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The Effect of Artificial Intelligence-Based Visual Learning Media (Canva) on Improving Interest in Learning Islamic Cultural History among Grade X Students of MA Subulussalam

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Abstract

This study aims to determine the effect and the magnitude of effectiveness of Artificial Intelligence (AI)-based visual learning media (Canva) on students' interest in learning Islamic Cultural History (SKI) at MA Subulussalam. The background of this research is the low learning interest of Class X.1 students, characterized by passive behavior, lack of attention, and minimal classroom engagement during SKI lessons. This study employed a quantitative approach with a pre-experimental design using the One-Group Pretest-Posttest Design. The sample consisted of 28 students of Class X.1, selected through Cluster Random Sampling. Data were collected using a Likert-scale learning interest questionnaire consisting of 23 validated items and were analyzed using the Paired Sample T-Test and the N-Gain Score. The results showed that the students' mean learning interest score increased from 54.50 (pretest) to 71.71 (posttest). The Paired Sample T-Test yielded t-count = 17.183 > t-table = 2.052 with Sig. (2-tailed) = 0.000 < 0.05, meaning that H_0 was rejected and H_a was accepted. The N-Gain Score calculation produced an average of 0.451, categorized as "Medium" effectiveness. Therefore, AI-based visual learning media (Canva) is proven effective in improving the learning interest of Class X.1 students in the SKI subject at MA Subulussalam.

Keywords: Visual Learning Media, Artificial Intelligence, Canva, Learning Interest, Islamic Cultural History

INTRODUCTION

Learning Islamic Cultural History (SKI) plays an important role in shaping students' understanding of the course of Islamic history, the values of struggle, and the exemplary conduct of Islamic figures. In practice, however, SKI is often perceived as a memorization-based subject that is unappealing and monotonous. This perception has the potential to significantly affect students' interest in learning (Nurmidi et al., 2024).

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Learning interest is one of the key factors that determine the success of the learning process. Slameto (2010) defines interest as a sense of preference and attraction toward a thing or activity without anyone asking. Students with high learning interest tend to participate more actively, have greater curiosity, stay focused, and show enthusiasm during lessons. Conversely, students who lack interest tend to be passive and less optimal in understanding the material (Nursyam, 2019). Observable indicators of learning interest include feelings of pleasure, attention, interest, and student involvement in the learning process (Safari, as cited in Septiani et al., 2020).

The low interest in learning SKI was found directly by the researcher through a preliminary study conducted during the Educational Field Experience Program (PPLK) from 25 September to 25 November 2025 at MA Subulussalam. Based on the preliminary study using structured observation and measurement of interest indicators, quantitative empirical data showed that only 50% of Class X.1 students met the criteria for high learning interest. Meanwhile, the remaining 50% were still in the less-than-optimal category, consisting of 25% of students in the moderate category (tending to be passive and attending class merely as a formality) and another 25% in the very low category. Students in the low group showed very little attention, characterized by sleepiness, not paying attention to the teacher's explanations, and chatting among themselves during group discussions. This decline in students' attention in class is in line with the view of Nursyam (2019) that limited interest makes students tend to be passive and less optimal in absorbing learning material. Therefore, the objective conditions of the 28 students of Class X.1 at MA Subulussalam indicate a real and crucial problem that requires immediate handling through more adaptive learning media innovation.

One of the factors that can influence students' learning interest is the use of learning media. The use of appropriate learning media can attract students' attention and significantly increase their interest in learning (Wijaya & Rismawati, 2023). The development of information and communication technology, especially Artificial Intelligence (AI), opens great opportunities in education through more innovative and interactive learning media (Tanjung & Suteki, 2024). One AI-based platform that can be used as visual learning media is Canva. Canva has integrated artificial intelligence features into its platform, transforming it into smarter and more adaptive learning media (Alhubilah & Abdurahman, 2025). AI features in Canva, such as Magic Design, Magic Write, and Magic Media, allow teachers to present learning material visually, attractively, and interactively without requiring special graphic design skills (Alfian et al., 2022).

Based on the description above, this study aims to determine the effect and the magnitude of improvement of using Artificial Intelligence-based visual learning media (Canva) on interest in learning Islamic Cultural History among Class X.1 students of MA

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Subulussalam. This study is expected to provide an empirical contribution to the development of technology-based SKI learning media innovation in Madrasah Aliyah.

