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The Correlation Between Gadget Use Intensity And Social Behavior And Responsibility Among Elementary School Students

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Abstract: This research investigates the relationship between the level of gadget use (X) and social behavior (Y1) and student responsibility (Y2) among elementary school students. Done at SD Negeri 03 Banjar Seminai, this research engaged 46 grade V and VI students as subjects by employing a proportional random sampling technique. Data were collected through a Likert scale questionnaire. The design utilized was quantitative correlational, with the data assessed using Pearson correlation and multiple regression. The findings provide high and significant negative correlations between level of gadget use and both social behavior (R2=0.65) and student responsibility (R2=0.72). This indicates that higher gadget use is highly correlated with reduced social behavior and responsibility. Multiple regression analysis again established that intensity of gadget usage is a salient and substantial variable determining these dimensions. The research establishes that intensive gadget usage has serious effects on students' social behavior and responsibility and emphasizes the utmost need for interventions and balanced digital usage among elementary school students.

***Keywords**: Gadget use intensity, Social behavior, Student responsibility, Elementary school.*

1. INTRODUCTION

The rapid development of digital technology has brought significant changes in daily life, including in the world of education. One of its most tangible impacts is the increasing use of gadgets among elementary school children. Excessive gadget use at an early age can lead to various negative impacts, especially on children's social development and character (Setiawan & Kurniawati, 2021). In the context of basic education, character building such as responsibility and social interaction skills are top priorities to support academic success and community life.

Various previous studies show that intensive gadget use can disrupt children's socialization process and decrease their social sensitivity (Wahyuni, 2020; Dewi & Prasetyo, 2022). Children who frequently use gadgets tend to experience a decline in direct interaction with peers and family. This can impact their ability to cooperate, understand others' emotions, and communicate effectively (Santrock, 2019). In the long term, this can also reduce children's sense of responsibility for their tasks, both at school and at home (Lickona, 2012).

Student responsibility in the context of character education includes several important aspects, such as completing tasks on time, obeying rules, maintaining the environment, daring to admit mistakes, and being consistent in fulfilling obligations (Lickona, 2012; Muslich, 2011). Meanwhile, student social interaction includes the ability to cooperate, show empathy, respect differences, communicate politely, be active in group activities, and avoid isolated or socially withdrawn behavior (Soekanto, 2006; Santrock, 2019).

This research stems from concerns about the high intensity of gadget use among elementary school students, which has not been balanced with good understanding and control from parents and teachers. At SD Negeri 03 Banjar Seminai, this phenomenon is starting to become apparent from the decreasing enthusiasm of students to participate in group activities and their lack of initiative in completing academic responsibilities. Therefore, this research is important to quantitatively reveal the extent of the relationship between the level of gadget use and students' social behavior and responsibility.

This research has a unique characteristic compared to previous studies because it simultaneously examines two important character aspects, namely responsibility and social interaction, both of which are the foundation of character education. In addition, this research was conducted on a population of elementary school students in rural areas that have not been widely studied, providing a new perspective on the impact of gadget use outside of urban contexts.

The purpose of this research is to determine the relationship between the intensity of gadget use and the social behavior and responsibility of elementary school students. The results of this research are expected to provide a factual overview as a basis for developing character education policies based on digital literacy, as well as serving as a reference for providing interventions for students with high levels of gadget dependence.

2. METHODS

This research used a quantitative approach with a correlational research design. This design was chosen to determine the relationship between gadget usage intensity and elementary school students' social behavior and responsibility. The research was conducted from April to May 2025, taking place at SD Negeri 03 Banjar Seminai, Dayun District, Siak Regency, Riau Province.

The subjects in this study were all fifth- and sixth-grade students, totaling 46 individuals. Due to the relatively small population size, all students were included as research participants using the total sampling technique. This technique was chosen to obtain comprehensive data that accurately represents the characteristics of students across both grade levels. The research instrument used was a closed-ended questionnaire with a four-point Likert scale: Strongly Agree (SA), Agree (A), Disagree (D), and Strongly Disagree (SD).

