



## The Effect of Gadget Addiction on the Ability to Read the Qur'an Among Students at Islamic Junior High Schools in Cirebon Regency

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**Abstract.** *In the era of globalization, the widespread use of digital gadgets has significantly influenced students' daily lives, including their learning processes. This study aims to evaluate the prevalence of gadget addiction among students at Madrasah Tsanawiyah (MTS) and to examine its potential impact on their ability to recite the Qur'an. A quantitative approach with a correlational research design was employed to identify the association between gadget addiction and Qur'an reading proficiency. The participants consisted of 122 students selected through convenience sampling from one MTS institution in Cirebon Regency. The instrument for measuring gadget addiction contained 11 items, while the Qur'an reading ability test consisted of 12 items, with a reliability coefficient of 0.593. Data analysis included descriptive statistics to describe the distribution of scores and inferential statistics, specifically the correlation test, to determine the relationship between the two variables. The results revealed that 77% of students experienced a high level of gadget addiction, while 15% demonstrated low levels, and 8% fell into the moderate category. In terms of Qur'an recitation ability, 63% of the students were classified in the low category, 35% in the moderate category, and only 2% in the high category. The correlation analysis produced a coefficient of -0.544\*\*, indicating a moderately strong negative relationship between gadget addiction and Qur'an reading ability (range 0.400–0.599). The two-tailed significance value ( $p = 0.000 < 0.05$ ) confirmed the statistical significance of this finding. Overall, the study highlights that greater gadget addiction is associated with lower Qur'an reading proficiency, whereas lower levels of gadget use are linked to improved recitation skills. These findings suggest the urgent need for educational interventions and parental guidance to balance gadget usage and ensure the strengthening of Qur'anic literacy among students.*

**Keywords:** *Al-Qur'an; Cirebon; Gadget Addiction; Madrasah Tsanawiyah; Students.*

### 1. INTRODUCTION

The digital era has brought significant changes to people's daily lives, particularly in the use of communication technologies such as mobile phones or smartphones (Agostini and Petrucco 2023). Smartphone penetration in Indonesia has reached 89% of the total population, with teenagers aged 13-18 years being the largest user group (I.N.P., I.G.M., and DK.T. 2025; Setiadi et al. 2019). This phenomenon is no exception among Madrasah Tsanawiyah students who are in their early teens, where mobile phone use has become an integral part of their daily activities..

Madrasah Tsanawiyah, as an Islamic educational institution, has specific characteristics in its curriculum, namely an emphasis on learning the Qur'an as a compulsory subject (Kustiyahningsih and Aini 2020; Syamsul, Miftachul, and Nur Hayati 2023). The ability to read the Qur'an well and correctly is a fundamental competency that students must master, including aspects of fluency, accuracy of makharijul huruf, and application of tajwid rules. However, initial observations at one Madrasah Tsanawiyah in Cirebon Regency show a decline in the quality of students' ability to read the Qur'an, which is thought to be correlated with the increasing intensity of mobile phone use.

Previous studies have explored the impact of smartphone use on students' academic abilities in general. Ammunje et al., (2023) found that excessive smartphone use can interfere with students' concentration and ability to focus. Meanwhile, research (Esan et al. 2025) shows that multitasking involving digital media can reduce the quality of learning and information retention. In the context of religious education, research (Munawaroh, Munawir, and Pavytha 2023) identified that students who are addicted to gadgets tend to have difficulty memorizing and understanding verses from the Qur'an.

However, research that specifically analyzes the relationship between cell phone addiction and the ability to read the Qur'an among Madrasah Tsanawiyah students is still very limited. The majority of previous studies have focused more on the impact of technology on academic achievement in general subjects, while learning the Qur'an has unique characteristics that require high concentration, visual-auditory coordination, and repeated practice to master the phonetic aspects of the Arabic language. This research gap is becoming increasingly important considering that Cirebon Regency has a large number of Madrasah Tsanawiyah with diverse student characteristics, yet there has been no comprehensive study on this phenomenon..

