ISTAWA: Jurnal Pendidikan Islam (IJPI)
P-ISSN: 2502-573; E-ISSN: 2541-0970
2024, Vol. 09 No. 02
http://journal.umpo.ac.id/index.php/istawa/

The Effect of Use of Gadgets on PAI Learning Outcomes at SDN 2 Dwijaya, Musi Rawas Regency, South Sumatera

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ABSTRACT: *This study aims to analyse the effect of the use of gadgets on the learning outcomes of Islamic Religious Education (PAI) of grade IV and V students at SDN 2 Dwijaya, Musi Rawas Regency. This study uses a quantitative approach and type of research is associative research by taking a sample of all students in grades IV and V of SDN 2 Dwijaya Musi Rawas The data were collected through a closed questionnaire that had been tested for validity and reliability, then analysed using inferential statistics through the T-test with the help of SPSS version 27. The results showed that there was a significant influence between the use of gadgets on Islamic Education learning outcomes, with a calculated t value of 2.240 > t table 1.674 and a significant value (2-tailed) of 0.029 < 0.05. This study also found that the use of devices can positively increase students' learning activeness and insight, but if not managed properly, it can have a negative impact on learning outcomes. In conclusion, gadgets have a significant influence on PAI learning outcomes.*

Penelitian ini bertujuan untuk menganalisis pengaruh penggunaan gadget terhadap hasil belajar Pendidikan Agama Islam (PAI) siswa kelas IV dan V di SDN 2 Dwijaya Kabupaten Musi Rawas. Penelitian ini menggunakan pendekatan kuantitatif dan jenis penelitian yang digunakan adalah penelitian asosiatif dengan mengambil sampel seluruh siswa kelas IV dan V *SDN* 2 Dwijaya Musi Rawas. Pengumpulan data dilakukan melalui angket tertutup yang telah diuji validitas dan reliabilitasnya, selanjutnya dianalisis menggunakan statistik inferensial melalui uji-t dengan bantuan program SPSS versi 27. Hasil penelitian menunjukkan bahwa terdapat pengaruh yang signifikan antara penggunaan gadget terhadap hasil belajar Pendidikan Agama Islam, dengan nilai t hitung sebesar 2,240 > t tabel 1,674 dan nilai signifikan (2-tailed) sebesar 0,029 < 0,05. Penelitian ini juga menemukan bahwa penggunaan gawai dapat meningkatkan

keaktifan dan wawasan belajar siswa secara positif, namun apabila tidak dikelola dengan baik dapat berdampak negatif terhadap hasil belajar. Kesimpulannya, gadget memiliki pengaruh yang signifikan terhadap hasil belajar PAI.

Keywords. *Gadgets, Islamic Religious Education, Learning Outcomes*

INTRODUCTION

The development of digital technology has brought great changes in various aspects of life, including in the world of education. Gadgets are one of the fastest growing technologies today (Apsari et al., 2023). Gadgets are considered a tool that can facilitate everything because of its many functions (Widiawati, 2014). In addition, gadgets are generally considered as an electronic device with specific functions for each device (Rosiyanti, 2018). Gadgets can make it easier for humans to communicate and find information and support the learning process. In the implementation phase of learning, Islamic education teachers must take important steps regarding the use of gadgets for learning activities to achieve optimal results (Mainuddin et al., 2023). The development of technology is a significant trend in the context of education, changing the traditional learning paradigm towards a more dynamic and interactive approach (Siringoringo, 2024)

The use of technology in PAI education and learning is progressing rapidly, characterized by the use of various digital tools to improve the quality of teaching and student learning (Rayhani. A, 2024). The existence of digital learning resources, interactive applications and educational videos can actually help students to understand religious concepts in a more modern way and relevant to their live (Sugianto, 2022; Katni et al., 2024; Saputro et al., 2023).

Students should not only be "literate" in technology and information but also equip themselves with religious awareness to prevent the emergence of split personality and split integrity due to the penetration of global developments that infiltrate every aspect of human life as a consequence of gadget usage (Ainiyah, 2017). However, optimizing the use of devices in PAI learning is still a challenge, as it requires proper guidance and supervision so that it does not turn into a distraction (Azhar et al., 2024).