METHOD

This study used a quantitative approach with a pre-experimental design. The research design was the One-Group Pretest-Posttest Design, which uses only one group without a control group, with measurements taken before and after the treatment. The design pattern of this study is illustrated as follows:

$$O_1 \quad X \quad O_2$$

Where: O_1 is the pretest (initial measurement before the treatment), X is the treatment in the form of AI-based visual learning media (Canva), and O_2 is the posttest (final measurement after the treatment).

The population of this study was all students of MA Subulussalam in the 2025/2026 academic year, totaling 374 students divided into 10 study groups. The sample was selected using Cluster Random Sampling, with classes as the cluster units. Sampling was limited to Grade X because SKI is actively taught in Grade X during the even semester. Grade X consists of three study groups, namely X.1, X.2, and X.3, which have homogeneous characteristics because they are at the same level, are taught by the same teacher, receive the same SKI lesson hours, and none of them is a superior class. Based on a lottery, Class X.1 was selected as the research sample. The sample in this class consisted of 28 students who acted as active participants and fully followed the entire series of research activities, from the pretest and the treatment to the posttest.

The instrument used in this study was a learning interest questionnaire using a Likert scale with four alternative answers: Strongly Agree (4), Agree (3), Disagree (2), and Strongly Disagree (1). The initial questionnaire consisted of 24 statement items developed based on four indicators of learning interest, namely feelings of pleasure, attention, interest, and involvement (Safari, as cited in Septiani et al., 2020). Before being used in the study, the questionnaire was first tried out on 55 respondents outside the sample, namely students of Classes X.2 and X.3.

The validity test was conducted using the Pearson Product Moment correlation with an r-table value of 0.266 (N = 55, α = 5%). The validity test showed that 23 of the 24 statement items were valid, while one item, Item_16, was invalid (r-count = 0.237 < r-table = 0.266) and was therefore removed from the instrument. Furthermore, the reliability test using Cronbach's Alpha produced a value of 0.916, which falls into the very high category, so the 23 final items were declared reliable and suitable for use in the study.

Data analysis in this study consisted of four stages using SPSS. First, descriptive statistical analysis was used to describe the data in general, including the mean, minimum, maximum, and standard deviation. Second, the normality test used the

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Shapiro-Wilk test because the sample was fewer than 50 respondents (n = 28), with the data considered normally distributed if Sig. > 0.05. Third, hypothesis testing used the Paired Sample T-Test, with H_0 rejected if t-count > t-table or Sig. (2-tailed) < 0.05. Fourth, the N-Gain Score was calculated using the formula of Hake (1999) to measure the magnitude of improvement in students' learning interest, categorized as high if $g \geq 0.70$, medium if $0.30 \leq g < 0.70$, and low if $g < 0.30$.

RESULTS

The results of this study are presented in two main parts to provide a systematic empirical picture of the effectiveness of the intervention. The first part describes the statistical data on students' learning interest before and after the implementation of Artificial Intelligence-based visual learning media (Canva). The second part presents the results of hypothesis testing through inferential statistics and the measurement of the effectiveness of the media intervention using the gain coefficient formula. Before the main data analysis, the Pearson Product Moment validity test of the 24 questionnaire items with N = 55 showed that 23 items were valid because their r-count values were > 0.266, while one item (Item_16) was invalid (r-count = 0.237) and was removed from the instrument. The reliability test of the 23 final items using Cronbach's Alpha produced a coefficient of 0.916, which falls into the very high category, so the instrument was declared suitable for use in the study.

Description of Students' Learning Interest Data

Initial data collection (pretest) was carried out to determine the actual learning interest of Class X.1 students in Islamic Cultural History (SKI) before the treatment was given. After learning with AI-based visual media (Canva) during the intervention period, a final measurement (posttest) was carried out using the same final questionnaire. The descriptive statistics of the learning interest scores of the 28 students are presented in detail in Table 1.

Table 1: Descriptive Statistics of Students' Learning Interest in the Pretest and Posttest

Data	N	Minimum	Maximum	Mean	Std. Deviation
Pretest	28	43	64	54.50	4.910
Posttest	28	66	77	71.71	2.733

Based on the data in Table 1, there is a significant change in the descriptive values of students' learning interest after the media intervention was applied. The mean learning interest score increased convincingly from 54.50 in the pretest to 71.71 in the posttest.