The urgency of this research lies in the need for early identification of the negative impacts of cell phone addiction on students' spiritual and academic abilities, particularly in the context of Al-Qur'an learning, which is the foundation of Islamic education. The findings of this study are expected to contribute to the development of learning strategies that are more adaptive to the challenges of the digital age, as well as to provide policy recommendations for madrasah administrators in optimizing Al-Qur'an learning amid the increasingly massive penetration of technology.

The novelty of this study lies in its specific focus on the ability to read the Qur'an as a dependent variable, using measurement instruments tailored to the standards of Qur'anic learning in madrasahs. In addition, this study will explore the mechanism of the influence of cell phone addiction on specific aspects of the ability to read the Qur'an, such as reading fluency, accuracy of makharijul huruf, and application of tajwid rules, which have not been studied in depth in previous literature.

Based on this background, this study aims to analyze the effect of cell phone addiction on the ability of Madrasah Tsanawiyah students in Cirebon Regency to read the Qur'an. Specifically, this study will identify the level of students' mobile phone addiction, measure their ability to read the Qur'an, analyze the relationship between these two variables, and

formulate strategic recommendations for improving the quality of Qur'anic learning in the digital age.

## **2. THEORETICAL STUDY**

### **The Theory of Technology and Digital Media Addiction**

Mobile phone addiction or smartphone addiction is a psychological phenomenon defined as excessive and compulsive use of mobile devices that interferes with an individual's daily activities (Ahn et al. 2025). Young, (1998) in his theory of internet addiction, adapted the criteria for addiction from the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) to identify addictive behavior toward technology. These criteria include excessive preoccupation, tolerance, withdrawal symptoms, loss of control, and negative effects on social, academic, or work functioning.

Habib, (2019) developed a behavioral addiction component model consisting of six elements: salience (dominance of thoughts about the activity), mood modification (mood changes), tolerance (need for increased intensity), withdrawal symptoms (uncomfortable symptoms when the activity is stopped), conflict (interpersonal and intrapersonal conflict), and relapse (the tendency to return to addictive behavior patterns) (Monteiro, Sousa, and Correia 2020). This model has been widely adapted to explain smartphone addiction, where individuals experience psychological dependence on their mobile devices.

The Uses and Gratifications Theory developed by Katz, Blumler, and Gurevitch (1973) explains that individuals actively choose media to fulfill certain psychological and social needs (Mateus, Leon, and Vásquez-Cubas 2023). In the context of smartphones, adolescents use these devices to fulfill their needs for entertainment, social communication, information, and personal identity (Karunakaran and Selvabaskar 2022). However, when use becomes excessive and uncontrolled, the gratification obtained can turn into harmful dependence.

### **Theory of Learning and the Ability to Read the Qur'an**

The ability to read the Qur'an is a complex skill that involves multiple cognitive processes, including recognition of Arabic letters, understanding of tajwid rules, visual-auditory coordination, and long-term memory. Gagné et al., (2010) in the learning hierarchy theory emphasize that learning complex skills requires mastery of prerequisite skills that are arranged hierarchically (Tang, Tsai, and Huang 2020). In the context of reading the Qur'an, students must master the recognition of Hijaiyah letters, understanding of harakat, and basic tajwid rules before they can read fluently and correctly.

The Cognitive Load Theory developed by Sweller, J., (1998) explains that human working memory capacity is limited in processing information. Effective learning occurs when the cognitive load does not exceed working memory capacity. In learning the Qur'an, students must process visual (Arabic text), auditory (pronunciation), and kinesthetic (articulation movements) information simultaneously. Distractions from external factors such as smartphone notifications can increase cognitive load and disrupt the learning process.

Social Cognitive Learning Theory Bandura, (1978) emphasizes the importance of attention as the first stage in the learning process. Reading the Qur'an requires sustained attention and focused concentration to process the unique characteristics of the Arabic language, such as reading direction from right to left, diacritics that determine pronunciation, and complex tajwid rules. Attention distractions caused by smartphone addiction can hinder the encoding and retention of information in the learning of the Qur'an.

