

Grade Six Pupils' Level of Screen Dependency and Its Implication to Learners' Academic Performance in Kabayan District, Benguet

Lorenza Liwan Tubal

*Benguet State University - Bokod Campus
Ambangeg, Daklan, Bokod, Benguet, Philippines*

Publication history: Received: March 24, 2026; Revised: April 13, 2026; Accepted: April 16, 2026

Email of Corresponding Author: 3nl.tubal@gmail.com

Abstract

This study aimed to determine the level of screen dependency among Grade 6 learners and its relationship to their academic performance during modular distance learning in Barangay Ballay and Barangay Tawangan, Kabayan, Benguet. Anchored on the concept of screen dependency disorder and its behavioral and academic implications, the study employed a descriptive-correlational research design. Data were collected using an adapted survey questionnaire (Jennifer, 2012) and respondents' Grade Point Average (GPA), involving 83 Grade 6 pupils aged 11–12 years from four public schools. Descriptive and inferential statistics, including frequency, percentage, mean, t-test, ANOVA, and Pearson correlation, were utilized. Findings revealed that learners exhibited very low screen dependency across cellphones, television, video games, and the internet, attributed to parental guidance, limited gadget ownership, and unstable internet connectivity. Despite this, results showed that screen dependency has a slight but significant relationship with academic performance, indicating that increased exposure to digital screens can influence learners' achievement. However, learners maintained a very satisfactory academic performance and demonstrated the ability to manage their screen use effectively without major negative effects on their learning, health, and behavior. These findings are consistent with prior studies emphasizing the link between technology use and academic outcomes (Azizi et al., 2019). The study recommends continuous monitoring, awareness programs, and further research to sustain low dependency levels and support academic success. This study supports Sustainable Development Goal 4 (Quality Education) by promoting effective learning conditions and responsible use of technology in education. It contributes to social sustainability by guiding educators and communities in fostering balanced digital habits and improving learners' academic performance through informed interventions.

Keywords: Academic performance, Cellphones, Digital screen, Internet, Modular distance learning, Screen dependency, Television, Video games

1. Introduction

Technology has become an essential component of modern education, offering increased access to information and more efficient learning processes. However, its growing use, particularly among young learners, has raised concerns regarding screen dependency and its potential effects on academic performance and well-being. This study examines the level of screen dependency among Grade Six pupils in rural areas and its relationship to their academic performance during modular distance learning, aiming to provide insights for educational interventions and policy development. Technology provides convenience and supports learning by improving access to information and educational resources. However, excessive or improper use may negatively affect students, leading to reduced academic performance and developmental concerns (Vijjani, 2021). In many cases, children are exposed to prolonged screen time through smartphones, television, video games, and the internet, often due to limited parental regulation. The use of media may reduce students' interaction with textbooks and peers, potentially affecting both learning engagement and social development (Lu'luilmaknun et al., 2021).

In rural areas, such as Kabayan, Benguet, challenges such as limited access to devices and unstable internet connectivity also influence screen usage patterns. Despite these limitations, concerns remain about the possible effects of screen exposure on learners' academic outcomes and overall development. Existing literature highlights both the benefits and risks of technology use among learners. While digital tools enhance access to knowledge, excessive screen exposure is associated with negative impacts on physical health, behavior, and academic performance (Vijjani, 2021). Studies on Screen Dependency Disorder (SDD) emphasize its effects on children's cognitive and behavioral development, particularly in relation to attention, learning habits, and social interaction.

Furthermore, research suggests that balanced use of technology, combined with parental guidance and structured activities such as physical exercise and mindfulness practices, can mitigate negative effects and support healthier learning behaviors (Iyer & Doraiswamyiyer, 2020). There is also evidence that digital addiction, particularly through social networking, has a measurable relationship with academic performance (Azizi et al., 2019). Globally, studies on screen dependency have

largely focused on urban and technologically advanced settings, leaving a gap in understanding its effects in rural communities. In the Philippines, despite high levels of social media usage, awareness of Screen Dependency Disorder remains limited.

