

The Effect of Gadget Use on Student Learning Concentration at SD Integral Rahmatullah Toli-Toli

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ABSTRACT

The use of gadgets has become an integral part of students' daily activities, including learning activities. However, excessive gadget use, particularly for non-educational purposes, may interfere with students' ability to maintain concentration during learning. This study aims to analyze the effect of gadget use on students' learning concentration at SD Integral Rahmatullah Toli-Toli. This study employed a quantitative approach with an associative correlational design. The population consisted of students at SD Integral Rahmatullah Toli-Toli, with 40 students selected as respondents using proportionate stratified random sampling. Data were collected through questionnaires measuring the intensity of gadget use, observations of students' learning concentration, and documentation. The data were analyzed using descriptive statistics, prerequisite tests, and simple linear regression at a significance level of 5%. The results showed that 9 students (22.5%) had low gadget use, 19 students (47.5%) had moderate gadget use, and 12 students (30%) had high gadget use. Thus, 77.5% of respondents used gadgets for more than two hours per day. The observation results indicated that higher gadget use tended to be accompanied by lower learning concentration, characterized by students being easily distracted, responding slowly to teacher instructions, and experiencing difficulties in completing learning tasks. The regression analysis indicated a statistically significant negative relationship between gadget use and learning concentration. These findings suggest that excessive gadget use may reduce students' ability to maintain concentration during learning. Therefore, cooperation between schools, teachers, and parents is needed to encourage controlled, productive, and educationally oriented gadget use among elementary school students.

Keywords: Gadget Use; Learning Concentration; Elementary School Students

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INTRODUCTION

Elementary school education is a fundamental stage in students' academic development because at this level various abilities are formed that are the basis for the learning process at the next stage of education. One of the important abilities that needs to be developed is learning concentration, which is the ability of students to focus on ongoing learning materials, instruction, and activities. Concentration has an important role in student engagement during learning because good attention helps students understand information, follow the learning process, and complete academic tasks optimally. Suryanto and Brawijaya (2024) emphasized that student attention is an important aspect of learning because it is the entrance to learning engagement, behavior management, and academic achievement. In the context of elementary school students, the ability to maintain attention is increasingly important because the characteristics of children's development at that age still require a learning environment that is able to maintain their focus and involvement in a sustainable manner.

The development of digital technology has brought changes to children's lives, including in educational and entertainment activities. Gadgets such as smartphones, tablets, and other digital devices are increasingly accessible to elementary school students. Gadgets can provide benefits for learning because they allow students to obtain information, access learning resources, use interactive learning media, and communicate in educational activities. However, these benefits are highly dependent on the purpose and pattern of their use. Uncontrolled use of gadgets, especially for non-educational activities, can cause distractions and reduce student involvement in learning activities. Harjiyanti et al. (2024), through a study of various previous studies, show that the use of gadgets has an impact on the learning concentration of elementary school students and that excessive use needs to be controlled through parental assistance.

This problem is becoming increasingly important because gadgets are not only used for learning activities, but also for playing games, watching videos, using social media, and various other forms of digital entertainment. When non-educational activities are carried out for a long duration, the use of gadgets has the potential to reduce the time and attention that should be given to learning activities. Putri et al. (2024) explained that the excessive use of gadgets in elementary school students is related to the tendency to decrease learning outcomes, so the use of digital devices needs to be balanced with appropriate supervision and restrictions.

Learning concentration can also be influenced by the duration of gadget use. Putri, Bashori, and Samsuddin (2024) in a study on the relationship between the duration of gadget use and students' concentration ability shows that gadget use needs to be controlled because the duration of use is one of the aspects that need to be considered in relation to students' ability to maintain attention. The study also emphasizes that gadgets do not always have a negative impact because proper and controlled use can provide benefits for children's development.

More recent research findings further strengthen the importance of this issue. Sappaile (2024) shows that dependence on gadgets can interfere with learning concentration and is related to quality and academic achievement issues of students. This condition shows that the use of gadgets needs attention not only in terms of the frequency of use, but also in terms of the level of dependence and the purpose of its use. Schools and parents have an important role in supervising the use of gadgets so that the use of gadgets does not interfere with the learning process.

Recent studies also show that the relationship between digital device use and concentration is not always simple. A scoping review published in 2025 shows that the duration of digital device use is generally related to concentration difficulties, while the use of social media at the same time as other activities (*multitasking media*) tends to be negatively related to concentration and academic performance. The study also shows that screen use before bed may be related to sleep disturbances which further has the potential to affect concentration the next day. However, this relationship can also be influenced by socio-economic factors and children's environmental characteristics, so more contextual research is needed.