### **Previous Relevant Research**

Several studies have explored the relationship between the use of digital technology and students' academic abilities. Rosen et al., (2013) in their study of 1,000 students found that the use of technology during learning was negatively correlated with academic achievement, especially in subjects that require high concentration. This finding is supported by research Ward et al. (2017) showing that the presence of smartphones, even in silent mode, can reduce cognitive performance because cognitive resources are allocated to refrain from using the device.

In the context of language learning, research by Kuznekoff & Titsworth, (2013) found that students who used mobile phones during lectures showed a significant decline in material comprehension and exam scores compared to students who did not use devices. This research is relevant because learning the Qur'an also involves complex linguistic aspects, including phonological processing and morphological awareness in Arabic.

Specific research on Al-Qur'an learning has been conducted by several researchers. Fauzi, M. R., & Rahman, (2020) in their research at Islamic boarding schools found that students with limited access to gadgets showed better Al-Qur'an reading skills than students with unlimited access. Research by Hidayat, (2019) found a negative correlation between the intensity of smartphone use and the ability to memorize the Qur'an among adolescent students.

However, research that specifically analyzes the mechanism of smartphone addiction's influence on the components of Quran reading ability is still limited. The majority of previous

studies were more descriptive in nature and did not use standard measurement instruments to comprehensively identify the level of smartphone addiction and Quran reading ability.

Based on the theoretical review and previous studies, it can be assumed that there is a negative relationship between the level of cell phone addiction and the ability to read the Qur'an among Madrasah Tsanawiyah students. Students with high levels of cell phone addiction tend to experience attention disorders, decreased concentration, and cognitive overload, which can hinder the process of learning the Qur'an, which requires focus and repeated practice.

### 3. METHODS

This study uses a quantitative approach with a correlational research design (simple correlation). According to Creswell, a correlational research design is a research method used to measure the relationship between two variables. In correlational research, researchers attempt to determine the extent to which changes in one variable (the independent variable) affect changes in another variable (the dependent variable) (Creswell 2015). The population in this study were students of a Madrasah Tsanawiyah (Islamic junior high school) in Cirebon Regency, with a sample of students in grades 7, 8, and 9. There were two variables studied in this research. First, gadget addiction (X) as the influencing variable (independent), and second, the variable of ability to read the Qur'an (Y) as the influenced variable (dependent). The working hypothesis with the formula  $H_a/H_1$  is: There is a relationship between gadget addiction and students' ability to read the Qur'an. Meanwhile, the null hypothesis,  $H_0$ : There is no relationship between gadget addiction and students' ability to read the Qur'an. The confidence interval or risk level in this study is 95%, where students in grades 7, 8, and 9 can correctly estimate the population parameters, namely students of one of the Islamic junior high schools in Cirebon Regency. The research sample was obtained through random sampling. The questionnaire was distributed to several classes in the school online using Google Forms. A total of 122 respondents filled out the questionnaire according to the research criteria. The instrument used was a questionnaire created in the form of a Likert scale Google Form with questions developed through Kimberly Young's gadget addiction theory, consisting of 11 items with reference to Table 2.1 categorization of gadget addiction levels. The questions were developed through Gagne's learning hierarchy, consisting of 12 items with reference to Table 2.2 categorization of Al-Qur'an reading skills.

**Table 1.** Categorization of Gadget Addiction Levels.

No.	Value Range	Category
1	11 – 21	Low
2	22 – 32	Medium
3	33 – 44	High

Source: This categorization calculation refers to the book "Compiling Psychological Scales" by Syaifuddin Azwar

**Table 2.** Categorization of Levels of Ability to Read the Qur'an.

No.	Value Range	Category
1	12 – 23	Low
2	24 – 35	Medium
3	36 – 48	High

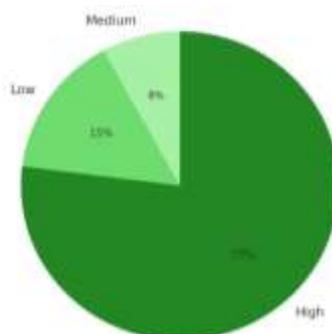
Source: This categorization calculation refers to the book "Compiling Psychological Scales" by Syaifuddin Azwar

