

The Effect of Smartboard Use on Students' Learning Interest in Islamic Religious Education at Grade VI of SD Negeri Mekarmanah

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Abstract

This study aims to examine the effect of Smartboard use on students' learning interest in Islamic Religious Education among sixth-grade students at SD Negeri Mekarmanah. The study was conducted because learning interest in Islamic Religious Education still needed improvement, while the available Smartboard facility had not been used optimally in classroom learning. This research used a quantitative approach with a pre-experimental one group pretest-posttest design. The participants were 33 sixth-grade students selected through total sampling. Data were collected using a learning interest questionnaire, observation, and documentation. The questionnaire consisted of 12 valid items and showed acceptable reliability with a Cronbach's Alpha value of 0.739. The data were analyzed using descriptive statistics, the Shapiro-Wilk normality test, and the Paired Sample t-Test. The results showed that the mean score increased from 40.03 in the pretest to 50.00 in the posttest. The hypothesis test showed a significant difference between pretest and posttest scores, $t(32) = -16.821$, $p < .001$. These findings indicate that Smartboard use can improve students' attention, interest, and active involvement in Islamic Religious Education learning.

Keywords: Smartboard; Learning Interest; Islamic Religious Education; Elementary Students.

Abstrak

Penelitian ini bertujuan untuk menguji pengaruh penggunaan Smartboard terhadap minat belajar peserta didik pada mata pelajaran Pendidikan Agama Islam kelas VI di SD Negeri Mekarmanah. Penelitian ini dilatarbelakangi oleh minat belajar peserta didik yang masih perlu ditingkatkan, sementara fasilitas Smartboard yang tersedia di sekolah belum dimanfaatkan secara optimal dalam pembelajaran. Penelitian ini menggunakan pendekatan kuantitatif dengan desain pre-eksperimen tipe one group pretest-posttest. Subjek penelitian berjumlah 33 peserta didik kelas VI yang dipilih melalui teknik sampel jenuh. Data dikumpulkan melalui angket minat belajar, observasi, dan dokumentasi. Instrumen angket terdiri atas 12 butir valid dan memiliki reliabilitas yang dapat diterima dengan nilai Cronbach's Alpha sebesar 0,739. Data dianalisis menggunakan statistik deskriptif, uji normalitas Shapiro-Wilk, dan Paired Sample t-Test. Hasil penelitian menunjukkan bahwa nilai rata-rata meningkat dari 40,03 pada pretest menjadi 50,00 pada posttest. Hasil uji hipotesis menunjukkan adanya perbedaan signifikan antara skor pretest dan posttest, $t(32) = -16,821$, $p < 0,001$. Temuan ini menunjukkan bahwa penggunaan Smartboard dapat meningkatkan

perhatian, ketertarikan, dan keterlibatan aktif peserta didik dalam pembelajaran Pendidikan Agama Islam.

Kata Kunci: Smartboard; Minat Belajar; Pendidikan Agama Islam; Peserta Didik Sekolah Dasar.

INTRODUCTION

Learning is a process that changes students' knowledge, attitudes, and skills through direct interaction with their learning environment. In elementary education, this process does not only depend on students' intellectual ability. It also depends on their interest in learning. Learning interest encourages students to pay attention, participate actively, ask questions, and remain involved in classroom activities. In Islamic Religious Education, learning interest has a strategic role because the subject does not only transfer religious knowledge, but also develops values, attitudes, and moral character.

The importance of learning has a strong foundation in Islamic teaching. The command to read in QS. Al-'Alaq [96]: 1 shows that learning is part of a religious obligation. This verse gives a basic orientation that education should lead students to understand knowledge and values through meaningful learning activities. In the context of Islamic Religious Education, teachers need to create a learning process that can attract students' attention and help them understand religious messages in a clear and relevant way.

Students' interest in learning Islamic Religious Education cannot be separated from the way teachers design classroom activities. Akrim (2021) explains that monotonous learning can reduce students' interest because students tend to become passive when the learning process only relies on verbal explanation. Interest in learning appears when students feel attracted to the lesson, focus on the learning process, and show willingness to participate in classroom activities. This condition becomes important in Islamic Religious Education because students need to understand, internalize, and practice religious values in daily life.