The use of gadgets or electronic devices can include computers, laptops, tablets, and cell phones or smartphones are increasingly common among primary school students (Rahayu et al., 2022). They provide easy and quick access to a variety of information and learning resources. They can be used by students as a tool to enhance their knowledge of current technological developments, ensuring that they keep abreast of the advancements taking place in the current era. They can also be utilized as interactive and engaging learning media if used correctly. They can help students learn about a variety of topics, such as finding information

about material that is considered difficult (Harmain, 2022)

In schools, devices are often used to search for teaching materials, access learning videos, and attend online classes. This interaction between students and digital teaching materials can be one of the foundations of contemporary learning that brings benefits (Ripai & Ropiah, 2023). On the other hand, the use of these devices can raise concerns regarding their impact on students' concentration, motivation, and learning outcomes, including in Islamic Religious Education (PAI) subjects. The positive and negative effects of learning with digital media as a result of technological development can be seen as a tool of freedom, truth and educational innovation.(Yuliani & Hartanto, 2022)

The negative impacts of using gadgets include (1) Applications on gadgets make a person more self-centered. Often people ignore other people, sometimes not even considering people who invite them to talk; (2) A person becomes addicted to playing gadgets; (3) Gadgets allow teenagers to access various sites that should not be accessed; (4) Social media on gadgets often causes cases such as bullying, kidnapping, and rape, which usually start with introductions on social media; (5) Gadgets make teenagers lazy to move and do activities, making it difficult to learn social skills and their abilities (Harfiyanto et al., 2015).

The positive impacts of using gadgets include: (1) Facilitating interaction and communication with many people, making it easier to expand friendships and get to know new people; (2) Shortening distance and time; (3) Enabling long-distance relationships without barriers thanks to the sophistication of applications available on devices; (4) Assisting students in consulting lessons and assignments that have not been understood (Amri, 2021).

Most students only use gadged to listen to music, watch videos, play games, and play social media (Nurpratiwi et al., 2021). Instead of being utilized for learning purposes, some students use devices for less productive purposes, such as playing games, accessing social media, or consuming content that does not support learning such as hoax information that will affect the learning process (Bustami et al., 2024). Learners who frequently use devices will experience problems in their learning process and can interfere with their interpersonal skills (Nurmalasari, 2018). Another impact that also affects students' learning outcomes is when students rely more on gadgets than having to study with books, so that they will become dependent on using gadgets (Harfiyanto et al., 2015).

Internet addiction began to attract the attention of many academics after being introduced by Kimberly Young in 1996. In her research, five types of internet addiction were identified: Computer addiction, Net compulsion, Cyber-relationship addiction, Cybersexual addiction, and Information overload (Young, 2017). Excessive use of gadgets is similar to internet addiction, where individuals are unable to control and become dependent on internet-based technology Gadget

dependence can also cause excessive anxiety if the student is kept away from gadgets, brain health becomes disturbed, becomes more introverted, has difficulty socializing, likes to be alone, has oversized behavior and fades creativity and students tend to be less creative again (Domitila et al., 2021).

The American Academy of Pediatrics (2016) states that the ideal duration of device use for elementary school-age children should not exceed two hours per day. This means that the maximum limit of device use for elementary school students is two hours a day. If students use devices for more than two hours, then it is considered excessive or inappropriate (Oktafia et al., 2021). The duration of device use can be categorized into three types: a) high use, which is when the device is used for more than 3 hours per day, b) moderate use, which is when the device is used for about 3 hours per day, c) low use, which is when the device is used for less than 3 hours per day. Excessive and prolonged use of devices can adversely affect health, disrupt brain development, and reduce children's interest in various activities and learning, potentially negatively affecting learning outcomes (Sanjiwani et al., 2020).

Gadgets with proper utilization can become a highly effective tool for improving the quality of learning outcomes. Learning objectives include changes that need to be achieved by students according to Benjamin S. Bloom's taxonomy, namely the cognitive, affective and psychomotor domains (Kementrian Agama RI, 2015) Evaluation activities are designed to collect evidentiary data that shows how well students have achieved learning objectives (Wirda et al., 2020).

Based on observations of student learning outcomes, it was found that out of 55 students in grades IV and V, 40 students experienced a decline in their Islamic Education scores. Students who use gadgets as learning media and to obtain materials supporting their studies, such as finding additional resources and completing school assignments, amount to 24 students or 44% of the 55 respondents from grades IV and V. Meanwhile, the remaining 31 students use gadgets primarily for entertainment purposes, such as playing games, watching YouTube, using TikTok, and other similar activities. *(Source: Semester 1 grade documentation for the 2023/2024 academic year).*

Based on the explanation above, the researcher is interested in conducting further research entitled "The Effect of Gadget Use on PAI Learning Outcomes at SDN 2 Dwijaya, Musi Rawas Regency".

