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ORIGAMI MEDIA FOR TEACHING ISLAMIC CULTURAL HISTORY: AN EXPERIMENTAL STUDY IN 9TH GRADE MTs MA'ARIF BALONG

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Keyword

Origami Learning Media, Islamic Cultural History.

Abstract

Islamic Cultural History (SKI) is a subject taught in Madrasahs to help students recognize, understand, and appreciate the values and legacy of Islamic civilization. However, in grade 9 at MTs Ma'arif Balong, student learning outcomes remain below expectations, with an average score of 65, which does not meet the Minimum Mastery Criteria (KKM) of 72. This study aims to examine the effectiveness of origami-based learning media in improving students' learning outcomes in SKI. A quantitative approach with a quasi-experimental design was employed, involving 54 students selected through cluster sampling. Data were collected through written tests and documentation, then analyzed using mean score comparison and the Mann-Whitney test with SPSS software. The results show a significant difference between the experimental and control groups. The experimental group, which used origami as a learning aid, achieved a mean rank of 85.18, while the control group achieved 59.62. The statistical analysis produced a significance value of 0.000 < 0.050, indicating a positive effect of the origami media. These findings suggest that incorporating origami into classroom instruction enhances student engagement, comprehension, and overall academic performance in SKI. The study recommends that teachers develop skills in designing creative instructional media, including origami, and that Madrasahs provide adequate learning materials and a supportive environment. Furthermore, future research is encouraged to investigate the long-term impact of origami-based learning on students' knowledge retention and motivation.

INTRODUCTION

Education According to Law No. 20 of 2003, is a conscious and planned effort to create a learning environment and process that enables students to actively develop their potential spiritual, self-control, personality, intelligence, noble character, and skills needed by themselves, society, and the nation. (Undang-Undang Republik Indonesia Nomor 20 Tahun 2003 Tentang Sistem Pendidikan Nasional, 2003) Islamic Religious Education (PAI) is an integral part of this process, aimed at guiding students to understand, internalize, and practice Islamic teachings as a way of life. PAI plays a significant role in achieving national education goals by shaping students' behavior and character through higher standards of Islamic education.(Muhaimin, 2003)

Teachers are central to the success of education. Learning outcomes can be improved when teachers employ diverse and relevant teaching methods. However, in many cases, the lecture method is still dominant, leading to student boredom and passive participation. (Aprilia, Imelda. et al., 2020). This is also evident in the teaching of Islamic Cultural History (SKI) in Madrasah Ibtidaiyah, which is designed to cultivate understanding and appreciation of Islamic civilization. Despite its rich values, SKI is often perceived as uninteresting due to monotonous teaching methods, limited use of learning media, and reliance solely on textbooks, resulting in low student motivation and comprehension.(Siregar, Suriani., 2017)

Active learning is essential to engage students in thinking, interacting, and creating, rather than receiving information passively. In SKI classes, traditional lectures often fail to

maintain interest, especially when taught without appropriate strategies or media.(Jusmeli Hartati et al., 2023) One promising approach is the integration of origami with questioning techniques. This method combines physical manipulation (paper folding) with cognitive engagement (answering questions), encouraging deeper conceptual understanding. Origami, as defined by Sudjianto, is the art of paper folding without cutting or gluing, producing various creative forms. Sudjana notes that such media can clarify learning objectives and enhance understanding.(Amin Nasrul, 2019)

Origami-based learning offers several benefits: improving fine motor skills, visualizing abstract concepts, fostering creativity, enhancing focus, and promoting cooperation. However, it also requires considerable preparation time and has limitations in presenting questions, making careful planning essential.(Prince, Michael, 2020)

