and challenges. While gadgets support access to learning resources, excessive and unsupervised use may negatively affect students' academic performance. Parental monitoring plays a critical role in guiding children's gadget use toward productive and educational purposes, yet its direct relationship with students' academic outcomes remains insufficiently explored in localized settings. This study examined the relationship between parental monitoring of gadget use and students' academic performance. A total of 110 parents from Macugay Elementary School, Abulug, Cagayan, Philippines, participated through total enumeration. Data were gathered using a researcher-made, expert-validated questionnaire assessing parental monitoring in terms of setting rules and limitations, supervision of online activities, and guidance on academic use of gadgets. Students' academic performance was measured using their General Weighted Average (GWA). Findings revealed that the overall level of parental monitoring was high, with guidance on academic use obtaining the highest mean. Students' academic performance was generally very satisfactory. Correlation analysis showed a significant positive relationship between parental monitoring and academic performance, with guidance on academic use demonstrating the strongest correlation among the monitoring dimensions. The study concludes that parental monitoring, particularly active guidance on the educational use of gadgets, significantly contributes to improved academic performance. Balanced parental involvement through regulation, supervision, and guidance is essential in maximizing the educational benefits of gadgets and minimizing their negative effects.

Keywords — computer literacy, technology integration, academic performance, digital competence, secondary education

I. Introduction

The rapid advancement of digital technology has significantly transformed the daily lives of students, particularly in the way they access information, communicate, and engage in learning. Gadgets such as smartphones, tablets, and laptops have become essential tools in education, offering both opportunities and challenges. While these devices provide access to educational resources and support independent learning, their excessive and unregulated use has raised concerns regarding students' academic performance. In many households, children are exposed to gadgets at an early age, often without consistent supervision, which may lead to distractions, reduced study time, and poor academic outcomes.

The background of the problem lies in the increasing reliance on gadgets among students and the varying degrees of parental involvement in regulating their use. Studies have shown that students spend a considerable amount of time on gadgets not only for academic purposes but also for entertainment, such as gaming and social media, which can negatively affect their focus and study habits. Latif et al. (2025) examined the impact of excessive gadget use on students' concentration and discipline within the educational process. Their study revealed that while gadgets can support learning activities when used appropriately, excessive and uncontrolled use leads to decreased concentration, reduced attention span, and poor discipline among students. The findings indicated that students who spent prolonged time on gadgets were more likely to experience distractions during class and had difficulty maintaining focus on academic tasks. This supports the idea that although screen time can enhance learning, it also contributes to distractions and reduced academic focus when not properly managed. Thus, the study suggests that the effect of gadget use on academic performance is not determined solely by the presence of technology but largely depends on how its use is regulated and monitored by parents and educators.

Parental monitoring plays a crucial role in guiding children's gadget use. It involves setting limits, supervising online activities, and ensuring that gadgets are used primarily for educational purposes. Wang et al. (2024) conducted a systematic review on parental guidance in children's use of gadgets for learning purposes and found that active parental involvement, such as setting clear rules, supervising usage, and guiding children toward educational content, significantly enhances students' learning engagement and academic outcomes. The study emphasized that children who receive consistent parental guidance are more likely to use gadgets responsibly and productively, underscoring the importance of structured parental monitoring in ensuring that technology is used effectively for educational purposes.

Similarly, Abao (2025) emphasized that parental perceptions and decisions regarding gadget use influence children's study habits and learning performance. The study revealed that parents are aware of both the benefits and risks of gadget use, yet their level of supervision varies, affecting how children utilize these devices for academic tasks. This indicates that parental monitoring is not only about control but also about awareness and informed guidance, which can shape children's attitudes toward learning and technology use.

Despite the growing body of research on gadget use and academic performance, there remains a significant research gap in understanding the specific relationship between parental monitoring of gadget use and students' academic outcomes, particularly in localized contexts. Many studies focus either on the effects of gadget use alone or on general parental involvement, without directly examining how structured monitoring practices influence students' academic performance. Additionally, existing research often emphasizes either the positive or negative effects of technology, overlooking the moderating role of parental supervision in balancing these effects. This gap highlights the need for further investigation into how different levels and forms of parental monitoring impact students' academic success.