Elementary school students are generally at a concrete operational stage. They understand learning materials more easily when teachers present them through visual displays, real examples, and interactive activities. For this reason, Islamic Religious Education needs learning media that can connect abstract religious concepts with students' concrete experiences. A lesson about faith, worship, morality, and Islamic history will be easier to understand when students can see pictures, watch videos, interact with learning objects, or respond directly to questions shown on digital media.

The Qur'an also emphasizes the importance of delivering messages through wise and good instruction. QS. An-Nahl [16]: 125 states that humans should be invited to the path of God with wisdom and good teaching. In education, this principle can be understood as the need to use appropriate methods, language, and media according to students' characteristics. The use of learning media is also reflected in the teaching practice of Prophet Muhammad SAW. In a hadith narrated by Bukhari, the Prophet used lines as visual media to explain a message to his companions. This example shows that visual aids have long been used in Islamic educational practice to clarify meaning and help learners understand the material.

One of the learning media that can support visual and interactive learning is Smartboard. Smartboard is an interactive board connected to digital devices that allows teachers to present materials through text, images, sound, video, animation, and interactive activities. Sanaky (2013) states that technology-based learning media can create communicative and student-centered learning. Through Smartboard, teachers can combine explanation, visualization, questioning, and student participation in one learning process. Students do not only listen to the teacher, but can also interact with learning content displayed in front of the class.

The use of various and attractive media can support students' learning interest. Kurnia (2019) states that learning media can increase students' attention because learning is not limited to verbal explanation. Media helps students receive information through visual and interactive experiences. In Islamic Religious Education, this condition becomes relevant because several materials require explanation through examples, illustrations, or contextual presentation. Smartboard can help teachers present verses, prayers, stories of prophets, worship procedures, and moral values in a more concrete form.

Initial observation at Grade VI of SD Negeri Mekarmanah shows that Islamic Religious Education learning still faces several problems. Many students show low attention and limited participation during the lesson. Around 80% of students appear less enthusiastic, rarely respond to questions, and do not actively participate in class discussions. The learning process still tends to use conventional media, such as a whiteboard and textbooks. At the same time, the school already has Smartboard facilities, but their use in Islamic Religious Education has not been optimal. This condition shows a gap between available learning technology and its actual use in the classroom.

This situation requires a learning innovation that can increase students' interest and participation. Smartboard has the potential to support Islamic Religious Education because it can display material in visual, audio, and interactive forms. The use of Smartboard can help teachers build a more active classroom atmosphere and provide students with a more engaging learning

experience. However, the use of Smartboard should not be seen only as the use of technology. It should be understood as part of a learning strategy that connects media, material, method, and student characteristics.

Based on the background above, this study focuses on the use of Smartboard in Islamic Religious Education learning at Grade VI of SD Negeri Mekarmanah. The main problem in this study is whether the use of Smartboard affects students' learning interest in Islamic Religious Education. This problem is developed into three research questions. First, how is students' learning interest before the use of Smartboard in Islamic Religious Education? Second, how is students' learning interest after the use of Smartboard in Islamic Religious Education? Third, is there a significant effect of Smartboard use on students' learning interest in Islamic Religious Education? The aims of this study follow those research questions. This study aims to describe students' learning interest before the use of Smartboard, describe students' learning interest after the use of Smartboard, and examine the effect of Smartboard use on students' learning interest in Islamic Religious Education at Grade VI of SD Negeri Mekarmanah. The hypothesis proposed in this study is that there is a significant effect of Smartboard use on students' learning interest in Islamic Religious Education.

Several previous studies show that interactive learning media can improve students' learning interest. Rahmat (2019) found that the use of interactive learning media increased students' attention, involvement, and enthusiasm in classroom learning. This finding indicates that students tend to show stronger interest when the learning process gives them opportunities to see, respond, and participate in the material presented by the teacher.

Research by Syofiyanti et al. (2025) also shows that Smartboard as an interactive learning medium can increase students' attention, active participation, and learning interest. Smartboard helps teachers present material through audio-visual and interactive formats. This kind of presentation makes classroom activities more varied and helps students avoid boredom during the learning process. In elementary education, this finding is important because students need learning experiences that are concrete, visual, and close to their developmental characteristics.

