The Effectiveness of Puzzle Media to Increase Knowledge About Pancasila Symbols in Elementary School Students

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Abstract: This study aims to describe it the difference that uses the media puzzles with classes that use the image media and improvement of student learning outcomes in the class using the media puzzle with a class that uses media. The type of research used in this study was Quasu Experiment in class II of 22 student. The data collection used in this research was about the everage multiple choice test instrument. Data analysis used is normality test, homogeneity test, t test, and n-gain test. The results of the study showed there ware difference in the posttest result in the class using the media puzzles and there is increase in student learning outcomes in the class that use the media puzzles. Based on the results of the analysis that the t-test shows Tcount (2.75) > Ttable (2.086), so it can be concluded in learning outcomes between the control class and the experimental class after treatment (posttest). While the n-gain test shows that the control class learning outcomes obtained are 0.27 while the experimental class learning outcomes obtained are 0.52, so it can be concluded that there is an increase in PPKn learning outcomes between the control class and the experimental class.

Keyword: Student Learning Outcomes, Media Puzzle Pancasila, PPKn Subject

Introduction

Education is basically a conscious effort to develop the potential of human resources by encouraging and facilitating through teaching and learning activities. Susanto (2014:1) states that learning outcomes are changes in behavior in the form of knowledge or understanding, skills and attitudes obtained by students during the teaching and learning process or commonly referred to as learning. Civics is one of the subjects that must be taught at every level of education, because it functions to develop moral values, and aims to provide experience to students in planning and implementing good attitudes to form good moral character as well.

Based on the results of the interview with the second grade homeroom teacher on April 16, 2021 at SD Negeri Sindangsari, it was stated that the value of the PPKn content was still low. From the data obtained from the homeroom teacher that there are no problems in the affective or psychomotor domains, problems occur in the cognitive domain as recorded in student learning outcomes in the PPKn content, many students get scores below the minimum completeness criteria (KKM). The problems of Civics learning that are not optimal and the absence of learning media that can involve students in their use, are interesting, challenging and provide understanding to students so that they can improve learning outcomes on PPKn content.

So the researchers set an alternative problem solving by applying an innovative media-assisted learning model. One of the right innovative media to overcome this problem is to apply Puzzle media in the Civics learning process. Media Puzzle is a game consisting of pieces of one particular image that can train creativity, regularity, and level of concentration (Soebacman, 2012: 48).

Research Methods

The research method used in this research is the experimental method. Sugiyono (2017:107) states that the experimental method is a research method that provides treatment (treatment) to the subject to be studied. The research method used is a Quasi Experimental Design research method with a quantitative approach. This experimental research method aims to determine the effect of puzzle media on

student learning outcomes in Civics subjects in class II SD Negeri Sindangsari, Luragung District, Kuningan Regency.

Research Variable

According to Arikunto (2010:118) states that the variable is the object of research or what is the point of attention of a study. The independent variable in this research is puzzle learning media. While the dependent variable in this study is student learning outcomes. So, the independent variable and the dependent variable in this study have a causal relationship in the learning process.

Research Procedure

Research procedures are the steps that must be taken when carrying out research from beginning to end. Researchers carried out the study for four days. At the first meeting, the instrument was tested in class II. At the second meeting, the pretest questions were distributed in class II A and class II B. At the third meeting in class II B on Tuesday, June 8, 2021, it was held in class II B as a control class using image media. And the next day at the fourth meeting in class II A on Wednesday 9 June 2021 it was held in the experimental class using puzzle media.

Data Processing Stage

In processing the data, the researcher carried out the preparation stage, the implementation of the research, the division of the control class and the experimental class, as well as hypothesis testing.

Research Subject

In this study, the subjects to be studied were all students of class II SD Negeri Sindangsari, namely class II A and class II B totaling 22 students. In this study, only two classes were taken, namely class II A totaling 11 students and class II B totaling 11 students. Where class II A is the experimental class, while class II B is the control class. Where the two classes will get different treatment, namely class II A as an experimental class that gets treatment using learning media, namely puzzle media, while class II B as a control class gets learning treatment using image media.