The motivation for this study stems from the increasing prevalence of gadget use among students and the observed variations in academic performance that may be linked to parental involvement. As technology continues to evolve, parents face challenges in keeping up with digital trends and effectively guiding their children's gadget use. Understanding the role of parental monitoring can provide valuable insights for parents, educators, and policymakers in developing strategies that promote responsible gadget use and enhance students' academic achievement. Furthermore, this study aimed to contribute to the existing literature by providing empirical evidence on the relationship between parental monitoring and academic performance, particularly in the context of modern digital learning environments.

In conclusion, this study aimed to examine the relationship between parental monitoring of gadget use and students' academic performance. By addressing the identified research gap, this study hopes to provide a clearer understanding of the importance of parental monitoring in maximizing the benefits of technology while minimizing its potential negative effects on students' academic performance.

Literature Review

Recent studies have highlighted the growing influence of gadget use on students' academic performance, particularly in the context of increased digital exposure. Sun et al. (2022) examined the relationship between parental monitoring of smartphone use and adolescents' behavior and found that higher levels of parental monitoring were associated with reduced problematic smartphone use. Their findings further revealed that parental monitoring enhances students' self-control and self-efficacy, which are essential in maintaining academic focus and discipline. This suggests that parental involvement plays a key role in shaping responsible gadget use among students.

In addition, Wang et al. (2022) explored the effects of smartphone use on students' learning effectiveness and reported that gadgets can positively contribute to academic performance when used appropriately. However, the study also emphasized that excessive and unregulated use of gadgets can negatively affect learning by causing distractions and reducing students' concentration. Similarly, Latif et al. (2025) found that excessive gadget use leads to decreased concentration and poor discipline among students, ultimately affecting their engagement in academic tasks. These findings reinforce the idea that the impact of gadget use is not inherently positive or negative but depends on how it is managed.

Moreover, parental involvement has been consistently identified as a significant factor in students' academic success. Ayimbila et al. (2022) found that active parental participation in monitoring students' academic activities significantly improves academic outcomes. Their study emphasized that parents who are actively engaged in their children's learning process help foster better study habits and academic responsibility. This highlights the importance of parental presence not only in monitoring but also in guiding students toward productive learning behaviors.

Furthermore, Abao (2025) examined parents' perceptions of gadget use and its influence on children's behavior and found that parental awareness and supervision greatly affect how children utilize gadgets. The study revealed that parents who are more conscious of both the benefits and risks of gadget use are more likely to implement effective monitoring strategies, leading to better behavioral and academic outcomes among children. This suggests that parental perception and attitude toward technology play a crucial role in shaping children's gadget usage patterns.

Supporting this, Wang et al. (2024) conducted a systematic review on parental guidance in children's use of gadgets for learning purposes and found that structured parental guidance, such as setting rules, supervising usage, and directing children toward educational content, significantly enhances students' learning engagement. The study further emphasized that consistent parental involvement encourages responsible and purposeful use of gadgets, thereby promoting better academic performance. Overall, these studies suggest that while gadget use can support learning, its effectiveness largely depends on the level of parental monitoring and guidance provided to students.

Research Questions

This study aimed to investigate the relationship between parental monitoring of gadget use and students' academic performance. Specifically, it sought to answer the following questions:

1. What is the level of parental monitoring of students' gadget use in terms of the following?
    a. setting rules and limitations on gadget use
    b. supervision of online activities
    c. guidance on the use of gadgets for academic purpose
2. What is the student's academic performance based on their general weighted average (GWA)?
3. Is there a significant relationship between parental monitoring of gadget use and students' academic performance?