The findings of previous studies show that technology-based interactive media has a positive contribution to learning. However, most previous studies tend to discuss Smartboard or interactive media in general subjects, such as mathematics, science, and civic education. Studies that specifically examine the effect of Smartboard on learning interest in Islamic Religious Education at the elementary school level are still limited. Islamic Religious Education has different characteristics

from general subjects because it includes knowledge, values, attitudes, and religious practice. Therefore, research on Smartboard use in this subject needs specific attention.

The research gap in this study lies in the limited empirical discussion about Smartboard use in Islamic Religious Education learning at elementary school. This study does not only examine the use of digital media as a teaching tool. It also examines how Smartboard can influence students' interest in learning religious material. The focus on Grade VI students at SD Negeri Mekarmanah gives a specific context because the school has Smartboard facilities that have not been used optimally in Islamic Religious Education learning.

This study is based on the concept of learning interest, learning media, multimedia learning, and constructivist learning. Learning interest refers to students' psychological tendency to feel attracted, attentive, and actively involved in learning activities. Akrim (2021) states that learning interest is related to students' attention, attitude, and participation in the learning process. Students with high learning interest usually show focus, curiosity, willingness to ask questions, and active involvement in classroom activities.

Learning media functions as a tool that helps teachers deliver material and helps students understand learning content. Kurnia (2019) explains that attractive learning media can increase students' attention because the learning process becomes more varied. Sanaky (2019) adds that technology-based media can support communicative and student-centered learning. In this study, Smartboard is positioned as interactive learning media that helps teachers present Islamic Religious Education materials through visual, audio, and interactive features.

The theory of multimedia learning is also relevant to this study. Mayer (2019) explains that students can learn better when information is presented through verbal and visual channels in an organized way. Smartboard supports this principle because it allows teachers to combine text, images, sound, video, animation, and direct interaction. This combination can help students process information more clearly, especially when the material contains abstract concepts or values that need concrete examples.

Constructivist learning theory also supports the use of Smartboard. Hasibuan et al. (2026) emphasizes that learning becomes more meaningful when students actively construct understanding through interaction, experience, and classroom participation. Smartboard can support this process by providing space for students to answer questions, observe visual materials, discuss content, and engage directly with learning activities. In Islamic Religious Education, this interaction can help students understand religious values through more active and contextual learning experiences.

Based on these theoretical perspectives, Smartboard use is expected to influence students' learning interest. Smartboard can attract attention through visual and audio displays, maintain students' focus through interactive activities, and encourage participation through direct classroom involvement. In this study, Smartboard is treated as the independent variable, while students' learning interest is treated as the dependent variable. The relationship between these variables is examined to determine whether Smartboard use has a significant effect on students' learning interest in Islamic Religious Education at Grade VI of SD Negeri Mekarmanah.

METHODS

Research Design

This study employed a quantitative approach using a pre-experimental design with a one group pretest-posttest model (Hardani et al., 2020). The quantitative approach was selected because the data were numerical and analyzed statistically to examine the effect of Smartboard use on students' learning interest in Islamic Religious Education. Quantitative research is used to study a specific population or sample through research instruments and statistical data analysis (Sugiyono, 2019).

The one group pretest-posttest design was used because this study involved one group without a control group. Students were given a pretest to identify their learning interest before the treatment. They then participated in Islamic Religious Education learning using Smartboard. After the treatment, students were given a posttest to identify changes in their learning interest. This design is appropriate for examining score differences before and after treatment within the same group (Arikunto, 2019). The design pattern was O1 X O2, where O1 refers to the pretest, X refers to the Smartboard-based learning treatment, and O2 refers to the posttest.

Research Setting And Participants

The study was conducted at SD Negeri Mekarmanah, located in Kampung Ciparay RT 03 RW 05, Mekarjaya Village, Campaka District, Cianjur Regency, West Java, Indonesia. The school was selected because it had Smartboard facilities that could be used in classroom learning, but their use in Islamic Religious Education had not been optimized. This condition provided a relevant context for examining the use of Smartboard in a more structured learning process.