Data Collection Technique

According to Tahzen, Ahmad (2007:57) states that data collection is a systematic and standard procedure to obtain the required data. The data needed in this study were obtained through test techniques.The test in this study was carried out twice pretest (initial test before the experiment was carried out on the research sample) and posttest (final test of the experiment, after the experiment was carried out).

Research Instruments

The research instrument is used to measure the value of the variable under study. This research meusing a test instrument in the form of multiple choice questions with a total of 20 questions used in the post-test and pre-test to measure learning outcomes.

Research Implementation

This research was conducted at SD Negeri Sindangsari using two classes, namely class II A and class II B. Both classes used the same learning model and were assisted by different learning media, class II A used puzzle media while class II B used picture media.

Data Analysis Technique

According to Sugiyono (2017:207) the activities in data analysis are grouping data, tabulating data, presenting data for each variable studied, performing calculations to answer the problem formulation, and performing calculations to test the hypotheses that have been proposed. Based on the results of the calculation of the validity test, it can be concluded that the criteria included are Enough starting from a value range of $0.41 < r\ 0.60$, there are 8 questions. Which includes the High criteria starting from the range of values $0.61 < r\ 0.80$ there are 25 items. Meanwhile, those included in the Very High criteria starting from the value range of $0.81 < r\ 1.00$ there were 7 questions. Based on the results of the calculation of the reliability test of 40 items obtained $R11 = 1.00$, it can be concluded that this question is a reliable question.

Based on the results of the calculation of the level of difficulty, it can be concluded that there are easy, medium, and difficult criteria. Which includes the Easy criteria starting from the range of values0.71 – 1.00There are 12 questions. Which includes the Medium criteria starting from the range of values0.31 – 0.70There are 18 questions. Meanwhile, those that are included in the Difficult criteria start from the 0 value range,00 – 0.30there are 10 questions. Based on the results of the different power test calculations, it can be concluded that there are sufficient, good, and very good criteria. Which includes the criteria Enough starting from the range of values0.21 – 0.40there are 15 questions. Which includes the criteria Good starting from the range of values0.41 - 0.70There are 21 questions. Meanwhile, the criteria for Very Good start from the range of values0.71 – 1.00there are 4 questions.

The normality test was carried out using the Chi Square normality test. Based on the results of the normality test, it shows that the two initial test data in each sample class are normally distributed, then it is necessary to test the homogeneity of the data.According toHake, RR. in Nurmala, (2017:62) Normalized gain or N-gain score aims to determine the effectiveness of using a certain treatment method in one group pretest design research (experimental design or pre-experimental design) as well as research using control groups (quasi-experimental design). or true experiment). In this study, N-Gain was used to express the increase in student learning outcomes using Puzzle media in the experimental class and picture media in the control class.

Research Results and Discussion

Description of Research Site

This research was conducted at SD Negeri Sindangsari, Luragung District, Kuningan Regency, which is located at Jalan Sindangsari Dusun II Rt 09 Rw 03 Sindangsari Village, Luragung District, Kuningan Regency.

Research Result

Pretest was given to determine the initial ability of students in the experimental class and control class. The questions used for the pretest are in the form of multiple choice questions as many as 20 questions. The frequency of pretest scores in the control class and the experimental class is as follows:
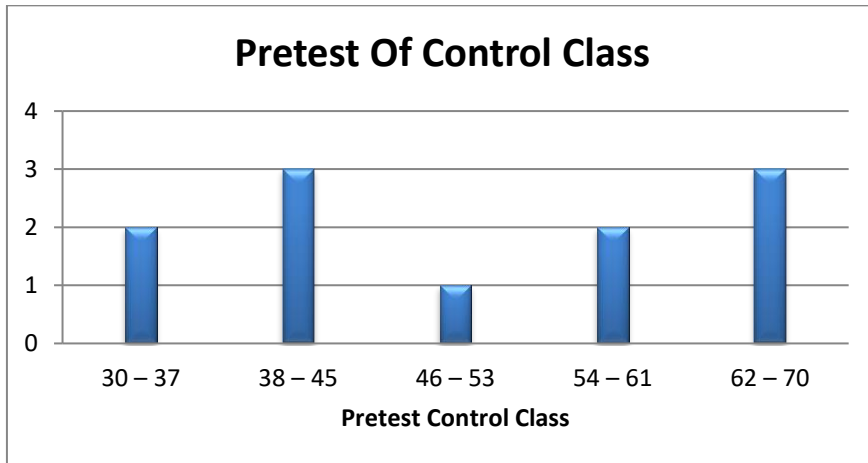
Pretest Of Control Class