Locally, rural areas like Kabayan, Benguet, present unique conditions, including limited access to gadgets and unstable internet connectivity, which may influence both the extent and impact of screen exposure. Nationally, there is a need for more localized studies to understand how Filipino learners, particularly in underserved areas, are affected by digital technology. Endert (2021) emphasized the importance of including diverse populations in research to improve the generalizability of findings on children's digital device use. This study is grounded in the concept of Screen Dependency Disorder (SDD), which examines the excessive use of digital devices and its psychological, behavioral, and academic implications. It also aligns with theories linking technology use to cognitive and behavioral outcomes, particularly in educational settings.

The study further adopts a correlational perspective, investigating the relationship between screen dependency and academic performance. This approach is supported by research indicating that behavioral patterns associated with digital usage can influence learning outcomes and student achievement (Azizi et al., 2019). Although numerous studies have explored screen dependency and its effects, most have been conducted outside rural contexts and in other countries. There is a lack of research focusing on Filipino learners in rural areas, particularly in relation to modular distance learning environments. Additionally, previous studies have primarily examined the psychological and behavioral effects of SDD, with limited focus on its direct relationship with academic performance in specific local settings. This study addresses these gaps by examining the level of screen dependency among Grade Six pupils in Kabayan, Benguet, and its implications for their academic performance. The findings aim to support the development of targeted interventions and educational strategies.

This study aligns with several Sustainable Development Goals:

SDG 4 – Quality Education: By examining factors affecting learners' academic performance, the study contributes to improving educational outcomes and promoting effective learning environments.

SDG 3 – Good Health and Well-Being: The research addresses the physical and mental health implications of excessive screen use among children.

SDG 9 – Industry, Innovation and Infrastructure: It explores the role of digital technology in education and its responsible use in learning contexts.

This study contributes to multiple dimensions of sustainability. In terms of educational sustainability, it provides insights into improving learning outcomes through balanced technology use. For public health sustainability, it highlights the importance of managing screen exposure to protect children's physical and mental well-being. From a technological sustainability perspective, the study promotes responsible and effective use of digital tools in education. It also supports socio-economic sustainability by addressing challenges faced by rural communities, such as limited access to technology and infrastructure. Overall, the study offers valuable evidence for educators, policymakers, and communities in developing strategies that ensure technology enhances, rather than hinders, learners' academic success and well-being.

2. Material and methods

2.1 Research Design

The study used a descriptive-correlational research design to determine the relationship between screen dependency and academic performance. This approach allows the analysis of associations between variables using collected data and identifies patterns without manipulating any conditions. It describes the relationship between variables and examines whether a significant correlation exists (Omair, 2015).

2.2 Locale of the Study

The research was conducted in four public elementary schools located in Barangay Ballay and Barangay Tawangan in Kabayan, Benguet, Philippines. These include Ballay Integrated School in Dimipayas, Bio B. Modol Elementary School in Besocol, Tinalab Elementary School in Tinalab, and Tawangan Elementary School in Tawangan. These rural settings provided the context for examining learners' screen dependency during modular learning.

2.3 Respondents of the Study

The respondents of the study were Grade Six pupils enrolled in the selected schools in Barangay Ballay and Barangay Tawangan. A total of 83 learners participated in the study, consisting of 44 males and 39 females. The respondents were generally aged between 11 and 12 years old.

2.4 Sample and Sampling Procedure

The study included all available Grade Six learners from the selected schools, resulting in a total sample of 83 respondents. The selection was based on accessibility and enrollment in the identified schools during the second quarter of the academic year 2021–2022. This allowed the researcher to gather relevant data from the target population within the specified locale.

2.5 Research Instrument

Data were collected using a survey questionnaire adapted from Jennifer (2012), which focused on the “Influence of Electronic Gadgets’ Excessive Use on Academic Performance and Family Interaction Among Adolescents.” The instrument consisted of two main parts. The first part gathered respondents’ profile information, including age, sex, frequency of technology use, school, and general point average. The second part measured the level of screen dependency across four dimensions: cell phones, television, video games, and the internet. The third part of the original instrument was excluded as it was not relevant to the objectives of the study.