Origami-based question media is an engaging and interactive learning tool that enhances student motivation, creativity, and teamwork. By combining hands-on paper folding with problem-solving activities, it prevents monotony and encourages active participation.(Hamzah B. Uno, 2013). Its implementation involves preparing materials and questions, explaining the lesson, forming groups, selecting and opening origami envelopes, answering questions, assessing performance, calculating scores, and awarding prizes. This approach not only delivers lesson content but also fosters critical thinking, collaboration, and healthy competition, making the learning process more dynamic and effective.(Hatori Koshiro, 2021)

Preliminary observations and interviews at MTs Maarif Balong, Ponorogo, revealed that low SKI learning outcomes in Grade 9 are largely due to the lack of variety in teaching methods, with lectures dominating instruction. As a result, many students become inattentive and less active. Therefore, this study aims to examine the effectiveness of origami-based learning media in improving the learning outcomes of Grade 9 students in SKI at MTs Maarif Balong, Ponorogo.

METHOD

This study employed a quantitative experimental approach to examine the effect of origami-based learning media on student outcomes. A *Quasi-Experimental Design* was used, specifically the *Non-equivalent Control Group Design*, involving two groups: an experimental group that received the treatment and a control group that did not. Both groups were given a pretest and post-test, and the data were analysed using SPSS software. The analysis included descriptive statistics to present the learning results of both groups without generalization. (Sugiyono, 2023).

The research sample consisted of 54 class IX students at MTS Maarif Balong, comprising 27 students from Automotive class A (experimental group) and 27 students from Automotive class B (control group), using a Two-Group Pretest-Posttest Design without stratification. The experimental class was given treatment using origami media, while the control class used a conventional learning model. After the treatment, the researcher administered a posttest to both classes to measure and compare the pretest and posttest results in order to determine whether there was an effect on the learning outcomes of the Islamic cultural history material.(Nur Fadilah Amin et al., 2023)

The data collection technique was complemented by prerequisite analyses, which included The normality of the data was assessed using the Shapiro–Wilk test, where the data are considered normally distributed if the Asymp. Sig. value exceeds 0.05 and not normally distributed if the value is below 0.05. Homogeneity of variance was examined using Levene's test, with data deemed homogeneous when the significance value is greater than 0.05 and non-homogeneous when it is less than 0.05. (Muhamad Galang Isnawan, 2020).

For normally distributed and homogeneous data, an independent samples t-test was applied to determine the effect of origami-based learning media on the Islamic Cultural History material for Grade 9 students at MTs Balong, Ponorogo. The decision criteria for the t-test were as follows: if Asmp. Sig. (2-tailed) > 0.05, Ho is accepted and Ha is rejected; if Asmp. Sig. (2-tailed) < 0.05, Ho is rejected and Ha is accepted. For data that did not meet the normality assumption, the Mann–Whitney test was used to determine whether there was a difference in ability between the experimental class, which received origami-based learning, and the control class, which

received conventional instruction. The decision criteria for the Mann–Whitney test were identical to those for the t-test. (Adi Damanhuri & Agus Solikin., 2023)

RESULTS

Before conducting the pretest, the researcher evaluated the instrument to ensure its sustainability, validity, and reliability. The process began with expert evaluation to assess whether the designed instrument met the required standards and criteria in the relevant field. (Nur Fadilah Amin et al., 2023). Subsequently, a validity test was carried out in class IX A with 27 students to determine the extent to which the instrument items accurately measured the intended variables. This step was crucial to ensure that the results obtained would be valid and accurately interpretable.

The research instrument for the Islamic Cultural History subject consisted of 20 questions adapted from the indicators in the previous instrument blueprint. Based on the validity test results presented in the earlier table, 10 items were found to be valid, while the other 10 did not meet the validity criteria. The invalid items were removed, leaving only the valid ones to be used in the study. These valid items, which represented all necessary indicators, are listed in the previous table. This careful selection was an essential step in ensuring that the instrument could serve as an accurate measure of learning success.