Ethical aspects of the research were also strictly observed. Ethical approval was obtained from the researchers and schools involved, with an informed consent process that included written information and verbal explanations, confirmation of voluntary participation, and parental consent for underage participants. Confidentiality was maintained through the use of pseudonyms, encrypted data storage, restricted data access, and a clear data destruction schedule. The research respected Islamic values and practices through adjustments to clothing, behavior, consultation with religious scholars, and schedule flexibility in accordance with religious activities.

#### 4. RESULTS AND DISCUSSION

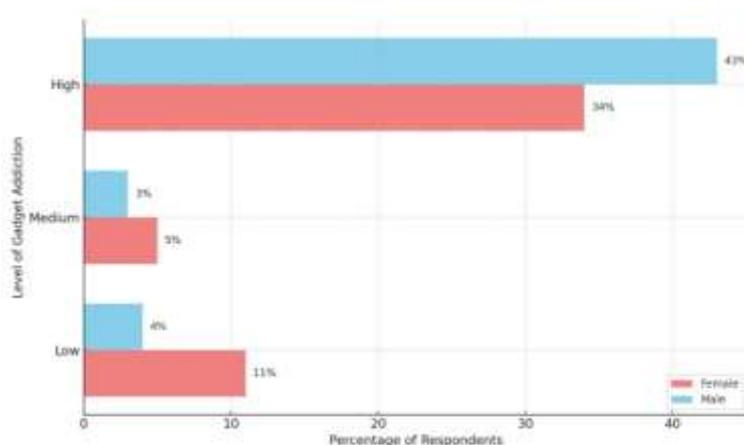
##### Results

##### *Gadget Addiction*



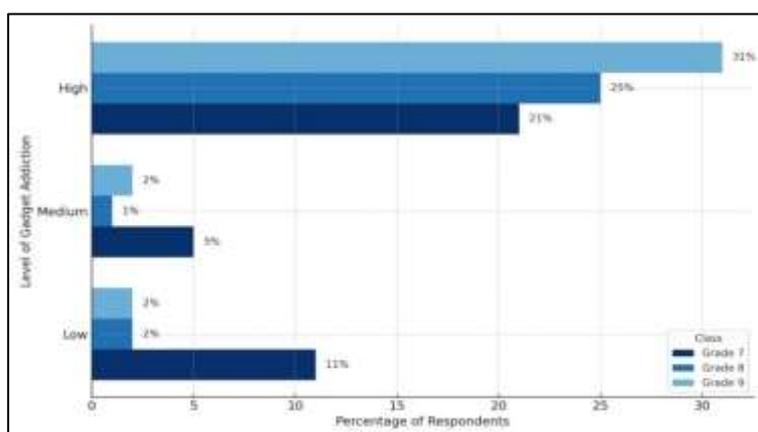
**Figure 1.** Percentage of Respondents' Gadget Addiction Level.

This image shows the percentage of gadget addiction among respondents, indicating a varied distribution. Of the total respondents, 15% were in the low category with a score range of 11-21. The majority of respondents, 77%, were classified as having a high level of gadget addiction with a score range of 22-32. The remaining 8% were classified as having a moderate level of addiction with a score range of 33-44..



**Figure 2.** Percentage Levels of Gadget Addiction Based on Gender.

Figure 1.2 shows the distribution of gadget addiction levels based on gender. Women tend to be more in the low addiction category (11%) than men (4%). Conversely, the majority of respondents, both men (43%) and women (34%), are in the high category, with men slightly more dominant. Interestingly, in the moderate addiction category, women show a higher percentage (5%) than men (3%).