2.6 Data Gathering Procedure

Prior to data collection, the researcher secured approval from the Schools Division Superintendent (SDS), Public Schools District Supervisor (PSDS), school principals, and teachers. Upon approval, the researcher administered the Digital Screen Dependency Disorder Test to the respondents along with a letter explaining the purpose of the study. Participants were properly informed about the objectives of the research, and confidentiality and anonymity were strictly maintained. The respondents’ general point averages were also collected with proper authorization. After completing data collection, all gathered data were prepared for statistical analysis.

2.7 Data Analysis Techniques

The study utilized both descriptive and inferential statistical methods to analyze the data. Descriptive statistics, including frequency, percentage, and mean, were used to describe the respondents’ profiles and levels of screen dependency. Inferential statistics such as independent t-test, one-way ANOVA, and Pearson Product Moment Correlation Coefficient were employed to examine relationships and differences among variables. Specifically, Pearson r was used to determine the significance of the relationship between screen dependency and academic performance. The respondents’ academic performance was based on their general point average for the second quarter of the academic year 2021–2022.

3. Results and Discussion

3.1 Level of Screen Dependency and Learners’ Profile

3.1.1 Respondents’ Profile

The findings revealed that the majority of the respondents were male and most were aged 11–12 years old. In terms of technology usage, most learners used digital devices for only 1–3 days per week, indicating limited exposure to technology. This result suggests that learners in rural areas have controlled access to digital devices, possibly due to limited resources and parental supervision. The manageable use of technology allows learners to balance their time between academic tasks and social interactions, which may support better learning engagement and development.

3.1.2 Screen Dependency on Cellphones

The results showed that learners had a low level of screen dependency on cellphones, with responses generally indicating rare usage-related problems, anxiety, or behavioral issues associated with mobile phone use. This implies that cellphone use among learners is minimal and regulated, which helps prevent negative effects on health and academic performance. Limited dependency may be attributed to parental guidance and restricted access, supporting the idea that excessive gadget use can be controlled through supervision.

3.1.3 Screen Dependency on Television

The findings indicated that learners also exhibited a low level of dependency on television. Most responses reflected minimal engagement in behaviors such as excessive watching or prioritizing television over academic tasks. This suggests that learners are able to manage their television viewing habits effectively. Proper parental monitoring likely contributes to this balanced usage, preventing interference with academic responsibilities and social development.

3.1.4 Screen Dependency on Video Games

The results revealed a very low level of screen dependency on video games among learners. Most respondents reported that gaming did not interfere with their school responsibilities, sleep, or behavior. This indicates that video gaming is not a major concern among the learners in the study. Limited access to resources, such as internet connectivity and financial capacity, as well as parental regulation, may explain the minimal engagement in gaming activities.

3.1.5 Screen Dependency on Internet Use

The findings showed that learners had a very low level of dependency on internet use. Most respondents reported that online activities did not negatively affect their academic responsibilities, sleep patterns, or social interactions. This suggests that internet usage among learners is limited and controlled. Factors such as lack of stable internet connection and financial constraints may reduce excessive online engagement, thereby supporting healthier academic and social behaviors.

3.2 Effects of Screen Dependency on Academic Performance

The results indicated that screen dependency has an effect on learners' academic performance, although the level of dependency across all digital platforms remained low. Learners were still able to focus on their modular learning tasks and demonstrated positive attitudes toward their studies. This implies that while technology can influence academic performance, its impact is not necessarily negative when usage is controlled. The findings support the idea that balanced technology use, combined with proper guidance, can prevent adverse effects on learning and well-being.

3.3 Relationship Between Screen Dependency and Academic Performance

The findings revealed a significant but slight relationship between learners' level of screen dependency and their academic performance. The computed Pearson Product Moment Correlation Coefficient values indicated a small correlation, leading to the rejection of the null hypothesis at a 0.05 level of significance. This result suggests that even minimal screen dependency can have an influence on academic outcomes. The findings are consistent with Azizi et al. (2019), which reported a significant relationship between social networking use and students' academic performance. This highlights the importance of monitoring learners' digital engagement and implementing interventions to prevent potential negative effects on academic achievement.

