

The Analysis of Al-Islam Learning Outcomes based on the Use of Jigsaw Puzzle Media at Muhammadiyah Elementary School

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Abstract. Learning Al-Islam is a distinctive feature in Muhammadiyah education. On the other hand, the learning outcomes of Al-Islam, including the materials on believing in angels and their duties at the third grade students of Muhammadiyah Elementary School Bangil, are still underrated the minimum completeness criteria. Based on this fact, the study applies an experimental research method with a pre-experimental pre-test and post-test design in one group. The population of this study is the 32 third-grade students using saturated sampling techniques. Besides, the research data use the pre-test and post test scores that are analyzed using paired t-test samples through SPSS 20 for Windows. The results show that the average score of pre-test is 69.53 lower than the average score of post-test that is 84.922. Here, the result of Al-Islam learning outcomes increases after the students receive the treatment of jigsaw puzzle games media. Finally, it shows that the use of media jigsaw puzzle games media can improve the learning outcomes of Al-Islam.

Keywords: learning media, puzzles, jigsaw, al-islam learning outcomes

INTRODUCTION

Entering the 21st century, Muhammadiyah education faces both external and internal challenges. External challenges globally and nationally are the development of science and technology which implies on the changes of education and learning methodology; various government policies in the field of education; eradication of morality in *Al-Karimah*; and public expectation of qualified Muhammadiyah schools [1]. Meanwhile, internal challenges are ideological commitment and loyalty of Muhammadiyah school holders; the quality, relevance, and competitiveness of Muhammadiyah schools; and professional and committed resources to the development of the progressive quality of Muhammadiyah education [2], [3].

Generally, Muhammadiyah education has some functions: 1) as a means of education and intelligence; 2) community service; 3) teaching *amar ma'ruf nahi munkar*; and 4) regenerating media [2]. This shows that the mission of Muhammadiyah in education is educating, giving service, proselytizing, and regenerating. Those missions become a solution and response to the dryness of the religious spirit in education. In line with this, Muhammadiyah has two characteristics; Al-Islam education and Ke-Muhammadiyah-an [4], [1].

Based on the observation in the study, the writer found that: 1) for the learning outcomes of Al-Islam, there are some third-graders at Muhammadiyah Elementary School Bangil who did not reach the minimum completeness criteria related to the materials of the Allah's angels and their duties; 2) some teachers have not optimized the use of media in Al-Islam teaching and learning; and 3) teachers of Al-Islam do not use jigsaw puzzle media to compile the Al-Islam Learning Program.

In fact, the third grade students like interesting and fun games in Al-Islamic learning, one of them is puzzle game media. Puzzle game media are two-dimensional visual media to convey information in the form of knowledge by connecting parts to one another, thus forming an image. In this study, the jigsaw puzzle game media are collaborated to cooperative learning jigsaw model.

The discourse study on puzzle game media shows that there is a relationship between the use of puzzle media and learning interest, motivation to learn, creative thinking, and students' learning outcomes [5]. The mastery of contents by using puzzle game media is also influential to increase social interaction and visual-spatial intelligence [6], [7]. The implementation of the accelerated learning approach assisted by media puzzle also influences the activities and students' learning outcomes [8], [9], [10], [11]. Here, there is an improvement in students' cognitive learning abilities after applying the cooperative learning model of *make a match, picture and picture, teams games tournament* type, and playing method assisted by puzzle media [12], [13], [14]. Another study also indicates that there

is an increase in the development of children language of kindergarten after the application of assignment method assisted with puzzle game media [15]. Further, the development of learning media of puzzle card using research and development approaches can improve the creative thinking skills of elementary school students [16].

The use of puzzle media can also improve the students' competence [17]. In line with this, the enlargement of puzzle game media developed through 4-D model: *define, design, develop, and disseminate* can activate and challenge students' learning activities [18]. Moreover, puzzle game media can advance essay writing skill of elementary school students in the learning process by applying the model of sentence concept and quantum teaching [19], [20], [21].