The questionnaire was developed based on indicators derived from theory and literature reviews. The gadget usage intensity variable included daily frequency, duration per session, purpose of use (such as entertainment, learning, or social), and emotional dependence on gadgets. Meanwhile, the student social behavior indicators encompassed the ability to cooperate, empathy towards others, willingness to help friends, conflict resolution, and participation in school social activities. Student responsibility indicators consisted of timely task completion, adherence to rules, consistency in tasks, courage to admit mistakes, and concern for the school environment. The instrument was validated through expert judgment by supervising lecturers and class teachers, and reliability was tested using the Cronbach's Alpha coefficient via Microsoft Excel. All research procedures commenced from instrument development, validation and pilot testing, questionnaire dissemination, to data processing. Data analysis was performed manually using Microsoft Excel software. The analysis techniques used were Pearson Product Moment correlation to examine the relationship between variables, and multiple linear regression analysis to determine the simultaneous effect of the gadget usage intensity variable on students' social behavior and responsibility.

3. FINDINGS AND DISCUSSION

To determine the relationship between variables, a correlation analysis was conducted between variable X (gadget usage intensity) and variables Y_1 (social behavior) and Y_2 (student responsibility). The results of the analysis are presented in Table 1 below:

Table 1. Correlation Results between Gadget Usage Intensity and Students' Social Behavior and Responsibility

Variable Relationship	Correlation Coefficient (r)	Determination Value (R^2)	Description
Gadget Intensity (X) with Social Behavior (Y_1)	-0.81	0.65	High Negative Correlation
Gadget Intensity (X) with Responsibility (Y_2)	-0.85	0.72	High Negative Correlation

The results indicate a strong negative relationship between gadget usage intensity and both dependent variables. This negative correlation suggests that the higher the gadget usage intensity, the lower students' social behavior and responsibility. To determine the simultaneous effect of variable X on Y_1 and Y_2, multiple linear regression analysis was performed. The calculations showed that gadget usage intensity significantly contributes to changes in students' social behavior and responsibility, with a significance value of $p<0.05$.

This research finding indicates that excessive gadget use is significantly negatively correlated with elementary school students' social behavior and responsibility. This finding aligns with studies conducted by Prensky (2012) and Subrahmanyam & Šmahel (2011), which state that uncontrolled digital technology use in children can decrease interpersonal skills and responsibility towards tasks and rules. Theoretically, this result reinforces Erikson's theory of social development (1963), which emphasizes the importance of direct social interaction in building a sense of responsibility and empathy in school-aged children. When students interact more with gadgets than with their social environment, they lose opportunities to learn conflict resolution, understand others' feelings, and develop a sense of responsibility for social tasks and rules.

From the indicator perspective, students' social behavior in this study encompassed aspects of cooperation, empathy, caring, and conflict resolution skills, all of which decreased with higher gadget usage time. Similarly, student responsibility indicators such as timely task completion, adherence to rules, and admitting mistakes also showed low scores in students with high gadget usage duration.

The strength of this research lies in its focused approach and the use of valid instruments to measure the variables studied. However, there are some limitations, such as the sample being restricted to one school and manual data calculation, which opens up the possibility of small technical errors in data processing. This serves as a note for future research to use more sophisticated statistical software and a wider sample.

Considering these results and limitations, educational measures are needed to limit excessive gadget use among elementary school students. Collaboration among teachers, parents, and the school is necessary to create a balance between technology use and the reinforcement of social values and responsibility in children from an early age.

4. CONCLUSION

Based on the research findings regarding the relationship between gadget usage intensity and students' social behavior and responsibility at SD Negeri 03 Banjar Seminai, it can be concluded that higher gadget usage is negatively and significantly related to both social behavior and student responsibility. This indicates that the more frequently students use gadgets, the more their social behavior and level of responsibility tend to decrease. This finding is consistent with educational psychology theories stating that excessive technology use can reduce social interaction and an individual's sense of responsibility. Therefore, it is crucial for educators and parents to monitor and regulate the intensity of gadget use among students to ensure their social development and responsibility remain optimal.

From these research findings, it is recommended that schools and parents implement balanced rules for gadget use among students, for instance, by limiting screen time and increasing social interactive activities at school. Furthermore, future research could expand this study by including other variables such as academic achievement or students' mental health to gain a more comprehensive understanding of the impact of gadget use. Developing digital education programs that instill values of responsibility and technological ethics is also highly necessary to increase students' awareness of using gadgets wisely.

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