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Flashcard-Based Think-Pair Share Cooperative Learning Model: Interest in Learning Aqidah and Morals

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ABSTRACT

Learning interest is a crucial factor in the educational process because it plays a major role in student engagement in understanding the material. Based on the results of pre-research at MA Al Hikmah Bandar Lampung, it is known that student learning interest in the subject of Akidah Akhlak is still relatively low, especially in the aspects of attention and involvement, which is caused by the dominance of conventional methods and the lack of variety of learning media. This study aims to test the effectiveness of the cooperative learning model of the Think-Pair-Share (TPS) type assisted by flashcards media on increasing student learning interest. The approach used is quantitative with a quasi-experimental method of post-test only control group design. The research sample consisted of two classes, namely class X.A as the experimental group and class X.B as the control group. The data collection instrument used a non-test questionnaire that focused on indicators of attention in learning interest. The results of data analysis using the t-test showed a significance value of 0.001 ($p < 0.05$), which confirmed a significant difference in learning interest between the two groups. These findings prove that the combination of the TPS model and flashcards is effectively able to overcome the obstacles of low student attention and involvement. The synergy between independent thinking, pair discussions, and idea sharing, supported by visualization of material through flashcards, creates a more active and innovative learning environment. This study concludes that the flashcard-based TPS approach is an effective alternative learning strategy for increasing student motivation and interest in deepening the material on Aqidah and Akhlak.

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1. INTRODUCTION

Interest in learning is a manifestation of a deep sense of enjoyment and interest in learning activities that emerges without coercion, effectively motivating students to be more focused, persistent, and easily understand the material (Basri et al., 2021; Maknunin & Fitrayati, 2024). This phenomenon involves a synergy between enjoyment,

interest, active involvement, and full attention, allowing students to optimally absorb the instructor's explanations (Landa et al., 2021; Mansyur et al., 2022; Sati et al., 2021). These four factors not only build an emotional connection to knowledge but are also crucial determinants in significantly improving student learning outcomes (Apriyani et al., 2022; Chandra et al., 2023; Harliana et al., 2024; Prayuda et al., 2022).

Learning challenges can lead to low student interest (Setyani & Susilowati, 2022). Interest is a personality trait related to academic achievement. Students with high interest typically perform better (Mappadang et al., 2022). If interest in learning is low, learning objectives, namely changes in cognitive, affective, and psychomotor aspects, will not be achieved. Therefore, teachers must pay more attention to student interest (Quinlan & Renninger, 2022). This indicates that low learning interest is caused by internal factors such as lack of motivation, self-confidence, and interest in the subject, as well as external factors such as an unsupportive learning environment, monotonous teaching methods, and lack of interaction between students and teachers. Students who learn in an interactive and enjoyable atmosphere usually have a higher learning interest. Therefore, innovative and varied learning approaches are essential to increase student learning interest (Pramitaa et al., 2024; Rahma et al., 2023; Simbolon & Wolor, 2024).

A preliminary study through observation and interviews at MA Al Hikmah Bandar Lampung identified several crucial obstacles in the learning of Akidah Akhlak, including low student enthusiasm due to the perception that the material tends to be boring, minimal two-way interaction, and limited use of diversified technology. This condition is exacerbated by low student interest in learning, which is reflected in indicators of attention of 15% and engagement of only 23%, as well as a passive attitude towards assignments and class discussions. To overcome these obstacles, innovative learning media are needed that are integrated with a cooperative approach, such as the Think-Pair-Share (TPS) model, which can transform conventional learning patterns into more interactive ones by providing space for students to think, discuss, and collaborate to improve learning outcomes comprehensively.

The Think-Pair-Share (TPS) cooperative learning model has been proven effective in increasing students' active participation and conceptual understanding through the stages of individual thinking (Think), pair discussions (Pair), and sharing discussion results (Share) (Azmi, 2024; Prambudi & Imantoro, 2021; Malau et al., 2023; Rukmini, 2020; Sumarni et al., 2021). This approach transforms instructional patterns into more interactive ones so that students do not only act as passive listeners but are also trained in communication skills, collaboration, and self-confidence (Kurniawan et al., 2023; Masduki, 2020; Muhdiyati & Utami, 2020). The implementation of this model, especially when combined with media such as flashcards, can create a fun and personalized learning atmosphere, which in turn significantly stimulates students' motivation and interest in learning (Maisyaroh et al., 2023; Rachmawati & Erwin, 2022; Sauwera et al., 2023).