Some of the above studies have not yet looked specifically at examining the jigsaw puzzle game media in Al-Islam teaching and learning in elementary schools. Therefore, the study analyzes the direct influence of the use of jigsaw puzzle game media on the students' learning outcomes of Al-Islam.

METHOD

The approach of the study used is quantitative research, especially the experimental research with pre-experimental design. In this case, the writer observes one main group and there is no control group to compare with the experimental group [20]. Additionally, the jigsaw puzzle game media is an independent variable that affects the students' learning outcomes of Al-Islam subject as a dependent variable. Here, the pre-experimental design applies pre-test and post-test in one group [22], [23]. During pre-test and post-test, the writer provides ten essay questions for the students. Then, the score of both tests are compared.

The population and the research sample of the study is the 32 third grade students of Muhammadiyah Elementary School Bangil in even semester of the 2017/2018 academic year. In accordance to this, the technique applied to take the sample is total sampling [24].

In the study, the data collection technique used is through tests as a tool to measure the students' cognitive learning outcomes: pre-test and post-test. Validity and reliability tests are applied using construct validity by asking for opinions from experts; next the instrument is tested to the students. The results of the instrument trials are then analyzed using Bivariate Pearson Correlation. The reliability test is assessed using Cronbach's Alpha Method. Before conducting a hypothesis test, the writer conducted a prerequisite test through a normality test of the data using chi quadrates (χ^2) and P-P (Probability Plot) chart with SPSS 20 for

Windows to test the data normality of pre-test and post-test [23], [25].

RESULT

The data analysis results to determine the effect of jigsaw puzzle game media used on the students' learning outcomes of Al-Islam subject can be seen in the following table:

Table 1. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Pretest	69,531	32	12,7860	2,2603
	Posttest	84,922	32	7,3639	1,3018

The table shows that the average score of pre-test is lower than the average score of the post-test. It means that the students' learning outcomes of Al-Islam subject increase after being treated using the jigsaw puzzle game media.

Table 2. Paired Samples Test

	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
				Lower	Upper			
				Pretest - Posttest	-15,3906			

The calculation result in the table shows that the t value points out -12.407 and t table indicates 2.040 with 2-sided test and degrees of freedom (df) $n - 1$ or $32 - 1 = 3$. This shows that there is a difference between the average score of pre-test and post-test. That is, the use of jigsaw puzzle game media can improve the students' learning outcomes of Al-Islam subject. The result of the study also proves that there is an influence of the use of jigsaw puzzle game media on the students' learning outcomes of Al-Islam subject at the third grade students of Muhammadiyah Elementary School Bangil.

The result of the study provides the evidence of reinforcement of previous studies, [14], [10], [9] that the use of instructional media, especially jigsaw puzzle game media, can improve the students' learning outcomes [10]. The use of jigsaw puzzle game media also fosters a learning atmosphere to be fun and challenging, and enhances the students' learning creativity so that they are motivated to learn during the learning activities [26].

This has been in accordance with Kemp & Dayton (1985) who state that the functions and benefits of using learning media in teaching and learning process can present information or subject matter to be more interesting and fun, so it arouses the students' motivation and interest to participate in the learning activities and improves the processes and students' learning outcomes [27]. It shows that the use of jigsaw

puzzle media is effective in teaching and learning Al-Islam.

Moreover, the results of the study can contribute to the teaching and learning process of Al-Islam and Ke-Muhammadiyah-an subject which are expected to be a center to improve the quality of graduates who surpass in personality, religion, science, skills, work in arts and culture, and high competitiveness for locally, nationally and globally [28].

CONCLUSION

Based on the data analysis and discussion, it can be concluded that there is an influence of the use of jigsaw puzzle game media on the students' learning outcomes of Al-Islam subject at the third grade students of Muhammadiyah Elementary School Bangil. The results of the study are expected to provide the suggestions for teachers, especially the teachers who teach Al-Islam and Ke-Muhammadiyah-an subject. Here, the teacher should always create a pleasant learning atmosphere for students by using learning media such as jigsaw puzzle game media.

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