1. Descriptive Test.

Table. 1 Descriptive Data Analysis

		Pretest eksperiment	Posttest eksperiment
N	Valid	27	27
	Missing	0	0
Mean		63,7037	85,1852
Std. Error of Mean		1,42706	1,71887
Median		60,0000	80,0000
Mode		60,00	80,00
Std. Deviation		7,41524	8,93152
Variance		54,986	79,772
Range		30,00	30,00
Minimum		50,00	70,00
Maximum		80,00	100,00
Sum		1720,00	2300,00

From the table above, it can be concluded that the experimental class showed a significant variation between pretest and posttest results. The range for both tests was 30, with minimum scores increasing from 50 (pretest) to 70 (posttest) and maximum scores rising from 80 to 100. The mean score improved from 63.70 in the pretest to 85.19 in the posttest, while the median increased from 60.00 to 80.00 and the mode from 60.00 to 80.00. The standard deviation rose from 7.42 (pretest) to 8.93 (posttest), and the variance from 54.99 to 79.77. These results indicate a substantial improvement in learning outcomes from pretest to posttest in the experimental class, providing a comprehensive picture of the change achieved through the intervention.

2. Conditional Test.

a. Normality Test.

Table 2. Normality Test

	Kelas	Kolmogorov-Smirnov(a)			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Learning Outcomes	pretest eksperiment	,247	27	,000	,846	27	,001
	posttest eksperiment	,238	27	,000	,880	27	,005

	pretest kontrol	,228	27	,001	,876	27	,004
	posttest kontrol	,182	27	,023	,919	27	,037

The normality test using the Shapiro–Wilk test showed that the pretest of the experimental class had a significance value of 0.001, indicating a non-normal distribution. The posttest of the experimental class had a significance value of 0.005, also indicating a non-normal distribution. The pretest of the control class had a significance value of 0.004, indicating a non-normal distribution, and the posttest of the control class had a significance value of 0.037, likewise indicating a non-normal distribution. (Susanto, D, 2023)

A histogram was used to provide a visual representation of the data distribution. In this context, the horizontal axis represents the score ranges, while the vertical axis indicates the number of participants 27 students whose scores fall within each range. The mean score for the posttest in the experimental class was 85.19, which led the researcher to categorize scores above the mean as belonging to the "good" category.

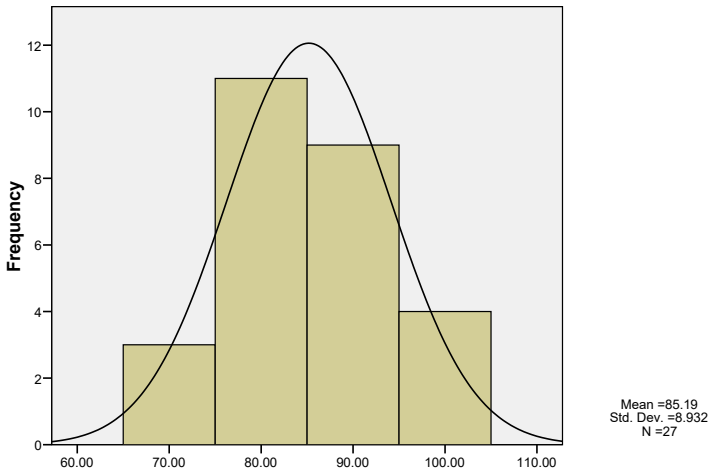

Figure 1. Histogram of postest experimental

b. Homogeneity Test

The homogeneity test *Based on Mean* significance value of 0.505. Since the *Based on Mean* significance value is greater than 0.05, the data are considered homogeneous. Therefore, the data in this study meet the homogeneity assumption. Data from the homogeneity test:

Table. 3 Homogeneity test

		Levene Statistic	df1	df2	Sig.
Learning Outcomes	Based on Mean	,450	1	52	,505
	Based on Median	,352	1	52	,555
	Based on Median and with adjusted df	,352	1	51,730	,555
	Based on trimmed mean	,460	1	52	,500

