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The Relationship Between Gadget Usage and Learning Concentration Among Students of UIN Syahada Padangsidimpuan

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Abstract

This study explores the relationship between gadget usage and learning concentration among students at UIN SYAHADA. The increasing reliance on digital devices has raised concerns regarding its impact on students' academic focus and cognitive performance. The primary purpose of this research is to analyze whether high-frequency gadget usage correlates with lower levels of concentration during learning activities. A quantitative research method was applied, using a correlational approach. Data were collected through questionnaires distributed to a sample of 100 students selected using purposive sampling. The results reveal a significant negative correlation between the intensity of gadget usage and students' concentration in learning. This indicates that students who use gadgets excessively tend to have reduced concentration, which can hinder academic performance. The findings emphasize the importance of promoting balanced gadget use and implementing strategies for digital discipline among students. This study provides insights for educators and policymakers to design interventions that foster healthier learning environments and minimize distractions caused by digital technologies.
Keywords: Concentration, Digital discipline, Gadget usage, Learning, Students

Abstrak

Penelitian ini bertujuan untuk mengkaji hubungan antara penggunaan gawai dan konsentrasi belajar pada mahasiswa UIN Syahada. Meningkatnya ketergantungan terhadap perangkat digital menimbulkan kekhawatiran terhadap dampaknya pada fokus akademik dan performa kognitif mahasiswa. Tujuan utama dari penelitian ini adalah untuk menganalisis apakah frekuensi penggunaan gawai yang tinggi berkorelasi dengan penurunan tingkat konsentrasi saat kegiatan belajar berlangsung. Metode penelitian yang digunakan adalah kuantitatif dengan pendekatan korelasional. Data dikumpulkan melalui penyebaran kuesioner kepada 100 mahasiswa yang dipilih menggunakan teknik purposive sampling. Hasil analisis menunjukkan adanya korelasi negatif yang signifikan antara intensitas penggunaan gawai dan konsentrasi belajar mahasiswa. Artinya, mahasiswa yang menggunakan gawai secara berlebihan cenderung mengalami penurunan konsentrasi yang dapat berdampak pada prestasi akademik. Temuan ini menekankan pentingnya penerapan penggunaan gawai yang seimbang dan strategi kedisiplinan digital dalam lingkungan kampus. Penelitian ini memberikan masukan bagi pendidik dan pembuat kebijakan dalam merancang intervensi yang mendukung lingkungan belajar yang lebih fokus dan minim gangguan dari teknologi digital.
Kata Kunci: Disiplin digital, Gawai, Konsentrasi, Mahasiswa, Pembelajaran

INTRODUCTION

In today's digital era, the advancement of information and communication technology has significantly transformed various aspects of human life, particularly in the field of education. Gadgets such as smartphones, tablets, and laptops are no longer merely tools for communication but have become integral to the learning process. University students, including those at UIN SYAHADA, are among the most active users of these devices. Gadgets are often used to access online journals, attend virtual classes, complete assignments, and communicate with lecturers and peers, making them an indispensable part of modern academic life.

Despite these advantages, the uncontrolled and excessive use of gadgets can pose serious challenges, especially to students' cognitive performance. One of the most pressing concerns is the decline in learning concentration. Many students find themselves distracted by non-academic content such as social media, entertainment apps, or mobile games while studying or attending lectures. This divided attention can hinder the learning process, reduce the ability to absorb information effectively, and ultimately affect academic performance. Previous studies have highlighted the negative impact of digital multitasking on attention span and memory retention, indicating that gadget use, if not well managed, can interfere with students' academic focus.

The research problem addressed in this study centers on the extent to which gadget usage influences students' learning concentration. While gadgets can support learning activities, their misuse may lead to reduced attention and academic disengagement. This issue is especially relevant in the context of UIN SYAHADA, where students are expected to balance religious, academic, and technological engagements. However, limited research has been conducted to explore the specific relationship between gadget usage and learning concentration among students within this unique academic and cultural environment.

Therefore, this study aims to identify the frequency and patterns of gadget usage among students at UIN SYAHADA, assess their level of concentration during academic activities, and analyze the correlation between gadget usage and learning concentration. Through this investigation, the research seeks to provide a comprehensive understanding of how students interact with gadgets in their daily academic routines and the potential effects on their focus and academic performance. By doing so, the research seeks to provide empirical evidence that may assist educators and policymakers in developing effective strategies to enhance students' learning focus without restricting the beneficial use of technology.

This study is grounded in two theoretical frameworks: **Cognitive Load Theory** and **Media Multitasking Theory**. Cognitive Load Theory posits that the human brain has limited capacity for information processing. When that capacity is exceeded such as by multitasking or frequent digital interruptions learning becomes inefficient, and concentration declines. Media Multitasking Theory supports this by emphasizing that simultaneous engagement with multiple digital sources leads to fragmented attention, reduced processing depth, and impaired memory consolidation. These theories provide a foundation for understanding how the overuse or misuse of gadgets can impact the cognitive functioning of students, particularly in academic contexts.