LITERATURE REVIEW

Some research that can be described as an addition to insight includes research by

1. Arif Rifan Hidayat and Erfian Junianto (2017) entitled The Effect of Gadgets on Student Achievement of Tasikmalaya Islamic Foundation

Vocational School, showing that the results of research and hypothesis testing using SPSS version 20 have concluded that H0 is accepted and Ha is rejected, so the hypothesis states that there is a significant influence between the variables perceived usefulness (X1) and perceived ease of use (X2) simultaneously on Attitude Toward Using (Y). The effect of these two variables on Attitude Toward Using (Y) is 2.3%, and the rest is 97.7% (Hidayat, 2017).

2. Rahayu et al (2018) entitled The Impact of the Use of Gadgets on the Learning Outcomes of IKIP Siliwangi Students, based on this study, gadgets greatly influence the learning process, as indicated by the number of students who use gadgets during the learning process. The effect of gadgets in general is found in the results (48.53%), learning using gadgets (55.12%), learning without using gadgets (35.7%), then the effect of gadgets on learning outcomes (46.34%) and finally the effect of gadgets on learning outcomes (46.95%) (Rahayu et al., 2018)
3. Santoso and Farhan Aldino's research (2020) entitled The impact of the use of devices on elementary school students' learning, the results of this study show that the role of devices is very important to make it easier for an educator to distribute various kinds of material to students to obtain the information sources and material formats they need. When devices are used as a supporting medium for reading and learning, they make students more interested and make learning activities more varied, effective, and fun (Santoso et al., 2020).
4. Nikmawati et al (2021) entitled The Effect of Gadged Use on the Achievement Level of Students of SMPN Satu Atap Pakisjaya Karawang, The use of gadgets has no significant effect on student learning outcomes, as evidenced by the simple regression analysis which shows t-count < t-table (0.539 < 2.06) and significance 0.596 > 0.05. On the other hand, gadgets have a significant effect on students' interest in learning, with t- count > t-table (5.044 > 2.063) and a significance of 0.000 < 0.05. Thus, it can be concluded that gadget use does not have a significant effect on student learning outcomes, but has a significant effect on student interest in learning at the elementary school level (Nikmawati et al., 2021).
5. Dian Kurniawati (2022) entitled The Effect of Gadget Use on Student Learning Outcomes, the results showed that gadget use can affect student achievement. This can be seen from the lowest percentage which reached 5.5% and the highest 97.7%. The average value found was 56% (Dian Kurniawati, 2022).
6. There is also Istanti and Meyfiani (2023) entitled The Effect of Addiction to the Use of Gadgets on Mathematics Learning Outcomes, the research

shows that addiction to the use of gadgets has an impact on student math learning outcomes by 54.1%, while the remaining 55.9% is influenced by other factors (Istanti, 2023).

7. Nurhati & Yanti (2024) entitled The Effect of Device Use on Learning Achievement of Elementary School Students. obtained the results The use of devices affects learning achievement by 15.5%, while the remaining 84.5% is influenced by other variables not examined in this study. Thus, it can be concluded that there is a positive relationship between the use of devices and learning achievement. If students use devices to find learning materials or watch educational videos, this can improve learning achievement. Conversely, if devices are used only to play games or watch negative content, students' learning achievement will decrease (Nurhati, 2024).

The similarity to the above studies is that they both examine the impact and influence of gadgets on students, although they are studied from different perspectives on achievement, interest in learning, and the influence of gadgets in their learning.

The difference between this research and previous research lies in different types of research and research locations, researchers use associative research types while in previous studies no one has used this type of research.

RESEARCH METHOD

This research adopts a quantitative approach. The quantitative approach is a method used to test certain theories by analyzing the relationship between variables (Sinaga, 2022). These variables are measured using research instruments, so that data in the form of numbers can be analyzed following statistical procedures (Jannah, 2016). Quantitative research is based on positivism and is used to study specific populations or samples. It collects data using research instruments and analyzes data quantitatively or statistically to validate predetermined hypotheses (Sugiyono, 2019) The reason why researchers choose to use this approach is because researchers want to measure how much influence the use of gadgets has on PAI learning outcomes in class IV and V students at SDN 2 Dwijaya, Musi Rawas Regency. The amount of influence will be measured using statistical data analysis, thus showing the relationship between variables in this study. This type of research is associative research. Associative research is research that aims to measure the relationship between two or more variables. can serve to explain, predict and control a symptom (Garaika, 2019)

The location of this research was conducted at SDN 2 Dwijaya, Tugumulyo District, Musi Rawas Regency, the subjects in this study were all classes IV and V, totaling 55 students. This study was conducted to measure whether there is an

effect of the use of gadgets on PAI learning outcomes in class IV and V students of SDN 2 Dwijaya. At first the researchers made initial observations and surveys, it turned out that several interesting things were found to be researched. Based on observations, researchers found that the learning outcomes of class IV and V students totaling 55 students, there were 40 students who experienced a decrease in Islamic Religious Education grades.