The population of this study consisted of all sixth-grade students at SD Negeri Mekarmanah in the 2025/2026 academic year. The total number of students was 33, consisting of 12 male students and 21 female students. The sampling technique used in this study was saturated sampling or total sampling, in which all members of the population were included as research

participants. This technique was used because the population was relatively small and all students could be involved as respondents (Sugiyono, 2019).

Research Variables

This study consisted of two variables. The independent variable was Smartboard use, while the dependent variable was students' learning interest. Smartboard use refers to the use of an interactive digital board in Islamic Religious Education learning to present text, images, videos, animations, and interactive activities. Technology-based learning media can support communicative, engaging, and student-centered learning (Sanaky, 2019).

Students' learning interest refers to students' tendency to feel interested, happy, attentive, and actively involved in Islamic Religious Education learning. Learning interest is related to attention, enjoyment, interest in the material, and participation in classroom activities. Students' learning interest can be influenced by teaching strategies, learning media, classroom atmosphere, and learning interaction (Akrim, 2021; Kurnia, 2019).

Research Instruments

The main instrument used in this study was a student learning interest questionnaire. The questionnaire was developed based on four indicators: enjoyment in learning Islamic Religious Education, attention during the learning process, interest in the learning material, and involvement in learning activities. Each indicator was developed into three statement items, resulting in 12 questionnaire items.

The questionnaire used a Likert scale with five response options: Always, Often, Sometimes, Rarely, and Never. The score ranged from 5 for Always to 1 for Never. The questionnaire scores were used to measure students' learning interest before and after the implementation of Smartboard-based learning.

In addition to the questionnaire, this study also used observation sheets and documentation. Observation was used to examine the implementation of Smartboard use in Islamic Religious Education learning. The observed aspects included Smartboard preparation, use of Smartboard features, student interaction, and implementation of learning activities. Documentation was used to collect supporting data, such as school profiles, student data, lesson plans, attendance lists, and photos of learning activities.

Validity And Reliability

Validity testing was conducted to ensure that each questionnaire item could accurately measure students' learning interest. Validity refers to the accuracy and precision of an instrument in performing its measurement function (Hamzah & Susanti, 2020). The validity test was conducted

using IBM SPSS Statistics by examining the significance value of each item correlation. An item was considered valid when the significance value was lower than 0.05.

The validity test showed that all 12 items of the learning interest questionnaire had significance values below 0.05. The significance values ranged from 0.000 to 0.008. Therefore, all questionnaire items were declared valid and could be used to measure students' learning interest. Reliability testing was conducted to determine the consistency of the research instrument. The reliability of the questionnaire was tested using Cronbach's Alpha. An instrument is considered reliable when the Cronbach's Alpha value is around 0.70 or higher. The reliability test showed a Cronbach's Alpha value of 0.739. This value indicates that the learning interest questionnaire had an acceptable level of reliability.

Data Collection Procedure

Data were collected through questionnaires, observation, and documentation. The questionnaire was administered before and after Smartboard-based learning. The questionnaire before the treatment was used as a pretest to identify students' initial learning interest. The questionnaire after the treatment was used as a posttest to identify students' learning interest after participating in Islamic Religious Education learning using Smartboard.

Observation was conducted during the learning process. It was used to examine how the Smartboard was implemented in the classroom and how students responded to the learning activities. Documentation was used to support the research data through school documents, learning materials, attendance records, and evidence of classroom activities during the study.

Data Analysis

The data were analyzed using IBM SPSS Statistics. The first analysis was descriptive statistics to describe students' learning interest scores before and after Smartboard use. The descriptive statistics included mean, minimum score, maximum score, and standard deviation. The normality test was conducted using the Shapiro-Wilk test because the sample size was less than 50 students. The data were considered normally distributed when the significance value was higher than 0.05. If the data were normally distributed, hypothesis testing was conducted using the Paired Sample t-Test to examine the difference between pretest and posttest mean scores within the same group. If the data were not normally distributed, the Wilcoxon Signed Rank Test could be used as a nonparametric alternative.