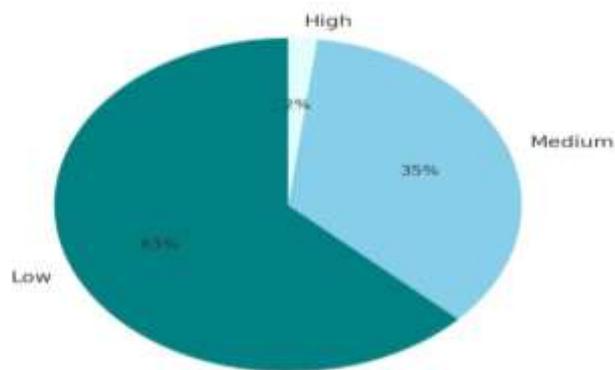
**Figure 3.** Percentage Distribution of Gadget Addiction Levels by Grade.

The image above shows the distribution of gadget addiction levels based on grade. From the results shown, it can be seen that 9th grade students have the highest percentage in the high addiction category (31%), followed by 8th grade students (25%) and 7th grade students (21%). In the low addiction category, 7th grade students show the highest percentage (11%), while 8th and 9th grades each have the same percentage of 2%. The moderate gadget addiction category

shows a more varied trend, with 9th grade reaching 2%, followed by 8th grade with 1%, and 7th grade with 5%.

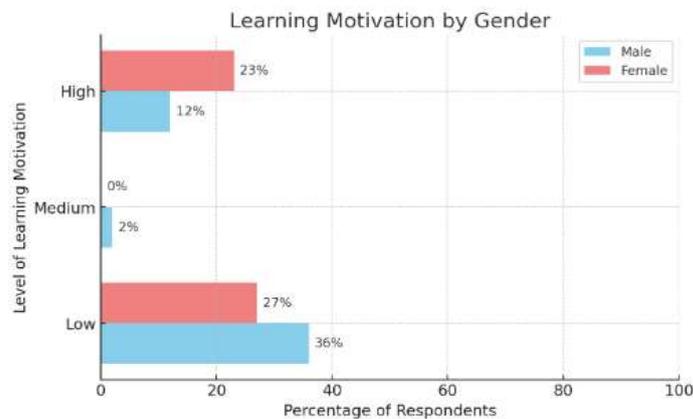
The gadget addiction data above (Figures 1.1, 1.2, 1.3) shows that the majority of students are at a high level of gadget addiction, with no significant difference between males and females. However, when viewed by grade, 9th grade students tend to be at a higher level of addiction than other grades. The high level of addiction is relatively lower than the moderate level, both in terms of gender and grade level.

### *Ability to Read the Qur'an*



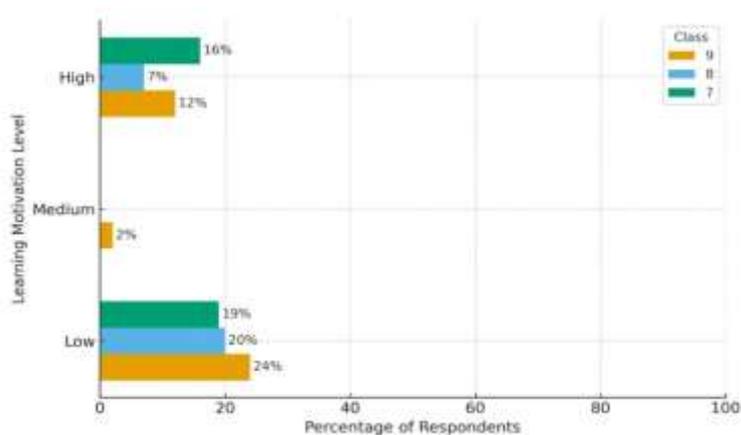
**Figure 4.** Percentage Data on Level of Ability to Read the Qur'an.

The image above shows the percentage of data regarding the overall level of Al-Qur'an reading ability of the 122 respondents. The majority of respondents, or 63% of the 122 students, had a low level of ability to read the Qur'an. 35% of respondents had an intermediate level of ability to read the Qur'an, and the remaining 2% of respondents had a high level of ability to read the Qur'an. These data show that the majority of students had a low level of ability to read the Qur'an, with only a small proportion of students having a high level of ability.