METHOD

This study employed a quantitative correlational research design to explore and analyze the relationship between gadget usage and learning concentration among students at UIN SYAHADA. The quantitative approach was selected because it offers a systematic and objective way of collecting and analyzing numerical data. This method allows researchers to quantify the behaviors and attitudes of participants, making it possible to draw generalizable conclusions based on measurable evidence. Through the use of statistical tools and techniques, researchers can examine the extent to which changes in one variable correspond to changes in another.

In this study, the correlational design was particularly appropriate because the researchers aimed not to manipulate variables, but rather to observe and assess the natural association between the two variables of interest: gadget usage (as the independent variable) and learning concentration (as the dependent variable). This design enabled the researchers to determine both the strength (how strong the association is) and the direction (whether positive or negative) of the relationship between these two variables. Furthermore, by utilizing this method, the study contributes to a deeper understanding of how modern technological behavior, such as the frequency and pattern of gadget usage, might influence or be associated with students' ability to concentrate during learning activities. Such insights are especially important in the context of higher education, where digital device use is pervasive and often essential, yet may also pose potential distractions. Therefore, the use of a quantitative correlational design provided a robust framework for analyzing this complex and timely issue within the student population at UIN SYAHADA.

Data for this study were collected using a closed-ended questionnaire that was designed based on a Likert scale. The questionnaire was systematically developed to measure the two primary variables under investigation, namely gadget usage (Variable X) and learning concentration (Variable Y). It was divided into two main sections. The first section focused on assessing the level of gadget usage among students using six specific indicators, which included the frequency of gadget use, duration of use, types of activities performed with gadgets, timing of usage (before, during, or after study sessions), the purpose or motivation behind gadget use, and the extent to which gadgets were used for academic versus non-academic purposes. The second section measured students' learning concentration based on four indicators, such as the ability to stay focused during lessons, attention span over a period of time, susceptibility to distractions while studying, and consistency in completing academic tasks.

Each item in the questionnaire was presented in the form of a closed-ended statement with a five-point Likert scale, ranging from "Strongly Disagree," "Disagree," "Neutral," "Agree," to "Strongly Agree." This scale was chosen because it allows respondents to express the intensity of their agreement with each statement in a quantifiable manner, making the responses suitable for statistical analysis. The questionnaire was distributed physically to the target respondents to ensure accurate and complete responses. Distributing the questionnaire in person also helped the researchers provide clear instructions and clarify any ambiguities that the respondents might encounter during the process of answering the questions.

To ensure the quality and credibility of the data collected, the instrument underwent a process of validation and reliability testing prior to full-scale distribution. The validity test was

conducted to confirm that each item accurately measured the intended construct, while the reliability test was carried out to assess the internal consistency of the items in the questionnaire. The results indicated that the questionnaire met the required standards for both validity and reliability, demonstrating that it was appropriate and dependable for use in the main study. Through these careful procedures, the questionnaire was expected to produce accurate, objective, and representative data regarding the relationship between gadget usage and learning concentration among students at UIN SYAHADA.

The data source consisted of primary data obtained directly from students of UIN SYAHADA as the research population. A random sampling technique was used to select a total of 100 respondents from various faculties to ensure diversity and representativeness. The inclusion criteria were active undergraduate students who frequently use gadgets as part of their academic activities.

The collected data were processed using Microsoft Excel and SPSS (Statistical Package for the Social Sciences). Descriptive statistics were used to summarize the central tendencies (mean, median, mode), dispersion (standard deviation), and range (minimum and maximum scores) of both variables. To examine the relationship between gadget usage and learning concentration, Pearson's Product Moment Correlation analysis was conducted. The interpretation of the correlation coefficient followed standard conventions, where 0.00–0.19 indicates very weak correlation, 0.20–0.39 weak, 0.40–0.59 moderate, 0.60–0.79 strong, and 0.80–1.00 very strong.

The scope of this study was limited to undergraduate students enrolled at UIN SYAHADA during the academic year in which the research was conducted. The study focused solely on the variables of gadget usage and learning concentration, without examining other psychological or environmental factors that may influence concentration. Additionally, the study did not differentiate between types of gadgets used (e.g., smartphones, tablets, laptops), although these devices were generally understood as "gadgets" for the purpose of this research.

RESULTS AND DISCUSSION

This study aimed to determine the relationship between gadget usage and learning concentration among students at UIN SYAHADA. In order to obtain relevant and accurate data, the researchers distributed a structured Likert-scale questionnaire to a total of 100 student respondents across various academic disciplines. The questionnaire was designed to assess two primary variables: Gadget Usage (Variable X) and Learning Concentration (Variable Y). Gadget Usage was measured through six key indicators that reflect the intensity, frequency, purpose, and context of gadget use in daily academic and non-academic activities. Meanwhile, Learning Concentration was measured through four specific indicators that evaluate students' ability to focus, avoid distractions, manage time effectively, and sustain attention during learning tasks.