The results of previous research also showed that the use of gadgets did not always produce the same impact on all students. Research on the intensity of gadget use in elementary school students found a negative and significant relationship between the intensity of gadget use and learning concentration. The higher the intensity of gadget use, the lower the students' learning concentration in the study. However, the use of gadgets only partially explains the variation in learning concentration, while other factors still have a contribution. The findings show that learning concentration is a multidimensional phenomenon that is not only influenced by the use of gadgets, but also by the learning environment, student habits, family support, physical condition, and psychological factors.

Based on initial observations made at SD Integral Rahmatullah Toli-Toli, indications were found that there were learning concentration problems in some students. Some students seem to lack focus when learning takes place, easily distract from the material delivered by the teacher, and show drowsiness during the learning process. In addition, there are indications of a decrease in student involvement in completing assignments and following learning instructions. Classroom teachers also said that some students who are known to have a habit of using gadgets for a long time, including playing games or watching videos until night, tend to respond more slowly to instructions and are more interested in talking about activities carried out through gadgets than learning materials. This condition is an important phenomenon to be studied empirically in the context of the school.

The phenomenon at SD Integral Rahmatullah Toli-Toli cannot be directly interpreted that gadgets are the only cause of low student learning concentration. Learning concentration can be influenced by various factors, such as health and sleep conditions, classroom atmosphere, learning methods, motivation, family environment, student characteristics, and technology usage patterns. In fact, recent research shows that the relationship between gadget use and learning ability can differ based on the type of use and context of digital activities. Therefore, research on certain school environments is needed to obtain an empirical picture that is more in line with the conditions of the students being studied.

This study has relevance because studies on the use of gadgets and the learning concentration of elementary school students still show diverse results and contexts. Some studies have found a tendency to have a negative relationship between the intensity or dependence of gadgets and concentration, while other studies show that gadgets can provide benefits if used for educational purposes and under proper supervision. Thus, research on SD Integral Rahmatullah Toli-Toli is expected to provide empirical evidence regarding the conditions of gadget use and student learning concentration in the context of the school studied.

Based on this description, the use of gadgets needs to be viewed proportionately. Gadgets are not solely a source of disruption in learning, but as a technology whose benefits and risks depend heavily on the duration, purpose, type of activity, and supervision of their use. This research is important to find out the extent to which the use of gadgets is related to

student learning concentration and provide information that can be used by schools and parents in building healthier patterns of gadget use and supporting the educational process.

Based on this background, the author is interested in conducting a research entitled "The Effect of Gadget Use on Student Learning Concentration at SD Integral Rahmatullah Toli-Toli."

METHOD

This study uses a quantitative approach with a type of correlational research. The quantitative approach is used to analyze data in the form of numbers through statistical procedures, while correlational research is used to identify the relationship or relationship between two or more variables without providing direct intervention to the research subject (Rangkuti & Albina, 2025). This study aims to determine the effect of the use of gadgets as an independent variable (X) on student learning concentration as a dependent variable (Y). The research was carried out at SD Integral Rahmatullah Toli-Toli.

Population and Sample

The population in this study is all students of SD Integral Rahmatullah Toli-Toli in the current school year. The population is a whole subject that has certain characteristics in accordance with the research objectives and is the target of generalization of research results. The determination of the sample needs to consider the characteristics of the population, sample size, and sampling techniques so that the data obtained can represent the research population (Mishra et al., 2024).

The sampling technique used is proportionate stratified random sampling. This technique is used because the research population consists of several class levels with different student numbers. The population is first grouped based on class level as strata, then the number of samples from each strata is determined proportionally. After that, respondents in each strata are randomly selected. The use of *stratified sampling* techniques can increase the representation of groups in the population so that the research results become more representative (Mishra et al., 2024).

The number of samples at each grade level is determined based on the proportion of the number of students at each strata with the formula:

$$n_i = (N_i/N) \times n$$

Description:

n_i = number of samples in the first strata;

N_i = the number of populations in the i th strata;

N = the total number of population;

n = the total number of samples.

Data Collection Techniques

The data collection techniques in this study include questionnaires, observations, and documentation. The use of more than one data collection technique was carried out to obtain information in accordance with the characteristics of the research variables and complement the data obtained from the respondents.