The hypothesis testing decision was based on the significance value. If the Sig. 2-tailed value was lower than 0.05, H_0 was rejected and H_a was accepted. This means that Smartboard use had

an effect on students' learning interest in Islamic Religious Education. If the Sig. 2-tailed value was higher than 0.05, H0 was accepted and Ha was rejected.

RESULT AND DISCUSSION

Research setting

This study was conducted at SD Negeri Mekarmanah, Campaka District, Cianjur Regency, West Java, Indonesia. The school is a public elementary school with B accreditation and NPSN 20203680. In the academic year of the study, the school had 159 students from Grade I to Grade VI. The participants of this study were 33 sixth-grade students, consisting of 12 male students and 21 female students. Grade VI was selected because it was relevant to the purpose of the study, namely to examine the use of Smartboard in Islamic Religious Education learning, especially in a school that already had Smartboard facilities but had not used them optimally in the subject.

Students' learning interest before Smartboard use

The initial measurement was conducted to identify students' learning interest before the use of Smartboard. At this stage, Islamic Religious Education learning still tended to use conventional media, such as a whiteboard and textbooks. Classroom observation showed that some students did not maintain stable attention during the lesson. Several students were also less active when the teacher asked questions or invited them to participate in classroom discussion.

The pretest data showed that students' learning interest scores ranged from 33 to 45. The mean score of the pretest was 40.03, with a standard deviation of 3.216. These data indicate that students' learning interest before the use of Smartboard was not yet optimal. The relatively small standard deviation shows that students' scores were not widely dispersed.

Table 1. Descriptive statistics of students' learning interest before and after Smartboard use

Test	N	Minimum	Maximum	Sum	Mean	Standard deviation
Pretest	33	33	45	1321	40.03	3.216
Posttest	33	44	56	1650	50.00	2.681

The initial condition shows the importance of learning media in building students' attention and classroom involvement. Learning that depends heavily on verbal explanation may make students lose focus more easily, especially at the elementary school level, where students need concrete and interactive learning experiences. This finding is in line with Maritsa et al. (2021), who state that the use of technology in education can help create learning that is more engaging and suitable for students' development.

Students' learning interest after Smartboard use

After Islamic Religious Education learning was conducted using Smartboard, students' learning interest scores increased. The posttest data showed a minimum score of 44 and a maximum score of 56. The mean score of the posttest was 50.00, with a standard deviation of 2.681. Compared with the pretest mean score of 40.03, there was an increase of 9.97 points.

The improvement was reflected in students' learning behavior during the classroom process. Students paid more attention to the material, responded more actively to the teacher's questions, and showed stronger interest in learning activities. Smartboard allowed the teacher to present material through text, images, videos, animations, and interactive activities. This type of presentation helped students gain a more concrete learning experience and reduced dependence on oral explanation.

The use of Smartboard also made Islamic Religious Education learning more visual and participatory. Materials related to values, behavioral examples, stories, or worship practices could be presented in forms that were easier for students to understand. Miftah (2022) explains that attractive learning media can help increase students' attention and make the learning process more effective and meaningful. In this study, Smartboard helped the teacher shift the classroom atmosphere from a mainly one-way learning process to a more participatory learning process.

This finding also supports Nurdyansyah (2023), who states that technology-based learning media can create more engaging learning experiences, increase motivation, and help students understand materials more easily. The increase in learning interest in this study was not only reflected in the score improvement, but also in students' responses during the lesson. Students became more active when the material was presented visually and when the teacher involved them in Smartboard-based activities.

Normality test

The normality test was conducted to determine the appropriate hypothesis test. Since the sample consisted of fewer than 50 students, the Shapiro-Wilk test was used. The test results showed that the significance value of the pretest was 0.138 and the significance value of the posttest was 0.236. Both values were higher than 0.05, indicating that the pretest and posttest data met the normality assumption.

Table 2. Shapiro-Wilk normality test

Data	N	Sig.
Pretest	33	0.138
Posttest	33	0.236

The normality result provided the basis for using the Paired Sample t-Test. This parametric test was relevant because the study compared two scores from the same group, namely scores before and after Smartboard use. This analysis allowed the researcher to examine whether the change in students' learning interest scores was statistically significant.