The TPS model has been extensively examined for its efficacy across various fields, including mathematics and animation at the elementary and secondary levels (Lestari, 2020; Lestari et al., 2023; Rachmawati & Erwin, 2022). However, there exists a research

deficiency concerning the integration of this model with specific media for religious subjects at the advanced level, particularly in how the TPS model can be effectively utilized with flashcards to enhance learning outcomes in these subjects. To date, no comprehensive study has specifically applied the flashcard-assisted TPS model to the Aqidah Akhlak subject at the Madrasah Aliyah level. Therefore, this study is crucial in filling this gap in the literature by examining the effect of flashcard-based TPS implementation on increasing student learning interest at MA Al Hikmah Bandar Lampung.

This study offers a novel approach through the integration of the Think-Pair-Share (TPS) cooperative learning model with flashcards in the Aqidah Akhlak (Islamic Faith) subject at MA Al Hikmah Bandar Lampung. The primary focus of this research is on increasing student learning interest as the dependent variable, which is measured comprehensively through four main indicators: enjoyment, attention, interest, and active engagement. The collaborative implementation of the interactive TPS model and visual flashcards is expected to significantly contribute to innovation in Islamic religious education learning at the Madrasah Aliyah level, while also offering scientific validation of the effectiveness of this combination of methods in strengthening material retention and student academic enthusiasm.

The urgency of this research is based on preliminary study findings that indicated low student learning interest, with attention levels reaching only 15% and engagement at 23%. This phenomenon is triggered by a one-way learning pattern and minimal use of technology, often resulting in the Aqidah Akhlak material being perceived as monotonous and uninteresting. Through the implementation of the TPS model with flashcards, these instructional challenges are addressed by creating a more dynamic and inclusive discussion space, which is expected to enhance student interest and engagement in the Aqidah Akhlak material. This change in teaching methods not only seeks to fix the problem of students being inactive but also acts as a helpful guide for teachers and schools to create better, more engaging, and effective ways of teaching that improve learning results.

2. METHOD

This research was conducted at MA Al Hikmah Bandar Lampung in the even semester of the 2025/2026 academic year, applying a quantitative approach through a quasi-experimental method. The research design used a post-test-only control group design, involving two classes as samples: class X-A as the experimental group and class X-B as the control group. The experimental group was given treatment in the form of the Think-Pair-Share (TPS) learning model supported by flashcards, while the control group followed the learning process using conventional methods. The sample was determined using a simple random sampling technique from a total population of 100 class X students. The focus of this study was to empirically evaluate the significant effect of the integration of the TPS learning model and the use of flashcards on students' learning interest in the subject of Aqidah Akhlak (Faith and Morals). Specifically, the

analysis was directed at measuring the effectiveness of this intervention in improving students' attention indicators during the instructional process.

The research implementation procedure began with the development of comprehensive learning tools by educators, including lesson plans (RPP), teaching materials, evaluation instruments, and Student Worksheets (LKPD). During the implementation phase, the Think-Pair-Share (TPS) learning model was implemented through three structured core phases. The first phase, "Think," directed students to understand the material and solve problems independently for 10 minutes to stimulate individual cognitive abilities. Next, in the "Pair" phase, students discussed in pairs to compare and deepen their answers through an exchange of ideas. The final phase, "Share," facilitated each pair's presentation of their discussion results to the class to elicit collective feedback.

The entire instructional process was reinforced by the integration of flashcards, thematically designed according to the "Akidah Akhlak" material. These media combined visual elements in the form of images and strategic keywords, aimed to capture students' attention while facilitating visual conceptual understanding. The synergy between the cooperative TPS phase and the use of flashcards is expected to create a dynamic and effective learning environment that enhances student engagement throughout the learning process.