Population in this study were students in grades IV and V of SDN 2 Dwijaya, totaling 55 students. The sample was carried out on grade IV and V students at SDN 2 Dwijaya, totaling 55 students. The reason for selecting samples in grades IV and V is because grade IV and V students can already make realistic statements.

The sample in this study is a number of student populations in grades IV and V of SDN 2 Dwijaya. This study used non-probability sampling techniques. The approach used is a total sample. The reason the researchers in this study took samples with the total sample technique stated that where the population size was <100, the entire population was sampled in the study. (Sugiyono, 2019).

Operasionalisasi Variabel

Variable operationalization is needed to determine the types and indicators of the variables involved in this study. In addition, the operationalization of variables aims to determine the measurement scale of each variable, so that hypothesis testing can be carried out appropriately with tools. In more detail, the operationalization of variables in this study can be seen in the following table:

Table 1. Operationalization of Variables

Variable Concept	Dimensions	indicator	Scale	Item
Variable X: Gadget Usage (Positive impact)	Gadgets can be a medium for children to get creative and interesting ideas from the information contained in the gadget.	Utilization of gadgets	ordinal	5 4 3 2 1
	Gadgets can be a medium for children to enjoy learning.	Utilization of gadgets	ordinal	5 4 3 2 1
	The sophistication of gadgets means that children are more interested in reading	Utilization of gadgets	ordinal	5 4 3 2 1
	Devices help children in making assignments at school	Utilization of gadgets	ordinal	5 4

				3 2 1
	The presence of gadgets makes it easier for children to communicate with friends	Utilization of gadgets	ordinal	5 4 3 2 1
	Children do assignments from teachers using gadgets	Utilization of gadgets	ordinal	5 4 3 2 1
	Children are attracted to gadgets because there are many applications for learning.	Utilization of gadgets	ordinal	5 4 3 2 1
	Children are more interested in using gadgets to learn than playing games.	Utilization of gadgets		5 4 3 2 1
	Childhave a social media account to connect with friends	Utilization of gadgets		5 4 3 2 1
	ChildI prefer to study online rather than face to face because I can be satisfied playing with my gadgets at home	Utilization of gadgets		5 4 3 2 1
Variable X: Gadget Usage (Negative impact)	Children use gadgets for more than 3 hours per day	Intensity of gadget use	ordinal	1 2 3 4 5
	Gadgets make children lazy	Utilization of gadgets	ordinal	1 2 3 4 5
	Children find it very difficult to divide their time between studying and playing with gadgets.	Intensity of gadget use	ordinal	1 2 3 4 5

	Children rarely read books and often play games	Utilization of gadgets	ordinal	1 2 3 4 5
	Children get bored easily reading books and read more often using gadgets.	Utilization of gadgets	ordinal	1 2 3 4 5
	Children cannot concentrate on studying when they play with gadgets for too long.	Utilization of gadgets	ordinal	1 2 3 4 5
	Children spend more time with devices than studying	Intensity of gadget use	ordinal	1 2 3 4 5
	Children play gadgets every day	Intensity of gadget use	ordinal	1 2 3 4 5
	Children feel less social if they don't play with devices	Utilization of gadgets	ordinal	1 2 3 4 5
	Children prefer playing on gadgets rather than playing with friends and relatives	Utilization of gadgets	ordinal	1 2 3 4 5
Variable Y: PAI Learning Outcomes	PAI PAT Score Results for Semester 2 of the 2023/2024 Academic Year, Knowledge Aspect	a. Very good b. Good c. Enough d. Less	interval	90-100 80-90 70-80 0-70
	PAI PAT Score Results for Semester 2 of the 2023/2024 Academic Year, Skills Aspect	a. Very good b. Good c. Enough d. Less	interval	90-100 80-90 70-80 0-70

Table 3.2

Table 2. Criteria for Weighting Values on the Likert Scale

No.	Answer Options	Weight of Value

		Positive Statement (+)	**Negative Statement (-)**
1.	Strongly agree	5	1
2.	Agree	4	2
3.	Quite Agree	3	3
4.	Don't agree	2	4
5.	Strongly Disagree	1	5

Source: Sugiyono (2016:82)

Data Collection Techniques

To obtain data from the two variables in this study, namely the use of gadgets and PAI learning outcomes in grade IV and V students at SDN 2 Dwijaya, the data collection technique uses a closed questionnaire, namely statements or statements that already have alternative answers (options) that can only be selected by respondents. In this study, the questionnaire used consisted of 20 statements in indicator X, using an ordinal scale and documentation of PAT values in the knowledge value aspect and the skill value aspect for the 2023/2024 academic year.