Figure 3.1 Diagram of control class pretest scores

Based on Figure 3.1, there are 2 students who scored in the 30–37 range, 3 in the 38–45 range, 1 in the 46–53 range, 2 in the 54–61 range, and 3 in the 62–70 range.
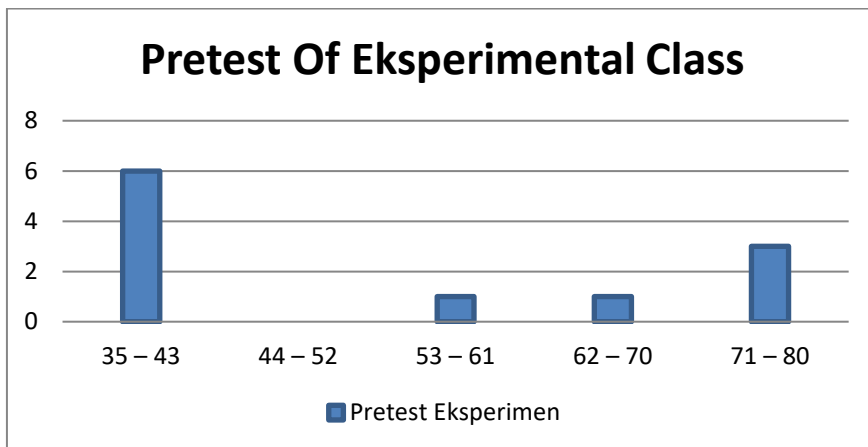
Pretest Of Eksperimental Class

Figure 3.2 Experimental Class Pretest score diagram

Based on Figure 3.2, there are 6 students who got scores ranging from 35 to 43, from 44 to 52, 1 person from 53 to 61, 1 person from 62 to 70 in the range, and 3 people from 71 to 80 in the range.

After obtaining the pretest results from the control class and the experimental class. Furthermore, data analysis includes normality test, homogeneity test, t test and n-gain test. Testing the normality of the distribution of pretest data for the control class and the experimental class was calculated using the Chi-Square test. The pretest data in the control class obtained the value of X2count of -59.0 and X2table of 5.991. This shows that the value of X2count (-59.0) < and X2table (5.991) means that the data is normally distributed. The pretest data in the experimental class obtained the value of X2count of -62.8 and X2table of 5.991. This shows that the value of X2count (-62.8) < and X2table (5.991) means that the data is normally distributed.

Based on the results of normality testing of the pretest data in the control class and the experimental class, it can be concluded that the results of the values are normally distributed. Based on the results of the normality test, it shows that the two initial data in each class are normally distributed, then it is necessary to test the homogeneity of the data. Based on the research, the results of the homogeneity test of the two groups were Fcount = 1.65 and Ftable = 2.0 so that it can be said to be homogeneous because Fcount (1.65) < Ftable (2.0). Based on these calculations, it can be concluded that both the pretest data for the control class and the experimental class were taken from a homogeneous sample.