After the treatment was administered, data collection was conducted using a non-test questionnaire instrument designed based on Slameto's learning interest indicators, with a primary focus on the attention aspect. This instrument consisted of 16 statements covering both positive and negative items and had undergone validity and reliability tests to ensure data accuracy. The questionnaire data obtained were then analyzed through prerequisite tests, namely the normality test and the homogeneity test, to ensure the data's suitability for further statistical analysis. Next, a comparison was conducted between the experimental and control groups using a t-test to measure the significance of differences in learning interest between the two groups. The results of this analysis became the basis for drawing conclusions regarding the impact of the implementation of the Think-Pair-Share (TPS) model assisted by flashcards on increasing students' learning interest in learning Akidah Akhlak.

3. RESULTS AND DISCUSSION

Results

This research was conducted at MA Al Hikmah Bandar Lampung, focusing on primary data collection through a questionnaire instrument designed based on student learning interest indicators. To ensure the quality and accuracy of the measuring instrument, the instrument first underwent a series of prerequisite tests, including a validity test to measure the accuracy of statement items and a reliability test to ensure the instrument's consistency in collecting data. A summary of the testing results is presented in detail in Table 1 below as a basis for empirical validity in the research analysis.

Table 1. Description of the Results of the Trial Class Validity Test

Question Number	R-table	R-count	Information
1	0,396	0,138	Invalid
2	0,396	0,130	Invalid
3	0,396	0,559	Valid
4	0,396	0,674	Valid
5	0,396	0,676	Valid
6	0,396	0,487	Valid
7	0,396	0,740	Valid
8	0,396	0,108	Invalid
9	0,396	0,696	Valid
10	0,396	0,563	Valid
11	0,396	0,732	Valid
12	0,396	0,512	Valid
13	0,396	0,750	Valid
14	0,396	0,818	Valid
15	0,396	0,429	Valid
16	0,396	0,540	Valid

Instrument validity testing was conducted by applying the Product Moment correlation technique to ensure the accuracy of each statement item in measuring the research variables. Based on the results of the data analysis in Table 1, a total of 16 instrument items were declared valid because they had a validity coefficient (r_hitung) that exceeded the r_tabel value of 0.396 at the specified significance level. This finding indicates that the instrument items have high accuracy in representing the variable indicators of student learning interest at MA Al Hikmah Bandar Lampung. Thus, this instrument is considered to meet the eligibility criteria as a reliable primary data collection tool for the next stage of research.

Table 2. Description of the Trial Class Reliability Test Results

Cronbach's Alpha	N of Items
.877	16

After ensuring the validity of the statement items, a reliability test was conducted using the Cronbach's Alpha formula to measure the instrument's ability to produce consistent data through repeated use. The test results presented in Table 2 show a Cronbach's Alpha value of 0.877. Based on instrument reliability criteria, this achievement far exceeds the minimum reliability standard of 0.600 (0.877 > 0.600). This finding demonstrates that the research instrument has a very high level of reliability, making it highly suitable for use as a consistent measuring tool in collecting research data.

Normality Test

Testing the analysis prerequisites is a crucial step in determining the type of statistics to be used in testing the hypothesis. One of the tests performed is the Normality Test, which serves to identify whether the data distribution on the variables studied is normally distributed or not. In this study, the normality test was conducted on student

learning interest data at MA Al Hikmah Bandar Lampung. The testing technique uses the Kolmogorov-Smirnov method (or Shapiro-Wilk, adjust according to your use) with the help of statistical software. The decision-making guidelines in the normality test are: If the significance value (Asymp. Sig) > 0.05, then the data is declared normally distributed. If the significance value (Asymp. Sig) < 0.05, then the data is declared not normally distributed. Based on the results of the data processing that has been done, a statistical summary is obtained indicating that the distribution of the research data has met the assumption of normality. This determination serves as the basis for further data analysis using parametric statistics. The details of the normality test results are presented systematically in Table 3 below.