Instrument Test

In collecting data for this study, an instrument was used that was expected to be able to measure data with good validity and reliability.

Table 3. Gadgets Use Questionnaire Instrument Outline

No	Variables	Indicator	Description	Question Items	
				Positive	Negative
1.	The Influence of Gadgets	Utilization of gadgets	Gadgets as a learning resource	1,2,3,4,6,7,8,10	12,14,15, 16
			Gadgets as a communication tool	5.9	19.20
		Intensity of gadget use	Duration of gadget usage		11.17
			Gadget usage time		13.18
Total				10	10

Validity Test

A validity test is considered valid if there is a match between the two data collected and the reality that occurs in the subject being studied.Validity describes how accurate the data that actually occurs in the subject is compared to the data that was successfully collected by the researcher. (Nuriyati et al., 2022)

The instrument whose validity is tested uses the Pearson Correlation formula (Product Moment Correlation) which is stated as follows:

$$\text{r hitung} = \frac{n\sum XY - (\sum X)(\sum Y)}{\sqrt{\{n\sum X^2 - (\sum X^2)\}\{n\sum Y^2 - (\sum Y^2)\}}}$$

r xy = Correlation coefficient

n = Number of samples
∑ XY = Sum of the multiplication of variables x and y
∑ X = Number of values of variable x
∑ Y = Total value of variable Y
∑ X^2 = Sum of the powers of the values of the variable x
∑ Y^2 = Sum of the powers of the values of the variable Y

The following are the indicators used to compile the research questionnaire, which can be seen in the following table:

Table 4. Device Usage Indicator

Variables	Indicator	Sub Indicators	No Item
Variable X Use of gadgets	Utilization of gadgets	Gadgets can be a medium for children to get creative and interesting ideas from the information contained in the gadget.	1
		Gadgets can be a medium for children to enjoy learning.	2
		The sophistication of gadgets means that children are more interested in reading	3
		Devices help children in making assignments at school	4
		The presence of gadgets makes it easier for children to communicate with friends	5
		Children do assignments from teachers using gadgets	6
		Children are attracted to gadgets because there are many applications for learning.	7
		Children are more interested in using gadgets to learn than playing games.	8
		Childhave a social media account to connect with friends	9
		ChildI prefer to study online rather than face to face because I can be satisfied playing with my gadgets at home	10
	Intensity of Gadget Usage	Children use gadgets for more than 3 hours per day	11
		Gadgets make children lazy	12
		Children find it very difficult to divide their time between studying and playing with gadgets.	13
		Children rarely read books and often play games	14
		Children get bored easily reading books and read more often using gadgets.	15
		Children cannot concentrate on studying when they play with gadgets for too long.	16
		Children spend more time with devices than studying	17
		Children play gadgets every day	18
		Children feel less social if they don't play with devices	19
		Children prefer playing on gadgets rather than playing with friends and relatives	20

Table 5. PAI Learning Outcome Indicators

Variables	Indicator	Sub Indicators	No Item
Variable Y PAI learning outcomes	PAI PAT Score Results Semester 2 Academic Year 2023/2024	PAI subject scores in the knowledge aspect	1
		PAI subject scores for the Skills aspect	2

The following are the criteria for the correlation coefficient value that can be used as a benchmark in testing the validity of questions:

Table 6. Instrument validity criteria

Correlation Coefficient	Decision
0.000 - 0.199	There is almost no correlation
0.200 - 0.399	Low correlation
0.400 - 0.599	The correlation is quite high
0.600 - 0.799	High correlation
0,800 - 1,000	Very high correlation

The validity testing criteria in this study used a significance level of 0.05. The testing criteria include: If r count > r table, then the measuring instrument used is valid. And if r count < r table, then the measuring instrument used is invalid.It is known that rtable uses a significance level of $\alpha = 0.05$ with n = 55, so the rtable value is 0.263.. To facilitate the calculation of excessive data, the researcher used the assistance of SPSS version 27.00 (Statistical Product and Service Solutions).