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This 17.21-point increase in the group mean is an initial indication that visual stimuli based on artificial intelligence technology had a positive impact on the learning atmosphere of Class X.1 students at MA Subulussalam.

Hypothesis Testing and Treatment Effectiveness

The Shapiro-Wilk normality test was conducted first as a prerequisite for parametric statistical analysis because the sample consisted of fewer than 50 respondents. The results showed significance values of 0.770 for the pretest data and 0.640 for the posttest data. Since both values are well above the 0.05 threshold, it can be concluded that the pretest and posttest data are statistically normally distributed. Hypothesis testing then continued using the Paired Sample T-Test, with the summary of results presented in Table 2.

Table 2: Results of the Paired Sample T-Test on Students' Learning Interest

Data Comparison	Mean Difference	t-count	t-table	df	Sig. (2-tailed)
Pretest Posttest	17.214	17.183	2.052	27	0.000

The analysis in Table 2 proves that the experimental treatment using Canva AI had a significant effect on students' learning interest. The comparative test produced a t-count of 17.183, which is much greater than the t-table value of 2.052 at a significance level of α = 5%. In addition, the Sig. (2-tailed) value of 0.000 is smaller than the 0.05 significance level, so the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted.

The final stage of data analysis aimed to determine the level of effectiveness of the increase in interest using the N-Gain Score, with a maximum ideal score of 92. The analysis showed that of the 28 students in Class X.1, 25 students (89.29%) were in the medium effectiveness category and 3 students (10.71%) were in the low category. The distribution of the normalized gain is summarized in Table 3.

Table 3: Summary of Students' N-Gain Score Categories

Category	Coefficient Range	Number of Students	Percentage
High	$g \geq 0.70$	0	0%
Medium	$0.30 \leq g < 0.70$	25	89.29%
Low	$g < 0.30$	3	10.71%
Total		28	100%

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Based on Table 3, most of the students' gain scores were concentrated in the medium interval. The overall mean N-Gain score was 0.451. Referring to the effectiveness criteria of Hake (1999), this final coefficient empirically confirms that the effectiveness of AI-based visual learning media (Canva) is in the "Medium" category.

DISCUSSION

The significant increase in the students' mean learning interest score from 54.50 to 71.71 empirically proves that the intervention in the form of Artificial Intelligence-based visual learning media (Canva) had a real positive impact. Inferentially, the rejection of the null hypothesis (H_0) with t-count = 17.183 > t-table = 2.052 and a significance value of 0.000 < 0.05 strengthens the position that the change in learning interest occurred because of the media treatment, not by chance. Although the effectiveness of this improvement is in the "Medium" category with an N-Gain of 0.451, this finding remains an innovative answer to the classic problem of Islamic Cultural History (SKI) learning at MA Subulussalam, which has tended to be monotonous and memorization-based.

The Effect of AI-Based Visual Learning Media (Canva) on Interest in Learning SKI

The finding of a significant effect can be explained through the Dual Coding theory proposed by Allan Paivio. This theory states that information is easier to understand and remember when it is presented verbally and visually at the same time, because the human brain processes both channels in parallel (Amelya et al., 2025). The use of AI-based visual media in Canva in SKI learning provides strong visual stimuli through infographics, timelines of Islamic historical events, and attractive visual designs, so that SKI material, which has long been considered boring, becomes easier to understand and more appealing to students. This condition encouraged an increase in all indicators of learning interest, which include feelings of pleasure, attention, interest, and active involvement during the learning process (Safari, as cited in Septiani et al., 2020).

Empirically, the results of this study are in line with the findings of Ayni et al. (2024), which proved a positive effect of using Canva media on students' interest in learning social studies (IPS). Mahendra and Zainuddin (2025) also showed that the use of Canva in Islamic Religious Education (PAI) learning was able to create a more engaging learning atmosphere and encourage students' active involvement. Furthermore, Alhubilah and Abdurahman (2025), in their systematic study, concluded that the integration of artificial intelligence (AI) features in Canva has great potential to increase students' cognitive and affective engagement in Islamic-based learning, including SKI. This study provides quantitative empirical evidence that strengthens these previous findings while filling a research gap that has not been addressed before, namely the quantitative testing of the effect of Canva AI on interest in learning SKI at the Madrasah Aliyah level.