The effect of Smartboard use on students' learning interest

The Paired Sample t-Test showed a significant difference between the pretest and posttest scores. The obtained t value was -16.821, with a significance value of $p < .001$. Since the significance value was lower than 0.05, the null hypothesis was rejected and the alternative hypothesis was accepted. This means that Smartboard use had a significant effect on students' learning interest in Islamic Religious Education at Grade VI of SD Negeri Mekarmanah.

Table 3. Paired Sample t-Test result

Pair	Mean difference	t	df	Sig. 2-tailed
Pretest and posttest	-9.970	-16.821	32	< .001

The mean difference of -9.970 indicates that the posttest score was higher than the pretest score. The negative sign appeared because SPSS calculated the difference by subtracting the posttest score from the pretest score. Substantively, the result shows an increase in learning interest after students participated in Islamic Religious Education learning using Smartboard.

The increase in learning interest can be understood through the characteristics of Smartboard as an interactive learning medium. Smartboard allows teachers to present materials in more varied ways, combine visual and audio elements, and provide opportunities for students to interact with learning content. Ali et al. (2024) state that interactive learning media can increase students' involvement and create more meaningful learning experiences. In this study, such involvement appeared through better attention, more active responses, and higher enthusiasm during the learning process.

The result also supports Riyadi & Ningsih (2025), who explain that the use of Interactive Flat Panel Display in learning can increase students' activeness because it allows direct interaction with learning materials. Smartboard has a similar function because it does not only display materials, but also gives students opportunities to respond, observe, and take part in classroom activities. In Islamic Religious Education learning, this feature helps teachers present religious materials in a more concrete way and closer to students' learning experiences.

Anandito Rahayu & Makmur (2024) state that Smartboard use can support learning innovation because it creates a more engaging, interactive, and student-centered learning atmosphere. The result of this study strengthens this view in the context of Islamic Religious

Education at the elementary school level. The increase in students' learning interest scores shows that Smartboard functions not only as a visual aid, but also as a medium that can build students' attention and participation.

This finding is also in line with Hasriwana et al. (2024), who explain that interactive technology-based Smartboard can increase students' learning interest through attractive material presentation and active student involvement. In this study, the shift from conventional learning to Smartboard-based learning provided a more varied learning experience. Students did not only listen to the teacher's explanation, but also observed visual materials, followed visual instructions, and responded directly to learning activities.

Theoretically, the result strengthens the view that learning interest can increase when learning provides engaging, concrete, and interactive experiences. In Islamic Religious Education, Smartboard helps teachers connect value-based and conceptual materials with visual presentations that are easier for elementary school students to understand. Practically, the finding shows that school technology facilities need to be used in a planned way so that they do not only function as supporting tools, but also become part of learning strategies that influence students' classroom involvement.

CONCLUSION

This study shows that Smartboard use plays an important role in increasing students' learning interest in Islamic Religious Education at Grade VI of SD Negeri Mekarmanah. The increase in the mean score from 40.03 in the pretest to 50.00 in the posttest indicates a positive change after Smartboard-based learning was implemented. The Paired Sample t-Test result, with a significance value of $p < .001$, also shows that the difference was statistically significant. This finding suggests that interactive learning media do not only function as visual aids, but also help build students' attention, interest, and involvement in the learning process.

Pedagogically, Smartboard helps teachers present Islamic Religious Education materials in a more concrete, varied, and engaging way. Materials that were previously delivered through conventional methods can be presented through text, images, videos, animations, and interactive activities. This condition helps students understand the material more easily, respond more actively, and participate more enthusiastically in classroom activities. Therefore, Smartboard use can be considered a relevant learning strategy to improve the quality of Islamic Religious Education learning in elementary schools.

This study has limitations because it used one group without a control group and involved only 33 students from one school. Future research is recommended to use an experimental design with a control group, a larger sample size, and more varied research locations. Further studies may also examine the effect of Smartboard use on other aspects, such as learning outcomes, learning motivation, understanding of religious concepts, or students' religious attitudes.

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