Table 7. Validity Test Results

No.	Statement	RCount	RTable	Category	Criteria	Information
1	P1	0, 899	0.263	Valid	Very high	Used
2	P2	0.838	0.263	Valid	Very high	Used
3	P3	0, 862	0.263	Valid	Very high	Used
4	P4	0.814	0.263	Valid	Very high	Used
5	P5	0.849	0.263	Valid	Very high	Used
6	P6	0.913	0.263	Valid	Very high	Used
7	P7	0.764	0.263	Valid	Tall	Used
8	P8	0.764	0.263	Valid	Tall	Used
9	P9	0.727	0.263	Valid	Tall	Used
10	P10	0.857	0.263	Valid	Very high	Used
11	P11	0.811	0.263	Valid	Very high	Used
12	P12	0.747	0.263	Valid	Tall	Used
13	P13	0.776	0.263	Valid	Tall	Used
14	P14	0, 814	0.263	Valid	Very high	Used
15	P15	0, 360	0.263	Valid	Low	Used
16	P16	0, 679	0.263	Valid	Tall	Used
17	P17	0, 416	0.263	Valid	High enough	Used
18	P18	0, 296	0.263	Valid	Low	Used
19	P19	0, 376	0.263	Valid	Low	Used

No.	Statement	RCount	RTable	Category	Criteria	Information
20	P20	0, 722	0.263	Valid	Tall	Used

Reliability Test

Reliability is the accuracy of a measuring instrument in measuring what it is intended to measure. This means that whenever the measuring instrument is used, it will provide measurement results with the same value (Nana Sudjana, 2007). To test the reliability of a test, use the Cronbach's Alpha formula, namely:

$$r_{11} = \frac{k}{k-1}\left\{1 - \frac{\sum \sigma_b{}^2}{\sigma_t{}^2}\right\}$$

Keterangan:

r_{11} = nilai reliabilitas

k = banyaknya butir soal

$\sigma_t{}^2$ = varian total

$\sum \sigma_b{}^2$ = total varian soal

The following are the criteria for interpreting the correlation index that can be used as a reference in testing the reliability of the instrument as shown in the following table:

Table 8. Instrument Reliability Criteria

Correlation Coefficient (r)	Decision
0.00 - 0.20	Not reliable
0.20 - 0.40	Low reliability
0.41 - 0.70	Quite reliable
0.71 - 0.90	High reliability
0.91 - 1.00	Very high reliability

Table 9

Reliability Statistics	
Cronbach's Alpha	N of Items
.957	20

Based on table 3.9, it was found that the reliability of the gadget usage questionnaire had a reliability coefficient of 0.957 meansvery high category, so thatthe data used is reliable or trustworthy. To facilitate the calculation, the researcher uses the help of SPSS 27.00 (Statistical Product and Service Solutions).

Data Analysis Techniques

The researcher used quantitative data analysis in this study. The statistics used were the t-test, and the requirements met before the t-test was conducted were as follows:

Hypothesis Testing

Testing of the research hypothesis was conducted using the T test with the help of the SPSS 27 for Windows program. The T test was used to measure whether or not there was an influence of gadget use on PAI learning outcomes. The T test used the Statistical Package for the Social Sciences (SPSS) 27 for Windows, using the following formula:

$$\text{t-test} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\left[\frac{SD_1^2}{N_1 - 1}\right] + \left[\frac{SD_2^2}{N_2 - 1}\right]}}$$

dengan :

$$SD_1^2 = \left[\frac{\sum X_1^2}{N_1} - (\bar{X}_1)^2\right]$$

$$SD_1^2 = \left[\frac{\sum X_2^2}{N_2} - (\bar{X}_2)^2\right]$$

Keterangan:
- $\bar{X}_1$: mean pada distribusi sampel 1
- $\bar{X}_2$: mean pada distribusi sampel 2
- SD_1^2 : nilai varian pada distribusi sampel 1
- SD_2^2 : nilai varian pada distribusi sampel 2
- N_1 : jumlah individu pada sampel 1
- N_2 : jumlah individu pada sampel 2

The criteria for testing the hypothesis are:

H0: There is no influence of gadget use on PAI learning outcomes in grades IV and V of SDN 2 Dwijaya.

Ha: There is an influence of gadget use on Islamic Religious Education learning outcomes in grades IV and V of SDN 2 Dwijaya.

Decision criteria:

1) Accept Ho if significance > 0.05
2) Reject Ho if significance < 0.05

RESULT AND DISCUSSION

RESULT

Research Implementation

The implementation of this research on July 25, 2024, was carried out directly by the researcher and according to the schedule. This research was conducted in grades IV and V of SDN 2 Dwijaya in the odd semester of the 2024/2025 school year. In the implementation of the research, the researcher distributed a gadget usage questionnaire to all students in grades IV and V of SDN 2 Dwijaya. Before conducting the research, a trial of the questionnaire instrument was carried out in grade V totaling 35 students on July 20, 2024.