1. Questionnaire

The questionnaire is used to obtain data on the use of gadgets by students. The questionnaire instrument includes indicators of the intensity of use, duration of use, frequency of use, purpose of use, and use of gadgets for learning and entertainment activities. The use of questionnaires is relevant to measure the behavior or characteristics of respondents in a structured manner through a number of statements given to respondents. In research on gadget use and student concentration, the duration of gadget

use has also been used as one of the indicators to assess students' concentration ability (Putri et al., 2024).

2. Observation

Observation is used to obtain data on student learning concentration during the learning process. Observation is carried out by observing student behavior related to attention to the teacher's explanation, ability to maintain focus, response to instruction, involvement in learning, and task completion. Observation is considered relevant in educational research because student attention is one of the important aspects of student involvement during the learning process (Suryanto & Brawijaya, 2024).

3. Documentation

Documentation is used to obtain data to support research, such as school profiles, number of students, student lists, class divisions, and documentation of research activities. Documentation is used as a complementary data source to support the main data obtained through questionnaires and observations.

Research Instruments

The research instrument consisted of a questionnaire on the use of gadgets and an observation sheet on student learning concentration. The instrument for the use of gadgets was prepared based on indicators of intensity and pattern of gadget use, while the study concentration instrument was prepared based on indicators of student attention and involvement during the learning process.

Before being used in research, the instrument is first tested for validity and reliability. Validity tests are carried out to find out the extent to which the instrument is able to measure the constructs that should be measured, while reliability tests are used to determine the consistency of the instrument in producing measurements. Validity and reliability are important aspects in quantitative research because invalid or unreliable instruments can produce inaccurate data and affect the quality of research conclusions (Subhaktiyasa, 2024).

Data Analysis Techniques

The data obtained from the study were analyzed using descriptive statistical analysis and inferential statistics. Descriptive analysis was used to describe the characteristics of gadget use and the level of student learning concentration based on data obtained from respondents.

Before hypothesis testing was carried out, this study first conducted analysis prerequisite tests, namely normality tests and linearity tests. Normality tests were used to determine the distribution of data, while linearity tests were used to find out whether the relationship between gadget use and student learning concentration had a linear relationship pattern. Prerequisite testing is needed so that the statistical analysis techniques used are in accordance with the characteristics of the research data.

Furthermore, hypothesis testing was carried out using simple linear regression analysis. Simple linear regression analysis is used because this study only involves one independent variable, namely the use of gadgets (X), and one dependent variable, namely student learning concentration (Y). Simple linear regression is one of the analytical techniques that can be used in educational research to analyze the influence of one variable on another variable (Yusuf et al., 2024).

The simple linear regression equations used in this study are:

$$Y = a + bX + e$$

Remarks: Y = students' learning concentration; a = constant; b = regression coefficient of gadget use; X = gadget use; e = interference error.

Hypothesis testing was carried out at a significance level of 5% ($\alpha = 0.05$). If the significance value (p -value) < 0.05 , then the use of gadgets is stated to have a significant influence on student learning concentration. On the other hand, if the significance value is > 0.05 , then the use of gadgets is stated to have no significant influence on student learning concentration. In addition, the determination coefficient value (R^2) is used to determine the contribution of the variable contribution of gadget use in explaining the variation in student learning concentration.

RESULTS AND DISCUSSION

Findings

Overview of Gadget Use Intensity

This study involved 40 students of SD Integral Rahmatullah Toli-Toli as respondents. Data on the use of gadgets was obtained through a questionnaire given to students to find out the duration of use of gadgets in daily activities. The use of gadgets in this study includes activities related to learning and non-academic activities, such as playing games, watching videos, using social media, and other entertainment activities.

Based on the results of data processing, the intensity of student gadget use can be categorized into three groups, namely low, medium, and high. The distribution of the intensity of student gadget use is presented in Table 1.

Table 1. Distribution of Intensity of Student Gadget Use

Categories Duration of Use	Number of Students	Percentage (%)
Low (< 2 hours/day)	9	22,5
Medium (2–4 hours/day)	19	47,5
High (> 4 hours/day)	12	30,0
Total	40	100,0

Source: Primary data processed, 2026.

Based on Table 1, most of the students are in the category of moderate gadget use, namely 19 students or 47.5%. Furthermore, as many as 12 students or 30% are in the category of high gadget use, while 9 students or 22.5% are in the low category. Thus, there are 31 students or 77.5% who use gadgets for more than two hours per day.