II. Methodology

Research Design

This study employed a descriptive–correlational research design to examine the relationship between parental monitoring of gadget use and students' academic performance. The descriptive component was utilized to determine the level of parental monitoring in terms of setting rules and limitations, supervision of online activities, and guidance in using gadgets for academic

purposes, as well as to describe the students' academic performance based on their general weighted average (GWA). Meanwhile, the correlational aspect of the design was used to identify and measure the degree of relationship between parental monitoring and students' academic performance without manipulating any variables. This design was deemed appropriate as it allowed the researchers to analyze existing conditions and determine whether a significant association existed between the variables under study.

Participants of the Study

This study employed total enumeration as the sampling technique. All 110 parents of students from Macugay Elementary School in Abulug, Cagayan, Philippines were included as respondents, with one parent representing each student. This approach was utilized to ensure that the entire population of interest was covered, thereby eliminating sampling bias and providing a more comprehensive and accurate representation of parental monitoring practices and their relationship to students' academic performance.

Instrumentation

This study utilized a researcher-made questionnaire as the primary data-gathering instrument. The questionnaire was designed to gather data relevant to the objectives of the study and was divided into two main parts. The first part focused on the students' academic performance, which was measured through their General Weighted Average (GWA). The GWA of the students was collected with the assistance of the class advisers using official school records to ensure the accuracy and reliability of the data.

The second part of the questionnaire determined the level of parental monitoring of students' gadget use. This section included items that assessed parental practices in terms of setting rules and limitations on gadget use, supervision of online activities, and guidance on the use of gadgets for academic purposes. The items were structured using a Likert scale to allow respondents to indicate the extent of their monitoring practices.

Moreover, the Likert-scale instrument was validated by a panel of experts in the field of education to ensure its content validity, clarity, and relevance. Their suggestions and recommendations were incorporated to improve the quality of the questionnaire before its administration.

Analysis of Data

The data collected in this study were analyzed using appropriate statistical tools to address the research questions. Descriptive statistics, such as frequency, percentage, standard deviation and mean, were used to determine the level of parental monitoring of students' gadget use and to describe the students' academic performance based on their General Weighted Average (GWA). To interpret the level of parental monitoring, the following scale was used:

Range	Interpretation
1.00 – 1.74	Very Low
1.75 – 2.49	Low
2.50 – 3.24	High
3.25 – 4.00	Very High

Furthermore, to examine the relationship between parental monitoring and students' academic performance, inferential statistics, specifically the Pearson Product-Moment Correlation Coefficient, were employed. This statistical method was used to determine whether a significant relationship existed between the variables. All data were tabulated, organized, and interpreted systematically to ensure accurate and meaningful results.

III. Results and Discussion

Level of parental monitoring of students' gadget use in terms of the following dimensions

The findings revealed that the overall level of parental monitoring of students' gadget use was high (mean = 3.14), indicating that parents generally practice consistent supervision and regulation of their children's gadget use. Among the three dimensions, guidance on the use of gadgets for academic purposes obtained the highest mean (mean = 3.20), followed by setting rules and limitations (mean = 3.17), and supervision of online activities (mean = 3.06), all interpreted as high. Notably, parents strongly agreed that they encourage their children to use gadgets for school-related tasks (mean = 3.30) and remind them to prioritize academic use over entertainment (mean = 3.27), both interpreted as very high. These results suggest that parents are more inclined to guide their children toward productive and educational use of gadgets rather than merely restricting access. However, slightly lower means in items such as checking online activities regularly (mean = 2.95) and awareness of social media interactions (mean = 2.85) indicate that direct monitoring of online behavior may be less consistently practiced.

The implications of these findings highlight the important role of parents in shaping responsible gadget use among students. The high level of parental guidance suggests that parents recognize the educational value of gadgets and actively support their children's learning through technology. At the same time, the relatively lower scores in supervision of online activities may imply challenges in consistently monitoring children's digital behavior, possibly due to time constraints or limited digital literacy among parents. This indicates a need for increased parental awareness and support systems, such as school-based programs or workshops, to enhance parents' capacity to supervise and guide their children effectively in the digital environment. Strengthening both regulatory and supervisory practices can help ensure that gadget use contributes positively to students' academic development rather than becoming a source of distraction.