Respondent Identity

Respondent identity data is obtained from the statement questionnaire they filled out. Distribution of respondent identity data to provide an overview of the respondent's condition. By using descriptive statistics, the results of the study will provide an overview of the distribution of data in the field.The data presented is raw data obtained using descriptive statistics.

1. Respondent Age

Respondents' age is related as a description of individual experience and responsibility. The tabulation of respondents' ages is as follows.

Table 10. Respondent Age

Age	Number of Respondents (People)	Percentage (%)
11 years old	37	67.3%
12 years old	18	32.7%
Total	55	100%

Source: Researcher's work in 2024.

Based on table 4.1, it can be seen that respondents aged 11 years were 37 people with a percentage of 67.3% and those aged 12 years were 18 people with a percentage of 32.7%. This shows that students in grades IV and V of SDN 2 Dwijaya are on average 11 years old, which is a productive age for learning.

2. Respondent Gender

Gender in general can affect how a person behaves. Often, in a field of work, gender is a differentiator in the activities carried out by individuals. Respondent data are distributed by gender as follows.

Table 11. Respondent Gender

Gender	Number of Respondents (People)	Percentage (%)
Man	31	56.4%
Woman	24	43.6%
Total	55	100%

Source: Researcher's work in 2024.

Based on table 4.2, it can be seen that there were 31 male respondents with a percentage of 56.4% and 24 female respondents with a percentage of 43.6%.

Research Results

1. Research Results Using Questionnaires

Table 12. Hypothesis Test Results

Variabel	Indikator	Sub Indikator	No Item	RCount	RTable	Variants	Reliability Coefficient	Kategori	Information
Variabel X Use of gadgets	Utilization of gadgets	Gadgets can be a medium for children to get creative and interesting ideas	1	0, 899	0,263	1,015	0,957	Valid	Used

Variabel	Indikator	Sub Indikator	No Item	RCount	RTable	Variants	Reliability Coefficient	Kategori	Information
		from the information contained in the gadget.							
		Gadgets can be a medium for children to enjoy learning.	2	0,.838	0,263	1,736	0,957	Valid	Used
		The sophistication of gadgets means that children are more interested in reading	3	0, 862	0,263	0,962	0,957	Valid	Used
		Devices help children in making assignments at school	4	0,814	0,263	1,213	0,957	Valid	Used
		The presence of gadgets makes it easier for children to communicate with friends	5	0,849	0,263	1,638	0,957	Valid	Used
		Children do assignments from teachers using gadgets	6	0,913	0,263	1,325	0,957	Valid	Used
		Children are attracted to gadgets because there are many applications for learning.	7	0,764	0,263	1,224	0,957	Valid	Used
		Children are more interested in using gadgets to learn than playing games.	8	0,764	0,263	1,277	0,957	Valid	Used
		Childhave a social media account to connect with friends	9	0,727	0,263	1,772	0,957	Valid	Used
		ChildI prefer to study online rather than face to face because I can	10	0,857	0,263	1,364	0,957	Valid	Used

Variabel	Indikator	Sub Indikator	No Item	RCount	RTable	Variants	Reliability Coefficient	Kategori	Information
		be satisfied playing with my gadgets at home							
	Intensity of Gadget Usage	Children use gadgets for more than 3 hours per day	11	0,811	0,263	1,513	0,957	Valid	Used
		Gadgets make children lazy	12	0,747	0,263	1,514	0,957	Valid	Used
		Children find it very difficult to divide their time between studying and playing with gadgets.	13	0,776	0,263	1,817	0,957	Valid	Used
		Children rarely read books and often play games	14	0, 814	0,263	1,213	0,957	Valid	Used
		Children get bored easily reading books and read more often using gadgets.	15	0, 360	0,263	0,467	0,957	Valid	Used
		Children cannot concentrate on studying when they play with gadgets for too long.	16	0, 679	0,263	0,475	0,957	Valid	Used
		Children spend more time with devices than studying	17	0, 416	0,263	0,490	0,957	Valid	Used
		Children play gadgets every day	18	0, 296	0,263	0,446	0,957	Valid	Used
		Children feel less social if they don't play with devices	19	0, 376	0,263	0,387	0,957	Valid	Used
		Children prefer playing on gadgets rather than playing with friends and relatives	20	0, 722	0,263	1,889	0,957	Valid	Used

2. Learning Outcomes

Students can obtain learning outcomes when they have completed all components of the learning activities..The learning outcomes in this study used the Final Semester Assessment (PAS) scores of even grade students in grades IV and V of SDN 2 Dwijaya.