**Figure 5.** Distribution of Levels of Ability to Read the Qur'an by Gender.

Figure 2.2 illustrates the distribution of Al-Qur'an reading ability levels based on gender. From the data shown, it can be seen that in the high Qur'an reading ability category, women show a higher percentage (23%) than men (12%). Conversely, in the low Qur'an reading ability category, men have a higher percentage (36%) than women (27%). Meanwhile, in the moderate category of Al-Qur'an reading ability, there are almost no women in this category, while only 2% of men are recorded. It can be concluded that women tend to have higher Al-Qur'an reading ability than men, even though more men have low Al-Qur'an reading ability.



**Figure 6.** Distribution of Levels of Ability to Read the Qur'an by Class.

Figure 2.3 shows the distribution of Al-Qur'an reading ability levels based on grade. At the high level of Al-Qur'an reading ability, 7th grade students had the highest percentage at 16%, followed by 9th grade at 12%, and 8th grade at 7%. For low levels of Quran reading ability, the largest percentage of students is in grade 9 with 24%, followed by grade 8 with 20%, and grade 7 with 19%. Meanwhile, at the moderate level of Quran reading ability, there are only 2% of students in grade 7, while grades 8 and 9 have no students with moderate Quran reading ability. Based on this data, it can be concluded that seventh-grade students tend to have higher Quran reading skills compared to eighth- and ninth-grade students, while seventh-grade students show greater variation in their level of Quran reading skills, including a small number who have low skills.

**The Influence of Gadget Addiction on the Ability to Read the Qur'an**

**Table 3.** Simple Correlation Linearity Test Results.

			Sum of Squares	df	Mean Square	F	Sig.
Students' ability to read the Qur'an * Gadget Addiction	Between Groups	(Combine d)	1417.450	22	64.430	4.208	.000
		Linearity	866.771	1	866.771	56.609	.000
		Deviation from Linearity	550.679	21	26.223	1.713	.041
	Within Groups		1515.829	99	15.311		
	Total		2933.279	121			

Source: Calculation of the results of the simple correlation linearity test using SPSS by the author

The table above shows that the linearity significance value is 0.000, which indicates that the linearity significance value is less than 0.05. Therefore, it can be concluded that there is a linear relationship between gadget addiction and the ability to read the Qur'an. Thus, the above data is linear.

**Table 4.** Kolmogorov-Smirnov Normality Test Results.

		Unstandardized Residual
N		122
Normal Parameters <sup>a,b</sup>	Mean	.0000000
	Std. Deviation	4.13262359
Most Extreme Differences	Absolute	.075
	Positive	.075
	Negative	-.073
Test Statistic		.075
Asymp. Sig. (2-tailed)		.085 <sup>c</sup>

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.

Source: Calculation of the results of the simple correlation normality test using SPSS by the author

The table above shows that the distribution of data for gadget addiction (X) and ability to read the Qur'an (Y) is normal. This is because the asymp. sig. (2 tailed) value is 0.085, which is greater than 0.05. This means that the data above is normally distributed.

**Table 5.** Pearson Correlation Test.

		Gadget Addiction	Students' ability to read the Qur'an
Gadget Addiction	Pearson Correlation	1	-.544**
	Sig. (2-tailed)		.000
	N	122	122
Students' ability to read the Qur'an	Pearson Correlation	-.544**	1
	Sig. (2-tailed)	.000	
	N	122	122

\*\* . Correlation is significant at the 0.01 level (2-tailed).

*Source: Calculation of Pearson correlation test results - simple correlation using SPSS by the author*

The table above shows that the correlation symbol is - (negative), namely -0.544\*\*, meaning that there is a negative correlation between gadget addiction and students' ability to read the Qur'an. This means that the higher the level of gadget addiction, the lower the students' ability to read the Qur'an. Conversely, if the level of gadget addiction is low, students' ability to read the Qur'an will be higher. This results in lower learning outcomes for students.