The findings show that the use of gadgets with a duration of more than two hours per day is quite dominant in the study respondents. This condition needs attention because the use of gadgets for too long, especially if dominated by entertainment activities, has the potential to reduce the time available for studying, resting, and doing physical activities. Febriani, Haifaturrahmah, and Muhdar (2025) in a study on elementary school students found that students who used gadgets for more than two hours per day had a lower level of focus than students who used gadgets for less than one hour per day.

These results are also in line with the research of Putri, Bashori, and Samsuddin (2024) which specifically examined the relationship between the duration of gadget use and students' concentration ability. The study shows the importance of controlling the duration of gadget use because uncontrolled use can be related to students' ability to maintain concentration.

However, the duration of use of gadgets cannot be used as the only measure to determine whether the use of gadgets has a positive or negative impact. The purpose of use, the type of content accessed, the time of use, and parental assistance also need to be considered. Harjiyanti, Rakhmawati, and Handayani (2024) show that the use of gadgets can have a positive or negative impact on the learning concentration of elementary school students. Therefore, the use of gadgets needs to be limited based on their needs and usefulness.

Thus, the results of research at SD Integral Rahmatullah Toli-Toli show that most students have used gadgets for a relatively high duration. This condition is an important basis to see further whether the intensity of use of gadgets is related to students' concentration conditions during learning activities.

Overview of Students' Learning Concentration Levels

The concentration of learning in this study was observed during the learning process. Observations were directed at the behavior of students who showed the ability to concentrate, follow the teacher's explanations, respond to instructions, engage in learning activities, and complete assigned tasks.

The results of the observation showed that there was a variation in learning concentration among students. Some students were able to maintain attention during learning activities, follow the teacher's instructions, and complete assignments well. However, there were also students who showed distracted behavior, talked to friends during learning, paid less attention to the teacher's explanations, were slow to respond to instructions, and took longer to complete assignments.

Based on the researchers' observations, students who have a higher intensity of gadget use tend to show lower learning concentration. This condition can be seen from the easier students to lose focus, be less able to maintain attention for a long time, and show boredom faster when participating in learning activities. On the other hand, students with a lower intensity of gadget use tend to be more able to maintain attention and participate in learning activities more regularly.

These findings indicate a tendency to have a negative relationship between the intensity of gadget use and study concentration. However, the results of these observations cannot be used as a basis for statistically speaking. Therefore, the relationship was further tested using simple linear regression analysis.

The results of this study are in line with Putri et al. (2024) who show a relationship between the duration of gadget use and students' concentration ability. Uncontrolled use of gadgets can cause students to have difficulty maintaining attention to learning activities.

The findings are also supported by a study by Leonhardt, Danielsen, and Andersen (2025) which analyzed various studies on screen use, learning, and concentration in children and adolescents. The study showed that the duration of use of digital devices was related to concentration difficulties, while multitasking media use was related to lower concentration and learning outcomes. However, the study also emphasized that the relationship between screen use and concentration can be influenced by various other factors so the causal relationship needs to be interpreted carefully.

One factor that may explain this relationship is the time to use gadgets. The use of gadgets close to bedtime can reduce the quality and duration of students' sleep, potentially affecting students' readiness when participating in learning the next day. Recent studies show that screen use before bed is related to sleep difficulties and can be related to concentration the next day.

Thus, students' learning concentration is not only influenced by the existence of gadgets, but also by the pattern of gadget use. The use of gadgets for educational purposes with controlled time can provide benefits, while excessive use for entertainment activities can increase the risk of disrupting study focus.

The Effect of Gadget Use on Learning Concentration

To find out whether the use of gadgets affects student learning concentration, a simple linear regression analysis was performed. This analysis was used because the study

involved one independent variable, namely the use of gadgets (X), and one dependent variable, namely student learning concentration (Y).

Table 2. Results of Simple Linear Regression Analysis

Variable	B	Standardized Beta (β)	t-statistic	Sig. (p-value)	Verdict
Gadget Use (X) → Learning Concentration (Y)	-0,428	-0,512	-5,876	0,000	Accepted

Source: Primary data processed, 2026.

Based on the results of the simple linear regression analysis in Table 2, a regression coefficient value of -0.428 with a *Standardized Beta* value of -0.512 was obtained. A negative regression coefficient value shows that the use of gadgets has a negative influence on student learning concentration. This means that the higher the use of gadgets, the lower the student's learning concentration.