After the treatment was carried out in the experimental and control classes, both classes were given a final test (posttest). The frequency of pretest scores in the control class and the experimental class is as follows:
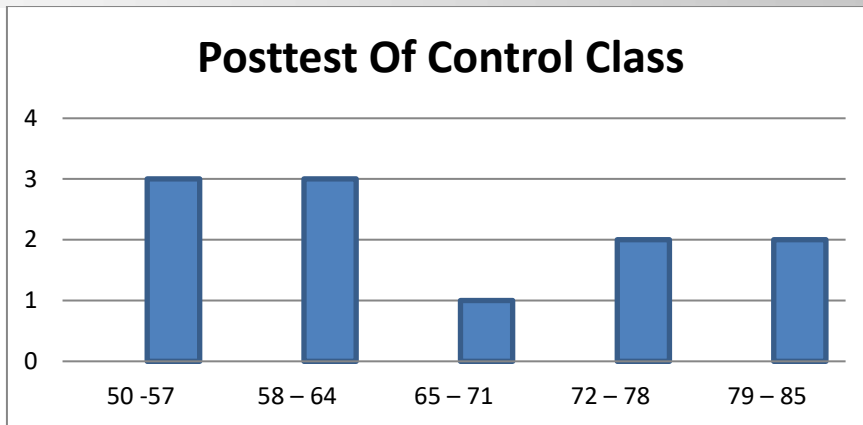
Figure 3.3 Control Class Posttest Value Diagram

Based on Figure 3.3, there are 3 students who scored in the 50-57 range, 3 in the 58-64 range, 1 in the 65-71 range, 2 in the 72-78 range, and 2 in the 79-85 range.
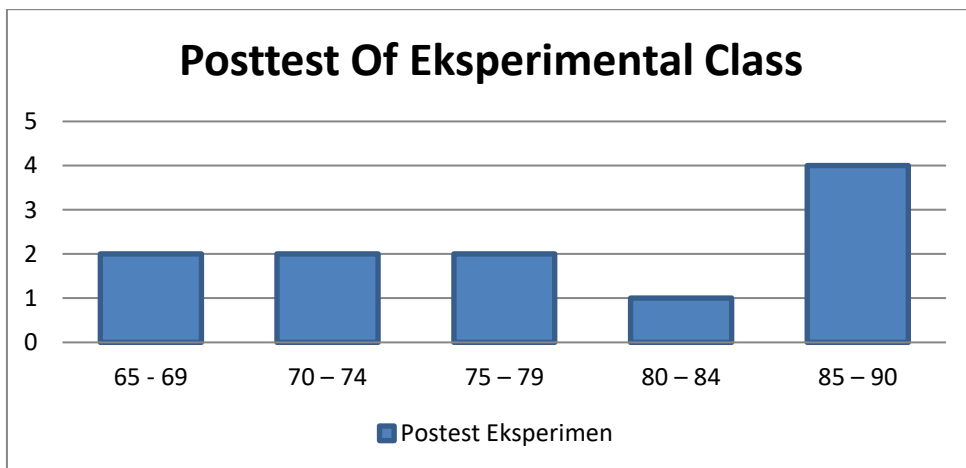

Figure 3.4 Experiment Class Posttest Value Diagram

Based on Figure 3.4, there are 2 students who get scores in the range of 65 - 69, in the range of 70 - 74 there are 2 people, in the range of 75-79 there are 2 people, in the range of 80 - 84 only 1 person and 85-90 as many as 4 people.

After obtaining the results of the posttest scores from the control class and the experimental class. Furthermore, data analysis includes normality test, homogeneity test, t test and n-gain test. Based on the results of the study, it was concluded that the posttest data in the control class obtained the value of X2count of (-47.2) and X2table of 5.991. This shows that the value of X2count (-47.2) < and X2table (5.991) means that the data is normally distributed. The posttest data in the experimental class obtained the X2count value of -9.96 and X2table 5.991. This shows that the value of X2count (-9.96) < and X2table (5.991) means that the data is normally distributed. Based on the results of the posttest data normality test in the control class and the experimental class, it can be concluded that the results of the values are normally distributed.

Based on the results of the normality test, it shows that the two final data in each class are normally distributed, then it is necessary to test the homogeneity of the data. Based on the t test results for the homogeneity of the two groups, Fcount = 0.59 and Ftable = 2.0, so it can be said to be homogeneous because Fcount (0.59) < Ftable (2.0). Based on these calculations, it can be concluded that the posttest data of the control class and the experimental class were taken from a homogeneous sample. Based on the results of the t-test, the value of Tcount = 0.3513 with = 0.05 so that the value of Ttable = t(0.05)(11) = 2.086. Then obtained Tcount = 0.3513 < Ttable = 2.086, it shows that there is no difference in the pretest of experimental class students and control class students.