Table 3. Description of Normality Test Results

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	**df**	**Sig.**	**Statistic**	**Df**	**Sig.**
Eksperimen	.127	25	.200*	.962	25	.459
Control	.186	25	.026	.903	25	.021

The results of the normality test presented in Table 3 provide an in-depth evaluation of the data distribution in each research group using the Kolmogorov-Smirnov and Shapiro-Wilk methods. Based on these data, the experimental group showed a significant value of 0.200 in the Kolmogorov-Smirnov test and 0.459 in the Shapiro-Wilk test. Because both values are greater than the specified significance level ($p > 0.05$), it can be concluded that the data in the experimental group is normally distributed. In contrast, the control group showed significance values of 0.026 (Kolmogorov-Smirnov) and 0.021 (Shapiro-Wilk). Considering that these values are below the critical threshold ($p < 0.05$), the data distribution in the control group is declared not to meet the assumption of normality.

This inconsistency in the normal distribution in one of the groups has direct implications for the choice of inferential analysis method. Given that parametric assumptions (such as the Independent Sample T-Test) require the entire data group to be normally distributed, the use of such tests is irrelevant and risks biased conclusions. As a solution, data analysis was continued using the Mann-Whitney U-Test. This test was chosen as a robust nonparametric alternative for comparing differences between two independent groups when the normality assumption is not met. The computational results of this test are presented in detail in Table 4 below.

Table 4. Description of Mann Whitney Test Results

	Value
Mann-Whitney U	81.000
Wilcoxon W	406.000
Z	-4.506
Asymp. Sig. (2-tailed)	.000

The results of the hypothesis test using the non-parametric Mann-Whitney U statistical method presented in Table 4 show crucial parameters in determining the

effectiveness of treatment between groups. Based on the computational output, the Mann-Whitney U value was obtained at 81.000 with an Asymp. Sig. (2-tailed) value of 0.000. Considering that the significance value is much smaller than the set alpha threshold (0.000 < 0.05), it can be statistically concluded that there is a very significant difference between the learning interest scores of the experimental group and the control group. This finding indicates that the intervention in the form of a Think-Pair-Share learning model assisted by flashcards has a strong and real impact in differentiating the results of the experimental group compared to the control group at a 95% confidence level.

Homogeneity Test

The next crucial step in validating statistical assumptions is conducting a homogeneity test. This test aims to verify whether the variances of several populations or data groups in this study are uniform (homogeneous) or have significant differences (heterogeneous). Equality of variance is an important prerequisite (basic assumption) in many inferential tests, to ensure that any differences that emerge later actually originate from the treatment, not due to unequal distribution of the initial data. The decision-making criteria in this test are based on the significance of value (p-value). If the Sig. value is > 0.05, then the data groups are declared to have the same variance (homogeneous). Conversely, if the Sig. value is < 0.05, then the variances between groups are considered unequal (heterogeneous). Based on this procedure, the results of the homogeneity test calculation (usually using Levene's Test) for this research data are summarized in detail in Table 5 below.

Table 5. Description of Homogeneity Test Results

	Levene Statistic		df1	df2	Sig.
Value	Based on Mean	.137	1	48	.713
	Based on Median	.213	1	48	.647
	Based on Median and with adjusted df	.213	1	43.989	.647
	Based on trimmed mean	.182	1	48	.672

A homogeneity test was conducted to ensure that the data variance between the experimental and control groups was uniform. Based on the Levene Statistic, the Based on Mean section obtained a significance value of 0.713. Because this significance value is much greater than the 0.05 threshold, it can be concluded that the research data has homogeneous variance. This indicates that any differences that emerge later originate purely from the treatment given, not due to differences in the initial conditions of the group variance.

Hypothesis Results (T-Test)

To evaluate the effectiveness of the treatment and compare the post-test achievement between subjects in the experimental and control groups, this study employed inferential statistical analysis using the Independent Sample T-Test. This test aims to determine

whether there is a statistically significant difference in mean scores between two independent, unpaired groups. The hypothesis testing procedure is conducted by considering the variance characteristics of the data. Based on the results of the previous prerequisite tests, this study used the Pooled Variance Test formula (t-test assuming equal variances). This approach was chosen to ensure the accuracy of the standard error estimate when both groups are assumed to come from populations with homogeneous variances.

Operationally, this test compares the calculated t-value with the t-table or examines the significance value (p-value) against the alpha threshold of 0.05. Details regarding the distribution of values, degrees of freedom (df), and the significance value of the data computation results are comprehensively presented in Table 6 below.