4. Conclusion & Recommendations

The study found that Grade 6 learners in Barangay Ballay and Tawangan generally exhibit very low screen dependency across cellphones, television, video games, and the internet during modular distance learning, with minimal differences between male and female learners. Despite limited access to gadgets and unstable internet connectivity, learners maintained a very satisfactory level of academic performance. Statistical analysis revealed a slight but significant relationship between screen dependency and academic performance, indicating that increased screen use has a measurable, though small, effect on learners' achievement. These findings align with prior research highlighting the influence of technology use on academic outcomes (Azizi et al., 2019), while also showing that, in this context, learners were able to manage screen exposure without substantial negative impacts on their academic tasks and overall well-being.

Future research should expand the scope by including broader variables and diverse demographic profiles to deepen understanding of screen dependency and its effects. Teachers are encouraged to consistently educate learners on the advantages and disadvantages of screen use, integrate discussions of screen dependency into regular meetings, and conduct continuous monitoring and background checks to support timely interventions. Attention to individual learning differences should be maintained to enhance academic performance, particularly for learners with higher screen dependency. Ongoing monitoring of students' academic status and the implementation of appropriate interventions are recommended to sustain low dependency levels and improve outcomes, while further studies should continue exploring the effects of screen dependency disorder on learners' academic performance.

Compliance with ethical standards

The authors declare no conflict of interest. This study complied with recognized ethical standards for human-participant research by ensuring voluntary participation with informed consent, the right to withdraw without penalty, and strict confidentiality through anonymous, secure, and aggregated data handling. Given the focus on psychological well-being, procedures were non-invasive, and safeguards were observed to minimize discomfort, with guidance to appropriate support services when needed, and required institutional permissions were secured for instrument use and access to academic records.

REFERENCES

- Ahmed, U. & Ullah, I. (2023). *Video games addiction: Positive and negative effects of playing video games on youth*. [Master's Thesis: University of Boras]. <https://www.diva-portal.org/smash/get/diva2:1309141/FULLTEXT01.pdf>
- Akca, N., Senturk, S., & Alsac, S. (2019). The effect of cell phone use in adolescents on sleep quality: Central Anatolia administrative quarantine. *International Journal of Caring Sciences*. https://www.internationaljournalofcaringsciences.org/docs/48_ahtsa_original_12_3.pdf
- Asghari, M., Karimzabeth, M., & Teymouri, R. (2017). Relationship between using television and behavioral problems of pre-school children. *Iranian Rehabilitation Journal*. <https://dx.doi.org/10.29252/nrip.irj.15.4.325>
- Aziz, N., Nordin, M. J., Addulkadir, S. J., & Salih, M. M. (2021). Digital addiction: Systematic review of computer game addiction impact on adolescent physical health. *MDPI Open Journal Access*.
- Azizi, S., Soroush, A., & Khatony, A. (2019). The relationship between social networking addiction and academic performance in Iranian students of medical sciences: A cross-sectional study. *BMC Psychology*. <https://doi.org/10.1186/s40359-019-0305-0>

- Brown, L. (n.d.). The influence of leisurely screen usage on adolescent mental health and academic performance. *Adelaide Research* & *Scholarship*.
https://digital.library.adelaide.edu.au/dspace/bitstream/2440/133966/1/BrownL_2021_Hons.pdf
- Endert, T. S. (2021). Addictive use of digital devices in young children: Associations with delay discounting, self-control, and academic performance. *Scholarly Journals*.
- Hazar, Z., & Halisdemir, N. (2019). Children's digital game addiction and opinions about their parents' playing digital games (A mixed method study). *ERIC – Education Resources Information Center*.
<https://doi.org/10.11114/jets.v7i1.3785>
- Kara, H. (2018). A case study on reducing children's screen time: The project of screen-free week. *ERIC – Education Resources Information Center*. <https://doi.org/10.5430/wje.v8n1p100>