In addition, the value of -0.544\*\* is included in the range of 0.40-0.599, which indicates a fairly strong relationship. The sig. (2-tailed) value is 0.000, which shows that the significance value is less than 0.05, so the relationship between gadget addiction and students' ability to read the Qur'an is significant. Thus, it can be concluded that there is a significant negative correlation between gadget addiction and students' ability to read the Qur'an. In other words, an increase in gadget addiction can decrease students' ability to read the Qur'an.

## Discussion

### *Implications for Quranic Learning in the Digital Era*

The findings of this study have important implications for the development of adaptive Qur'an learning strategies in the digital age. First, digital detox periods need to be integrated into the Qur'an learning schedule to allow for attention recovery and reduce cognitive fatigue. The implementation of "cell phone-free zones" during Qur'an learning can increase students' focused attention.

Second, developing learning methods that accommodate the characteristics of digital natives is urgent. The use of technology in Al-Qur'an learning can be a paradoxical solution, where technology is used to overcome the negative impacts of technology itself. Al-Qur'an learning applications designed with the principle of cognitive load optimization can help students develop sustained attention through healthy gamification.

Third, it is necessary to develop a digital literacy program that is integrated with religious learning, where students are taught to use technology mindfully and productively. This program should include awareness of the negative impact of cell phone addiction on spirituality and academic abilities, especially in the context of learning the Qur'an.

### ***Policy Recommendations for Madrasahs***

Based on the findings of this study, several policy recommendations can be formulated to optimize Al-Qur'an learning in madrasahs. First, the implementation of a smartphone policy that regulates the use of mobile phones in the madrasah environment, including designated times for the use of technology and smartphone-free periods during religious learning. This policy must be accompanied by socialization to students and parents about the scientific rationale behind the regulation.

Second, the development of a professional development program for Al-Qur'an teachers to improve their competence in integrating technology in a healthy way into learning. Teachers need to be equipped with an understanding of the neuropsychological effects of mobile phone addiction and pedagogical strategies to overcome it.

Third, implementation of a monitoring and evaluation system to periodically monitor the development of students' Al-Qur'an reading skills, taking into account the use of digital technology as one of the indicators. This data can be used for early intervention for students who show signs of declining skills due to mobile phone addiction.

### ***Research Contribution to the Body of Knowledge***

This study makes a significant contribution to the body of knowledge in several aspects. First, it fills a gap in the literature on the specific impact of cell phone addiction on religious learning, particularly the Qur'an. Previous studies have mostly focused on the impact on general academic achievement, while this study explores the spiritual-academic domain, which has unique characteristics.

Second, the development of a standardized instrument for measuring Al-Qur'an reading ability provides a methodological contribution that can be used in future studies. This instrument integrates cognitive, motor, and spiritual aspects into a comprehensive measurement framework.

Third, the findings on the differential influence of cell phone addiction on various aspects of Quran reading ability provide theoretical insights that can develop religious learning theory in the digital age. This study shows that not all aspects of Quran reading ability are

affected with the same intensity, providing guidance for more targeted and effective interventions.

## 5. CONCLUSION AND SUGGESTIONS

Amidst globalization, gadget usage is showing high numbers in Indonesia. By 2025, the number of mobile phone users will reach 354 million, placing Indonesia fourth in the world. Excessive gadget usage can lead to a phenomenon known as gadget addiction. Gadget addiction is not only experienced by adults but also by children, including students, which can affect their motivation and learning outcomes. The results of a study conducted at a junior high school in Cirebon Regency with a sample of 7th, 8th, and 9th grade students showed that gadget addiction affects students' ability to read the Qur'an. In fact, the analysis of the data on the influence of gadget addiction on the ability to read the Qur'an shows a negative correlation. This means that the higher the level of gadget addiction, the lower the students' ability to read the Qur'an, and vice versa, the lower the gadget addiction, the higher the students' ability to read the Qur'an. In fact, the level of gadget addiction among students at one Islamic junior high school in Cirebon Regency shows a high level of addiction, with a low level of ability to read the Qur'an.

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