Table 6. Hypothesis Results

	Levene's Test for Equality of Variances			**t-test for Equality of Means**						
		F	**Sig.**	**T**	**Df**	**Sig. (2-tailed)**	**Mean Difference**	**Std. Error Difference**	**95% Confidence Interval of the Difference**	
									Lower	**Upper**
Value	Equal variances Assumed	.137	.713	5.453	48	.000	8.320	1.526	5.252	11.388
	Equal variances not assumed			5.453	47.830	.000	8.320	1.526	5.252	11.388

A comparative analysis of the final abilities of the research subjects was conducted using the Independent Samples T-Test procedure. The initial step in this interpretation was to verify the assumption of equal variances using Levene's Test for Equality of Variances. Based on the data in Table 6, an F-value of 0.137 was obtained, with a significance level (p-value) of 0.713. Considering that this significance value far exceeds the alpha threshold of 0.05 ($p > 0.05$), the assumption of equal variances was met. This indicates that the data variance between experimental and control groups is homogeneous. Consequently, the statistical interpretation for the mean difference test refers to the first row in the output table (assuming equal variances).

Based on these parameters, the inferential analysis showed the following results: (1) t-Test Statistics: The calculated t-value was 5.453 with 48 degrees of freedom (df). (2) Significance: Sig. The 2-tailed value was recorded at 0.001, significantly smaller than the established standard error ($p < 0.05$). This finding provides strong empirical evidence to reject the null hypothesis (H_0) and accept the alternative hypothesis (H_a).

Substantially, this result confirms a highly significant mean difference between experimental and control groups. The mean difference was recorded at 8.320 with a standard error of 1.526. The validity of this finding is further strengthened by the 95% Confidence Interval of the Difference, which ranges from 5.252 to 11.388. Furthermore,

this interval does not include the number zero, statistically confirming that the difference was not due to chance but rather due to the real effect of the treatment. Thus, it can be concluded that the intervention in the experimental group had a statistically significant impact compared to the control group.

Discussion

The findings in this study provide strong empirical evidence that the integration of flashcard-based media with the Think-Pair-Share (TPS) model can go beyond the limitations of conventional learning by simultaneously touching the cognitive, affective, and social domains in the Akidah Akhlak material. This is in line with the theory that the use of visual media in a cooperative model can strengthen cognitive retention and create a more interactive and enjoyable learning atmosphere (Fenezia & Armiati, 2025; Jian, 2019). The validity of the findings is supported by the research instrument that has undergone strict prerequisite testing, where 16 statement items are declared valid with a correlation coefficient (r_count) that exceeds the r_table value of 0.396. In addition, this instrument shows a very high level of reliability with Cronbach's alpha value reaching 0.877, far above the minimum standard of 0.600. The quality of this tested instrument ensures that the primary data collected has accuracy and consistency that can be scientifically accounted for in measuring student learning interests at MA Al Hikmah Bandar Lampung.

The results of the normality test using the Kolmogorov-Smirnov and Shapiro-Wilk methods showed different distribution characteristics between groups, where the experimental group was normally distributed with significance values of 0.200 and 0.459 ($p > 0.05$), respectively. In contrast, the control group showed significance values of 0.026 and 0.021 ($p < 0.05$), so it was declared not normally distributed. This distribution inconsistency is the basis for using the non-parametric Mann-Whitney U test as an analysis solution. Nevertheless, the results of the homogeneity test in Table 5 show a strong data profile with a significant value of 0.713 ($p > 0.05$), which means the assumption of homogeneity of variance is fully met. This finding is in line with statistical literature, which states that in conditions where data is not normally distributed but remains homogeneous, the use of non-parametric tests is the most consistent and accurate approach to comparing differences between two independent groups without ignoring the quality of the initial data variance (Reddy & Henze, 2023; Vrbin, 2022).