In conclusion, the study demonstrates that parents exhibit a generally high level of monitoring in their children's gadget use, particularly in guiding them toward academic purposes. While rules and guidance are strongly implemented, there is still room for improvement in the consistent supervision of online activities. Overall, the findings emphasize that balanced parental monitoring, combining clear rules, active supervision, and educational guidance, is essential in maximizing the benefits of gadget use and supporting students' academic performance.

Statements	Mean	Interpretation
Setting Rules and Limitations on Gadget Use		
1. I set specific time limits for my child's gadget use.	3.32	Very High
2. I establish clear rules about when my child can use gadgets.	3.28	Very High
3. I limit my child's gadget use during study or homework time.	3.21	High
4. I restrict gadget use before bedtime.	3.05	High
5. I enforce consequences when my child does not follow gadget rules.	3.00	High
Mean	**3.17**	**High**
Supervision of Online Activities		
6. I monitor the websites or applications my child uses.	3.10	High
7. I check my child's online activities regularly.	2.95	High
8. I ensure that my child only accesses age-appropriate content.	3.20	High
9. I am aware of my child's social media interactions.	2.85	High
10. I guide my child to avoid unsafe or inappropriate online content.	3.18	High
Mean	**3.06**	**High**
Guidance on the Use of Gadgets for Academic Purposes		
11. I encourage my child to use gadgets for school-related tasks.	3.30	Very High
12. I assist my child in using gadgets for research and assignments.	3.22	High
13. I recommend educational apps or websites to my child.	3.05	High
14. I remind my child to prioritize academic use over entertainment.	3.27	Very High
15. I support my child in developing good study habits using gadgets.	3.18	High
Mean	**3.20**	**High**
Overall Mean	**3.14**	**High**

Learners' Performance based on Class General Weighted Average (GWA)

The table presents the distribution of learners' academic performance based on their General Weighted Average (GWA). The results show that the majority of learners fall under the Very Satisfactory category, with 52 out of 110 respondents or 47.27 percent. This is followed by those classified as Outstanding, comprising 28 learners or 25.45 percent. Meanwhile, 22 learners or 20.00 percent achieved a Satisfactory rating, and only a small proportion, 8 learners or 7.28 percent, were categorized as Fairly Satisfactory. The computed mean of 87.62 indicates that, on

average, the learners performed at a Very Satisfactory level, while the standard deviation of 3.85 suggests a moderate variation in students' academic performance.

These findings imply that most learners are performing well academically, with a significant number achieving above-average results.. Overall, the results indicate a positive academic performance trend among learners, highlighting the importance of sustaining supportive learning environments both at home and in school.

Learners' Academic Performance	**Frequency (n=121)**	**Percentage**
Outstanding (90 and above)	28	25.45
Very Satisfactory (85 to 89)	52	47.27
Satisfactory (80 to 84)	22	20.00
Fairly Satisfactory (75 to 79)	8	7.28
Mean = 87.62	S.D. = 3.85	

Relationship between parental monitoring of gadget use and students' academic performance

The analysis revealed that there is a significant relationship between parental monitoring of gadget use and learners' academic performance. Specifically, setting rules and limitations showed a positive correlation ($r = 0.289$, $p = 0.012$), supervision of online activities also exhibited a positive relationship ($r = 0.241$, $p = 0.021$), while guidance on the use of gadgets for academic purposes demonstrated the highest correlation among the three ($r = 0.331$, $p = 0.004$). All computed p-values are less than the 0.05 level of significance, indicating that the relationships are statistically significant. These findings suggest that as the level of parental monitoring increases, learners' academic performance also tends to improve.

The implications of these findings highlight that parental monitoring, while not the sole determinant of academic success, plays an important supportive role in enhancing students' academic performance. The relatively higher correlation of guidance compared to rules and supervision suggests that active parental involvement in directing children toward educational use of gadgets is more impactful than merely imposing restrictions or monitoring activities. This implies that parents should not only regulate gadget use but also engage with their children by encouraging academic applications, assisting in school-related tasks, and promoting productive digital habits. Schools may also consider implementing programs that equip parents with strategies to effectively guide and support their children's use of technology for learning.