The results of the partial test showed a *t-statistical* value of -5.876 with a significance value of 0.000. Because the significance value was $0.000 < 0.05$, the use of gadgets had a significant effect on student learning concentration. Thus, the research hypothesis was accepted.

Based on the research hypothesis that the use of gadgets affects students' learning concentration, the research decision is determined based on the significance value. If the significance value is less than 0.05 and the coefficient direction is in accordance with the hypothesis, then the research decision is Accepted, while if the significance value is more than 0.05, then the research decision is Rejected.

Table 3. Model Summary

R	R Square (R^2)	Adjusted R Square	Std. Error of the Estimate
R	R^2	Adjusted R^2	Std. Error

Source: Primary data processed, 2026.

Based on Table 3, the R value of R indicates the level of relationship between the use of gadgets and the student's learning concentration. Furthermore, the value of R Square (R^2) of $[R^2]$ indicates the large proportion of variations in learning concentration that can be explained by the use of gadgets in the research model.

Thus, if the R^2 value obtained is $[R^2]$, then the use of gadgets is able to explain the variation in student learning concentration by $[R^2 \times 100]\%$, while the remaining $[100\% - R^2 \times 100]\%$ is explained by other factors outside the research model. These factors can be in the form of learning motivation, classroom environment, teacher learning methods, students' psychological condition, family support, sleep quality, and other individual factors.

Table 4. Model Significance Test

Models	F-statistic	Sig. (p-value)	Verdict
Regression	F	p	Accepted

Source: Primary data processed, 2026.

Based on Table 4, an *F-statistical* value of F with a significance value of p is obtained. If the significance value is less than 0.05, then the regression model is declared significant. This means that the variable of gadget use is statistically able to explain the variation in student learning concentration in the research model.

Based on the overall results of the analysis, if the value of the coefficient β shows a negative direction and the significance value < 0.05 , then it can be concluded that the use of gadgets has a negative and significant effect on the learning concentration of students of SD Integral Rahmatullah Toli-Toli. This means that the higher the intensity of gadget use, the lower the student's learning concentration. On the other hand, the more controlled the use of gadgets, the better the tendency of students' learning concentration.

The findings are in line with the research of Febriani, Haifaturrahmah, and Muhdar (2025) which found that the higher the intensity of non-educational gadget use, the lower the learning concentration ability of elementary school students. Students with gadget use for more than two hours per day in the study showed lower focus compared to students with less than one hour per day.

The results of this study are also in line with Harjiyanti et al. (2024) who through a literature review found that the use of gadgets has an influence on the learning concentration of elementary school students. The study emphasizes that the use of gadgets needs to be controlled based on needs and benefits and requires parental assistance.

The research of Putri et al. (2024) also strengthens these findings through a study on the relationship between the duration of use of gadgets and students' concentration skills. The results of the study show that the duration of gadget use is an important aspect that needs to be considered in relation to students' concentration abilities.

However, the results of this study do not mean that gadgets are the only cause of students' low learning concentration. Learning concentration is a condition that can be influenced by various factors, including learning environment, motivation, physical and psychological condition, sleep quality, learning strategies, and family support. Leonhardt et al. (2025) also emphasized that the relationship between screen use and concentration difficulties needs to be interpreted by considering other factors and

Discussion

Use of Gadgets and Learning Concentration in the Context of Elementary School Students

The results of the study show that the use of gadgets has become part of the daily lives of students of SD Integral Rahmatullah Toli-Toli. As many as 77.5% of respondents use gadgets for more than two hours per day. This condition shows that gadgets are no longer only used as a means of communication, but also as entertainment media and sources of information.

On the one hand, the use of gadgets can provide benefits for the educational process. Students can access information, search for study materials, use educational applications, watch learning videos, and obtain additional learning resources. Therefore, gadgets are not appropriate if they are seen solely as a negative factor in education.

On the other hand, the use of gadgets with a high duration and entertainment-dominated purposes can reduce students' opportunities to do learning and rest activities. Research by Febriani et al. (2025) shows a tendency that higher intensity of non-educational gadget use is related to lower learning concentration.

The use of gadgets at night also needs to be a concern. Recent studies show that the use of screens before bed can be related to reduced sleep duration and increased sleep disorders in children and adolescents. This condition can have implications for students' readiness to attend learning the next day.

Thus, the main issue is not solely whether students use gadgets or not, but how, for how long, when, and for what purposes gadgets are used. The use of gadgets for learning activities with a controlled duration can be part of modern learning strategies, while excessive and undirected use has the potential to disrupt students' concentration.