3. Hypothesis Test

The researcher employed the Mann–Whitney test with the assistance of SPSS software. The Mann–Whitney test aims to determine the presence of an effect and differences in the mean scores. The results of the hypothesis testing using the Mann–Whitney test in this study are as follows:

Table. 4 Hypothesis Testing for Experimental and Control Classes

	Kelas	N	Mean Rank	Sum of Ranks
hasil belajar	kelas eksperiment	27	39,98	1079,50
	kelas kontrol	27	15,02	405,50
	Total	54		

Table.5 Statistict Test

	hasil belajar
Mann-Whitney U	27,500
Wilcoxon W	405,500
Z	-5,924
Asymp. Sig. (2-tailed)	,000

Based on the Mann–Whitney test results, the Asymp. Sig. (2-tailed) value for the learning outcomes of the experimental and control classes was 0.000, which is lower than the significance level of 0.05. Therefore, the null hypothesis Ho was rejected, and the alternative hypothesis Ha was accepted. This indicates a significant effect of the origami learning media on the learning outcomes of Grade IX students in the subject of Islamic Cultural History at MTs Ma'arif Balong, Ponorogo. Specifically, the experimental class (Grade IX-C), which received instruction using origami-based learning media, demonstrated notable improvement, with the mean pretest score of 63.73 increasing to a posttest mean score of 85.18. This result reflects the positive and significant impact of the origami media, as supported by the statistical difference between the experimental and control groups.

DISCUSSION

Based on the results of the pretest, posttest, and data analysis, the use of origami learning media proved to be highly effective in improving the learning outcomes of the Islamic Cultural History subject for Grade IX students at MTs Ma'arif Balong, Ponorogo. In the experimental class, the average pretest score was 63.70, while the average posttest score after using origami media increased to 85.19. Meanwhile, in the control class, the average pretest and posttest scores showed relatively smaller improvements compared to the experimental class

Hypothesis testing using the U test (Mann–Whitney) showed a significance value (Asymp. Sig. 2-tailed) of 0.000, which is smaller than the significance level of 0.05. This indicates a significant difference between the learning outcomes of students in the experimental and control classes. Therefore, the null hypothesis (Ho) was rejected, and the alternative hypothesis (Ha) was accepted. These findings indicate that the origami learning media had a significant positive effect on students' learning outcomes in the Islamic Cultural History subject for Grade IX at MTs Ma'arif Balong, Ponorogo.

This is consistent with the research conducted by Fatkhur Asmi (Fatkhur Asmi, 2021). on the application of origami as a learning medium to improve the learning outcomes of third-grade students at Madrasah Ibtidaiyah Wahid Hasyim Jambearum, Jember, which demonstrated a significant improvement in learning outcomes in the class where origami learning media was implemented. These findings not only reflect statistical significance but also provide deeper insights into the positive potential of using origami as a learning medium to enhance student achievement in educational settings.

Based on various studies, the Origami media is recommended for use in the learning process because it enhances students' active engagement. This increased active involvement positively impacts students' understanding of the material and overall learning outcomes.

CONCLUSION

Based on the results of the research and the analysis of the implementation of origami learning media, it can be concluded from the tested data that there is a significant improvement in students' learning outcomes in the subject of Islamic Cultural History when using this media.

This is evident from the post-test scores of the two classes studied: the experimental group achieved an average score of 85.18, while the control group had an average score of 59.62. The data clearly shows that the experimental group's average score is higher than that of the control group. Furthermore, hypothesis testing on the post-test data using the Independent Samples U-Test (Mann-Whitney Test) yielded a two-tailed p-value of 0.000, which is less than 0.05. Therefore, the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted, indicating that the use of Origami learning media has a significant positive effect on students' learning outcomes. Consequently, the Origami learning media is considered effective in improving students' learning outcomes in the subject of Islamic Cultural History.

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