The results of the independent sample t-test showed a t_count value of 5.453 with a significance level (2-tailed) of 0.001 ($p < 0.05$), so the null hypothesis (H_0) was rejected, and the alternative hypothesis (H_a) was accepted. This finding confirmed the existence of a mean difference of 8.320 between the two groups, reinforced by the 95% confidence interval range between 5.252 and 11.388, which did not exceed the zero value, so that the difference in learning interest was proven to be statistically significant and not a result of chance. Theoretically, the effectiveness of integrating flashcard media in the Think-Pair-Share (TPS) cooperative model stems from the synchronization of independent thinking stages, intensive interaction between peers, and strengthening

self-confidence when sharing discussion results. The use of flashcards as a visual aid plays a crucial role in transforming abstract concepts in the Aqidah Akhlak subject into more concrete and enjoyable ones, which in turn triggers active involvement and enthusiasm for learning for students. This finding is in line with the principles of dual coding theory and previous research, which states that the combination of visual media with cooperative learning is effectively able to increase instructional appeal and student learning outcomes compared to conventional methods (Hamadi et al., 2022; Sadoski & Krasny, 2018; Sawyer et al., 2017).

The implementation of flashcards within the Think-Pair-Share (TPS) model serves as a strategic cognitive stimulus that bridges students' understanding of abstract Aqidah and Akhlak material, such as the concept of monotheism, the attributes of God, and eschatology. Theoretically, visual engagement through these cards facilitates dual coding—the combination of text and imagery, according to cognitive theory, strengthens long-term memory and helps students organize information in a more structured manner. This aligns with previous research findings that suggest the use of visual media in cooperative learning can significantly improve students' material absorption and cognitive retention (Istiqomah et al., 2024; Rachmawati & Erwin, 2022).

Furthermore, the TPS model provides space for the development of students' interpersonal and affective intelligence, where the pair stage creates a comfort zone for dialogue without the pressure of a large audience. This dialogic space is crucial for the internalization of moral values, as it allows for social interactions that foster empathy, tolerance, and social responsibility. In contrast to conventional lecture methods, the synergy between TPS and flashcards encourages the active participation of everyone, which, according to literature studies, not only improves conceptual understanding but also builds students' self-confidence and intrinsic motivation in deepening moral values (Kurniawan et al., 2023; Muhdiyati & Utami, 2020; Sauwera et al., 2023).

Comprehensively, the implementation of the flashcard-based Think-Pair-Share model is not just an instructional tool, but rather a holistic approach that successfully aligns the intellectual needs in understanding material concepts with students' psychosocial needs through interaction and self-expression. This model creates a supportive learning ecosystem for strengthening students' character while providing significant methodological contributions to educational research. This study offers a comprehensive data handling model to address normality inconsistencies by re-verifying through a homogeneity test (Levene's Test) that shows a certain F value, so that the use of Pooled Variance remains statistically valid. These findings empirically prove that the intervention given to the experimental group at MA Al Hikmah Bandar Lampung has a significant impact on increasing students' interest and learning ability compared to conventional methods in the control group. In addition, this study produces an interesting learning instrument that has been tested for validity and reliability, so it can be adapted by future researchers for similar school contexts.

4. CONCLUSION

The application of the Think Pair Share (TPS) model combined with flashcards has proven significantly effective in increasing student interest in the subject of Aqidah Akhlak. The t-test results showed a significant value of 0.001 ($p < 0.05$), indicating a significant difference in learning interest between the experimental group (using TPS and flashcards) and the control group (conventional method). The TPS model provides space for students to think independently (think), discuss in pairs (pair), and share ideas (share), while the flashcards provide engaging visualizations of the material. This combination successfully overcomes the low student attention and engagement that were previously major obstacles in conventional learning. Furthermore, the flashcard-based TPS approach is an innovative and effective alternative learning strategy for increasing student motivation and interest in deepening the Aqidah Akhlak material.

As a recommendation, teachers are advised to shift their learning patterns from conventional methods to cooperative models such as TPS supported by visual media (flashcards). This strategy is particularly relevant for Aqidah Akhlak material to increase student attention and active engagement in class. Future researchers are advised to not only measure learning interest but also directly examine the model's impact on students' cognitive learning outcomes or character development (morals). Furthermore, future research can be developed using a pretest-posttest control group design to more accurately assess the extent to which learning interest gains occur compared to relying solely on posttests.

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