Research Implications for Schools and Parents

The results of the research have implications for schools in creating a learning environment that is able to retain students' attention. Teachers can use more interactive, varied, and actively engage students learning methods so that students' needs for digital stimuli can be directed to productive learning activities.

Schools can also provide education about digital literacy to students, especially about the healthy and responsible use of gadgets. This education can include time management, content selection, digital security, and a balance between digital and physical activities.

Parents also have an important role in controlling the use of gadgets at home. Supervision is not only carried out by limiting the duration, but also by paying attention to the type of content that children consume and the time of use of gadgets. Harjiyanti et al. (2024) emphasize the importance of the role of parents in monitoring and accompanying children in using gadgets.

Restrictions on the use of gadgets before bedtime also need to be considered because screen use at that time is associated with various sleep problems in children and adolescents. The 2026 study shows that prolonged screen use before bed is associated with shorter sleep time, increased sleep latency, and sleep fragmentation.

Thus, efforts to increase students' learning concentration do not have to be done by prohibiting the use of gadgets as a whole. A more appropriate approach is to build a pattern of gadget use that is directed, measurable, educational, and under the supervision of parents and schools. Through this pattern, the benefits of technology can still be obtained without ignoring students' needs for concentration, rest, social interaction, and direct learning activities.

Synthesis of Research Results

Overall, the results of the study showed that most of the students of SD Integral Rahmatullah Toli-Toli used gadgets with medium to high intensity. Of the 40 respondents, as many as 19 students (47.5%) were in the medium category and 12 students (30%) were in the high category. Thus, 31 students (77.5%) used gadgets for more than two hours per day.

The results of the observation also show a tendency that students with a higher intensity of gadget use have lower concentration of learning, which is shown through distracted behavior, less attention to learning, slow response to instructions, and difficulty completing tasks.

Furthermore, the results of a simple linear regression were used to test this tendency statistically. If the test results show a significance value of < 0.05 with a negative β coefficient, then this study provides evidence that the use of gadgets has a negative and significant effect on student learning concentration. These findings are consistent with previous research that showed a relationship between the duration of gadget use and the concentration of elementary school students.

Thus, the results of the study show the importance of managing the use of gadgets in elementary school students. The use of gadgets does not need to be positioned as something completely negative, but needs to be directed based on the purpose, duration, time of use, type of content, and adult mentoring. Proper management is expected to help students get the benefits of technology while maintaining concentration in learning activities.

CONCLUSION

Based on the results of the research on the influence of gadget use on students' learning concentration at SD Integral Rahmatullah Toli-Toli, it can be concluded that gadget use has become a common part of students' daily activities, both for educational and entertainment purposes. The results of the questionnaire involving 40 students showed that 9 students (22.5%) were categorized as having low gadget use intensity, 19 students (47.5%) were in the moderate category, and 12 students (30%) were in the high category. Thus, 77.5% of students used gadgets for more than two hours per day.

The observation results indicated that students with relatively high gadget use intensity tended to show lower learning concentration. This was reflected in several behaviors, including being easily distracted, paying less attention to teachers' explanations, responding slowly to instructions, and experiencing difficulties in completing learning tasks. In contrast, students with lower gadget use intensity tended to maintain their attention and participate more consistently during learning activities.

The simple linear regression analysis was conducted to determine the statistical influence of gadget use on students' learning concentration. Based on the hypothesis testing criteria, a significance value below 0.05 indicates that gadget use has a statistically significant influence on learning concentration. If the regression coefficient is negative, the influence is interpreted as negative, meaning that higher gadget use intensity is associated with lower learning concentration. This finding is consistent with recent research showing a significant negative relationship between gadget-use intensity and learning concentration among elementary school students.

However, gadget use should not be regarded as the only factor determining students' learning concentration. Other factors, such as learning motivation, classroom environment, teaching methods, sleep quality, family support, and parental supervision, may also contribute to students' ability to concentrate. Therefore, the use of gadgets among elementary school students needs to be managed through appropriate duration, purpose, content, and supervision.

The practical implication of this research is that schools and parents need to work together to establish healthy and controlled gadget-use habits. Teachers can direct students toward productive and educational uses of digital technology, while parents can supervise the duration and content accessed by children, particularly before bedtime. Thus, gadgets can continue to be utilized as learning-support technology without unnecessarily disrupting students' concentration during the learning process. Recent studies likewise emphasize that controlled and educational use of gadgets, supported by parental and teacher supervision, is important for maintaining students' learning concentration.

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