To ensure comprehensive analysis, the collected data were processed using both Microsoft Excel and Statistical Package for the Social Sciences (SPSS). Descriptive analysis techniques were applied to summarize the responses and provide an overview of the patterns observed in both gadget usage and concentration levels. This analytical approach allowed the

researchers to identify trends, central tendencies, and variances in the data, which served as the basis for further statistical testing. The results of this preliminary analysis are essential in understanding the behavioral tendencies of students in relation to modern technological tools and their potential impact on academic performance. A detailed summary of the statistical data for both variables is presented in Table 1 below.

Table 1. Descriptive Statistics of Gadget Usage and Learning Concentration

Variable	Mean	Std. Deviation	Minimum	Maximum	Q1	Median (Q2)	Q3
Gadjet Usage (X)	21.01	3.12	9	30	19.75	21.00	23.00
Learning Concentration (Y)	13.22	1.99	7	20	12.00	13.00	14.00

To determine the relationship between gadget usage and learning concentration among students at UIN SYAHADA, the researchers conducted a Pearson's correlation analysis. This statistical method was selected because it is widely recognized for its effectiveness in measuring the strength and direction of the linear relationship between two continuous variables. In this case, the two variables analyzed were Gadget Usage (Variable X) and Learning Concentration (Variable Y), both of which had been measured through multiple indicators using a Likert-scale questionnaire. The analysis aimed to identify whether there was a statistically significant relationship between the frequency and patterns of gadget use and the students' ability to concentrate during academic activities.

The results of the Pearson's correlation analysis revealed a moderate positive correlation, with a correlation coefficient value of $r = 0.552$. This indicates that there is a meaningful and positive association between gadget usage and learning concentration. Specifically, as students' usage of gadgets increases, their level of concentration in learning activities also tends to increase. This finding may initially seem counterintuitive, given the common perception that excessive gadget use can be distracting. However, it suggests that when used appropriately such as for accessing academic resources, managing schedules, or participating in online learning gadgets can actually support and enhance students' focus, engagement, and learning effectiveness.

Furthermore, the moderate strength of the correlation implies that while gadget usage is not the sole factor influencing concentration, it plays a significant role in shaping students' academic experiences. This result emphasizes the importance of understanding how technology is integrated into the learning environment and the need for guidance in promoting productive and purposeful gadget use among university students. Overall, the findings contribute valuable insights into the complex relationship between digital technology and academic behavior in higher education contexts.

The results of this study demonstrate a moderate and positive correlation ($r = 0.552$) between gadget usage and learning concentration. This indicates that increased use of gadgets tends to be associated with better learning focus among students. The finding aligns with the research objective, which sought to explore whether digital tools can positively impact student concentration levels in academic environments. Traditionally, gadget usage has been perceived

as a disruptive element in learning. Various studies (e.g., Al-Fudhaili & Rahman, 2021; Safitri et al., 2022) have pointed out the distracting nature of mobile devices, especially due to social media, gaming, and non-educational content. However, this study contributes to a growing body of literature that views gadgets as potential learning enhancers when used appropriately.

Students frequently use gadgets to access online learning platforms (e.g., Google Classroom, Zoom), digital libraries, and academic tools such as PDF readers or note-taking apps. These functionalities support their learning efficiency and task organization, potentially increasing their concentration span during study sessions. The average score of 21.01 (out of 30) on gadget usage shows a high level of digital engagement among students. Meanwhile, the average concentration score of 13.22 (out of 20) reflects a satisfactory concentration level. This implies that students are not only engaged with gadgets but are also able to maintain reasonable focus during learning.

However, it must be noted that gadget usage is not the only factor influencing learning concentration. Other internal factors such as motivation, learning strategies, mental health, and cognitive style as well as external factors like classroom environment and pedagogical approach also play significant roles (Nugroho et al., 2023). This study's findings are consistent with previous research emphasizing the importance of digital literacy and self-regulated learning. Students who are digitally literate tend to use gadgets for productive purposes, enhancing their ability to stay focused and engaged (Fitriani et al., 2020). Conversely, lack of self-regulation may lead to misuse, reducing learning concentration.

CONCLUSION

This study explored the relationship between gadget usage and learning concentration among students of UIN SYAHADA. The results indicated a moderate and positive correlation between the two variables, suggesting that students who frequently use gadgets particularly for academic purposes tend to demonstrate higher levels of learning concentration. This finding challenges the traditional perception of gadgets as purely distracting devices and highlights their potential as supportive tools in modern educational settings. The study underscores the importance of purposeful gadget use, where students can access learning platforms, manage academic tasks, and stay organized through digital tools. However, it also emphasizes the need for balance and self-regulation to ensure that gadget usage remains beneficial rather than detrimental to academic focus.

Based on the findings, it is recommended that educational institutions integrate digital literacy and time management programs into their student development initiatives. This would enhance students' ability to use gadgets productively and maintain strong concentration levels during learning activities. For future research, it is suggested to explore additional variables that may influence learning concentration, such as motivation, mental health, learning styles, and the role of different learning environments. Expanding the sample to include students from various academic institutions and backgrounds could also provide a more comprehensive understanding of the phenomenon. Longitudinal studies could further reveal the long-term effects of gadget usage on academic performance and cognitive development.

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