In testing the initial test data, the distribution is normal and homogeneous, then the t test is used to test the research hypothesis.Based on the results of the t-test calculation, the Tcount value is 2.744 with = 0.05 so that the Ttable = t(0.05)(11) = 2.086 is obtained, then the Tcount (2.744) > Ttable is 2.086 so it can be concluded that H0 rejected H1 is accepted, it shows that there is a significant difference in learning outcomes in classes using puzzle media with student learning outcomes in classes using picture media.

Based on the t test above, it is known that the pretest t value is 0.3513. Because t arithmetic < t table 2.086, it can be concluded that H1 or the first hypothesis (initial ability) is rejected. This means that there is no effect between treatment (X) on (Y). While the t-count value is 2.744. Because t arithmetic > t table 2.086, it can

be concluded that the second hypothesis (final ability) is accepted. So it can be concluded that in the pretest t test and posttest t test there are differences in student learning outcomes in the experimental class and the control class. This means that there is an effect between treatment (X) on (Y).

The difference test of the two averages on the Gain test was carried out to determine the increase in student learning outcomes using puzzle media and students using picture media. Based on the calculation of the Gain test, the gain in the experimental class was 0.52 with moderate criteria, compared to the control class which obtained a gain of 0.27 with low criteria. This means that puzzle media is able to improve student learning outcomes compared to image media.

Results and Discussion

The research carried out has the aim of knowing the influence of puzzle media assisted by the make a match method in the implementation of learning in Civics subjects in the experimental class. The effect of using puzzle media can be seen from the differences in the results of the pretest and posttest results in the experimental class using puzzle media assisted by the make a match method and the control class using image media. The effect of puzzle media can also be seen the difference in the increase in student learning outcomes in the experimental class and the control class.

The tests given are in the form of a pretest (pretest) and a final test (posttest), the initial test is given before the two classes get treatment, it aims to measure the initial abilities of students both experimental and control classes whether they have the same ability or not. Furthermore, the two classes were given different treatment, the experimental class was given treatment with puzzle media in the learning process and the control class was given treatment with picture media. After that, to find out the improvement in learning outcomes of each class, both classes were given a final test (posttest).

The results of the initial test (pretest) the average pretest of the control class using image media obtained 50.4 with the highest score of 70 and the lowest score of 30. While in the experimental class using puzzle media the average was 52.9 with the highest score of 80 and the lowest score is 35. The test analysis shows that the

initial abilities of the experimental class and control class students are not much different. Based on the results of the initial test (pretest) conducted in the experimental class and the control class, then the normality test was carried out in the control class to obtain X2count of (-59.0) < X2table (5.991) and the experimental class X2count (-62.8) < and X2table (5,991). This indicates that the initial test results from the two classes are normally distributed because X2count < X2table. Furthermore, the results of the homogeneity test of the initial test were obtained that Fcount (1.65) < Ftable (2.0). So that the research data is declared homogeneous, because Fcount < Ftable.

Based on these data, the results of the initial test between the experimental class and the control class have an average value or ability that is not much different and has data that is normally distributed and has homogeneous data. The results of the initial test (pretest) both in the experimental class and in the control class were normal and homogeneous, so the researchers then carried out learning in the experimental class and control class with different treatments. In the implementation of the treatment in the experimental class, the researchers gave treatment using puzzle media, while in the control class the researchers gave treatment using image media.

Then each class was given a final test (posttest), as for the final test score that the experimental class obtained an average score of 78.4 with the lowest score of 65 and the highest score of 90. The data obtained contained differences in the scores obtained by students when compared to the initial test. before being given learning treatment. In the final test almost all students scored higher or better than the initial test. This is because there is a stimulus when learning by using puzzle media assisted by the make a match method, students are more active and enthusiastic during the learning process. While the control class obtained an average score of 65.8 with the highest score of 85, the lowest score of 50.