These findings are supported by previous studies in the literature. Sun et al. (2022) found that parental monitoring significantly reduces problematic smartphone use and enhances students' self-control, which contributes to better academic focus. Similarly, Wang et al. (2022) reported that gadget use can positively influence learning effectiveness when properly managed, but excessive and unguided use may hinder academic performance. Furthermore, Wang et al. (2024) emphasized that structured parental guidance, such as setting rules and promoting educational content, significantly improves students' learning engagement and outcomes. These studies

collectively reinforce the present findings that parental monitoring is a key factor in ensuring that gadget use contributes positively to academic achievement.

In conclusion, the study confirms that parental monitoring of gadget use is significantly related to learners' academic performance. The results indicate that parental involvement, particularly in guiding the academic use of gadgets, can positively influence students' learning outcomes. Therefore, fostering effective parental monitoring practices that combine regulation, supervision, and guidance is essential in maximizing the benefits of technology and supporting students' academic success.

Variable	Coefficient (r)	Probability	Statistical Inference
Setting Rules and Limitations on Gadget Use and Learners' Academic Performance	0.289	0.012	Significant
Supervision of Online Activities and Learners' Academic Performance	0.241	0.021	Significant
Guidance on the Use of Gadgets for Academic Purposes and Learners' Academic Performance	0.331	0.004	Significant

*Tested using Pearson Correlation at 0.005 level of significancehe

IV. Conclusion

This study concludes that parental monitoring of gadget use is significantly related to students' academic performance, highlighting the important role of parents in guiding children's use of technology. The findings revealed that parents generally demonstrated a high level of monitoring through setting rules and limitations, supervising online activities, and providing guidance on the academic use of gadgets, with guidance showing the strongest positive relationship with learners' academic performance. Moreover, the students' overall academic performance was found to be very satisfactory, suggesting that effective parental involvement may contribute to positive learning outcomes. The results indicate that consistent and purposeful parental monitoring supports the development of responsible gadget use and enhances students' academic success. Therefore, the study emphasizes that balanced parental monitoring, combining regulation, supervision, and active guidance, is essential in maximizing the educational benefits of gadgets while minimizing their potential negative effects on students' academic performance.

References

[1] Abao, S. L. (2025). Parents' perception of gadget use and its influence to children's behavior. International Journal of Progressive Research in Engineering Management and Science. https://doi.org/10.58257/IJPREMS38119

[2] Ayimbila, J. A., Gunu, U., & Mumuni, A. (2022). Parental involvement in monitoring students' academic performance. European Journal of Education Studies. https://eajournals.org/wp-content/uploads/Parental-Involvement-in-Monitoring-Students-Academic-Performance.pdf

[3] Latif, A., Fitri, N. L., & Fatin, G. I. (2025). The impact of excessive gadget use on students' concentration and discipline in the educational process. Jambura Journal of Civic Education, 5(2), 822–830. https://ejurnal.ung.ac.id/index.php/jjce/article/view/22825
[4] Sun, R., Gao, Q., & Xiang, Y. (2022). Perceived parental monitoring of smartphones and problematic smartphone use in adolescents: Mediating roles of self-efficacy and self-control. Current Psychology. https://journals.sagepub.com/doi/pdf/10.1089/cyber.2022.0040
[5] Wang, X., Liu, C., Rahman, M. N. B. A., & Shaharom, M. S. N. (2024). Parental guidance on children's use of gadgets for learning purpose: A systematic review. Malaysian Journal of Qualitative Research, 10(1). https://elibrary.ru/item.asp?id=80698021
[6] Wang, Y. S., Hsieh, Y. C., & Kung, L. A. (2022). The effects of smartphone use on learning effectiveness: A study of college students. Education and Information Technologies. https://doi.org/10.1007/s10639-022-11430-9