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The Magnitude of Improvement in Interest in Learning SKI through AI-Based Visual Learning Media (Canva)

The N-Gain Score calculation showed a mean N-Gain of 0.451, which falls into the medium category (0.30 ≤ g < 0.70) according to the criteria of Hake (1999). Of the 28 students studied, 25 students (89.29%) experienced an increase in learning interest in the medium category and only 3 students (10.71%) were in the low category, while no student reached the high category in this study. The achievement of 89.29% of students in the medium category is a fairly encouraging result considering the limited facilities in the field. The improvement in the medium category was influenced by several factors that the researcher found directly at the research site. First, limited digital facilities at MA Subulussalam, such as the absence of a working projector, meant that the Canva AI media could only be presented through the researcher's laptop screen, so the visual reach of students in the back rows was limited. Second, students' adaptation to the use of artificial intelligence (AI) technology, which is relatively new in learning, requires gradual habituation, because learning interest is an affective aspect that is formed gradually and requires consistent stimulation over a certain period (Slameto, 2010). Nevertheless, the sharp decrease in the standard deviation from 4.910 in the pretest to 2.733 in the posttest shows that the distribution of students' learning interest became much more even and homogeneous after the treatment. This means that the Canva AI media not only increased the class mean of learning interest but also succeeded in narrowing the gap in interest among students in the same class. This finding is consistent with the view of Alhubilah and Abdurahman (2025) that Canva AI has strong potential to stimulate students' cognitive and affective engagement evenly, and it reinforces the conclusion that AI-based visual learning media (Canva) deserves to be considered as a broader innovation in SKI learning in Madrasah Aliyah.

Research Implications

The findings of this study have important implications for the development of SKI learning in Madrasah Aliyah, especially in the context of integrating artificial intelligence technology into Islamic education. This study proves that AI-based learning media innovation can be implemented in madrasahs even with limited facilities, simply by using a personal laptop and an internet connection. This has important policy relevance, especially for the Ministry of Religious Affairs in encouraging the digital transformation of learning across madrasahs in Indonesia. In addition, the ease of using AI features in Canva, such as Magic Design and Magic Write, which do not require special graphic design skills, opens opportunities for all SKI teachers in various regions to independently produce high-quality visual learning media (Alfian et al., 2022).

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CONCLUSION

The implementation of Artificial Intelligence-based visual learning media (Canva) had a significant effect on increasing the learning interest of Class X.1 students in Islamic Cultural History (SKI) at MA Subulussalam. This is shown by the Paired Sample T-Test result, which produced a t-count of 17.183, greater than the t-table value of 2.052, with a Sig. (2-tailed) value of 0.000 < 0.05, so the null hypothesis (H_0) was rejected and the alternative hypothesis (H_a) was accepted. The magnitude of the increase in students' learning interest after the technology intervention was in the "Medium" category. Based on the N-Gain Score calculation, the group mean was 0.451, which falls within the medium category interval ($0.30 \leq g < 0.70$) according to Hake (1999). The individual data distribution showed that of the 28 students in the sample, 25 students (89.29%) reached the medium category and only 3 students (10.71%) were in the low category.

Overall, the results of this experiment confirm that AI-based visual learning media (Canva) is effective in stimulating students' learning interest in Islamic subjects at the Madrasah Aliyah level. The increase in learning interest covered improvements in all main indicators, namely feelings of pleasure, focused attention, interest, and students' active involvement during the learning process. This empirical fact indicates that visual media innovation based on artificial intelligence technology has great potential and relevance to be applied more widely in Islamic Religious Education (PAI) learning in Indonesia.

RECOMMENDATION

SKI teachers are advised to use Artificial Intelligence-based visual learning media (Canva) continuously and to integrate it with other active learning methods. Optimizing smart features such as Magic Design, Magic Write, and Magic Media is highly recommended to present Islamic history material visually and interactively without requiring special graphic design skills.

The management of MA Subulussalam is recommended to improve the availability of supporting digital infrastructure, such as properly functioning projectors, a stable internet network, and adequate computer devices in every classroom. A well-planned facility procurement policy is crucial to support the sustainability of the digital transformation of learning in the madrasah.

Future researchers are advised to use a quasi-experimental design involving a control group so that the effect of the media treatment can be proven more validly and free from confounding variables. In addition, future researchers can broaden the scope of the study by testing the effect of this AI-based digital design platform on other Islamic Religious Education (PAI) subjects at various levels of education.

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