Based on these data, normality test and homogeneity test were then carried out. Posttest normality test results in the experimental classX2count(-9.96) < and X2table (5.991) and control class X2count (-47.2) < and X2table (5.991). This shows that the data from the final test results for the two classes are normally distributed because X2count < and X2table. While the homogeneity of the final

test was obtained that Fcount = 0.59 and Ftable = 2.0. So that the research data is declared homogeneous, because Fcount < Ftable. This data is then used as a reference for carrying out the next stage, namely answering the hypothesis.

After the initial test (pretest) and the final test (posttest) it can be said that there is an increase in the average learning outcomes in each class, the average result of the initial test in the control class = 50.4 and the average final test 65 ,8. While the average results of the experimental class initial test = 52.9 and the average experimental class final test = 78.4. Based on these results, it can be seen that the difference in the average increase in learning outcomes for the experimental class is more effective than the control class.

After knowing that there was a difference in the improvement after learning because the treatment was given to the experimental class and the control class, then the hypothesis was tested. The first hypothesis testing is to answer that there are differences in student learning outcomes (posttest) using puzzle media and those using image media. The results of the hypothesis analysis using the t-test in the final test (posttest) it was found that Tcountthat is 2.744 while the value of Ttable = t(0.05)(11) = 2.086, then the result is Tcount (2.744) > Ttable (2.086). This shows that H1 is accepted, meaning that there are differences in the learning outcomes (posttest) of students in the experimental class using puzzle media and the control class using picture media.

The second hypothesis was submitted to find out the difference in the improvement of both the experimental class and the control class. To test this hypothesis, it is done by calculating the n-gain test obtained in the experimental class, there is an increase in student learning outcomes, with many students getting high n-gain criteria and some getting moderate criteria. However, the average increase in learning outcomes in this experimental class has a high increase in learning outcomes, which is 0.52. This shows that student learning outcomes increase after learning by using puzzle media. getThe average increase in learning outcomes in the control class is in the low criteria of 0.27.

However, if you look at the criteria obtained from each class, it is known that the N-Gain value or the increase in learning outcomes for the experimental class is higher than the N-gain value or the increase in learning outcomes for the control class. This shows that the control class students' learning outcomes are at an increasing level after learning.

The results of research at SDN Sindangsari when students focus on learning, look active and enthusiastic during the learning process using puzzle media. Factors that influence this, one of which is that students are more interested in learning and finding out about the material of the Pancasila precepts symbol with the help of media that applies games with pieces of question cards and answers that must be sought by students, so that students become challenged to learn in order to complete the game on the media.

During the implementation, there were several obstacles and difficulties during the research. The obstacles faced by researchers in using puzzle media are that there are some students who do not listen to the instructions in using the media, as a result in groups the students ask a lot of teachers and friends so that the process of using the media becomes hampered, and the time provided is less. Fulfill.

Conclusions and Suggestions

Based on the results of research and discussion, the conclusion is that in learning outcomes there is a difference between the control class that uses picture media and the experimental class that uses puzzle media, seen from the average value of the control class of 65.8 while the average value of the experimental class is 78, 4. So the difference in learning outcomes of the experimental class is higher than that of the control class. This means that puzzle learning media is more effective compared to image media. In the experimental class learning outcomes there is an increase (gain) of 0.52 with moderate criteria, while the increase (gain) in the control class is 0.27 with low criteria. Then the increase (n-gain) of the experimental class students is higher than the gain of the control class students.

Based on the conclusions above, the advice of researchers in conducting this research for schools is to be able to optimize the application of puzzle media or other learning media as materials in an effort to improve the quality of education

and innovation in the right active learning process, especially in improving Civics learning outcomes. For teachers, it is better to make sure students listen and understand how to use instructional media instructions, and teachers facilitate students' questions about instructions for using media so that the learning process can take place well. As for the next researcher, it can improve the puzzle media and its use by paying attention to the time allocation, the characteristics of students in school.

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