Research Statistical Analysis

The testing conducted on the research hypothesis using the t-test with the help of the SPSS 27 for Windows program. The use of the t-test aims to determine whether or not there is an effect of gadget use on PAI learning outcomes in grade IV and V students of SDN 2 Dwijaya.

Table 13

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	The Influence of Gadgets – Learning Outcomes	5.12727	16.97280	2.28861	9.71566	-.53888	2.240	54	.029

Based on the calculation results, the significance value (t count) is 2.240. Furthermore, the t count value is compared with the t table value at a significance level of 5% and dk (n-2) the t table value is 1.674. Because the t count is greater than the t table, there is a significant influence between the use of gadgets on PAI learning outcomes. The results of the hypothesis test calculations are summarized in the following table

Table 14. Summary of Hypothesis Test Results

Variables		Price r		Price t		Information
X	Y	rxy	r table	t count	t table	
Use of Gadgets	PAI Learning Outcomes	0.646	0.263	2.240	1,674	Influence and significance

The significance value for gadget use on PAI learning outcomes is 0.029 (sig.2-tailed). The provisions in decision making are based on the following provisions:
Hypothesis:

Ha: There is an influence of gadget use on the learning outcomes of PAI grades IV and V of SDN 2 Dwijaya.

Ho: There is no effect of gadget use on the learning outcomes of Islamic Religious Education students in grades IV and V of SDN 2 Dwijaya.

Decision criteria:

1) Accept Ho if the significance value > 0.05
2) Reject Ho if the significance value < 0.05

Based on table 4.7, it can be seen that the significance value is 0.029 <0.05 so it can be concluded that Ho is rejected. The interpretation of the data is that there is an influence of gadget use on the learning outcomes of PAI in grades IV and V of SDN 2 Dwijaya.

DISCUSSION

Before conducting this research, a questionnaire was tested in class V with 35 students on July 20, 2024. The questionnaire trial showed that all 20 statements were valid. In addition, the reliability coefficient of the gadget usage questionnaire was obtained in a very high category with a reliability coefficient of 0.957. So thatThe data used is reliable or trustworthy, and can be used several times to measure the same object. Continued with the implementation of the research conducted on July 25, 2024 by the researcher by distributing a gadget usage questionnaire to respondents in grades IV and V of SDN 2 Dwijaya

In the implementation of this research, the questionnaire was distributed to all respondents totaling 55 people. Based on the results of the research that has been carried out, it shows that in the testt was obtainedt-value 2.240 > t-table 1.674 withmark Sig. (2-tailed)which is 0.029. This shows that 0.029 < 0.05so it can be concluded that Ho is rejected. The results of the study indicate that there is an influence of gadget use on the learning outcomes of grade IV and V students of SDN 2 Dwijaya.

Based on the results of this study, the use of gadgets with indicators of gadget utilization for learning media and communication tools and indicators of the intensity of gadget use can affect PAI learning outcomes. This is in line with Nortcliffe & Middleton's research,which states that the integration of personal devices in educational settings has shown significant potential to improve learning outcomes. Research shows that students are increasingly using their smartphones and tablets in innovative ways to support formal and informal learning, driving more personalized educational experiences (Nortcliffe, 2013).

A study of the influence of devices on learning outcomes was also carried out bymelly istanti and nelly indra meyfiani, shows that addiction to gadget use can have an effect on student learning outcomes, even though gadgets themselves have sophistication that can support student learning processes. Based on the results of data analysis in this study, it was concluded that gadgets had a 54.1% effect on mathematics learning outcomes (Istanti, 2023)

The positive use of gadgets can encourage students to be active in learning

and can increase their insight through gadget media. Difficult learning will become easy if students are able to utilize gadgets as a learning resource media. With proper management, the use of gadgets can be a very useful tool in improving student learning outcomes.

CONCLUSION

Based on the results of this study, it can be concluded that there is or there is an influence of gadget use on the learning outcomes of PAI grades IV and V SDN 2 Dwijaya. This is known from the results of the questionnaire on gadget use distributed to all respondents totaling 55 people. Then from the results of the analysis using the T test, the T count value was obtained at 2.240> t table 1.674 and the value (sig.2-tailed) 0.029 <0.05 so that it can be concluded that Ha is accepted and Ho is rejected.

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