

The Effectiveness of Using Learner Worksheets (LKPD) Based on Problem Based Learning (PBL) and Numbered Head Together (NHT) Cooperative Learning Models on Islamic Cultural History Learning Outcomes at MTs Arifah Gowa Regency

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Abstract: The objectives of this study are: (1) Describing the learning outcomes of Islamic Cultural History taught using the Learner Worksheet (LKPD) based on the Problem Based Learning (PBL) learning model at MTs Arifah Gowa. (2) Describing the learning outcomes of Islamic Cultural History taught using the Learner Worksheet (LKPD) based on the Numbered Head Together (NHT) type cooperative learning model at MTs Arifah Gowa. (3) Testing whether the Learner Worksheet (LKPD) based on the Problem Based Learning (PBL) learning model and cooperative Numbered Head Together (NHT) type is effective for improving the results of Islamic Cultural History at MTs Arifah Gowa. This research is quantitative research with the type of research Quasi Ekperiment. The form of design used is non-equivalent control group design. The population in this study were all students at MTs Arifah Gowa, totaling 883 people. While the sample is class VII 1 and VII.2 each consisting of 28 people, with cluster sampling technique, namely the technique of determining the sample is done randomly. The methods used are observation, test and documentation methods. The research instruments used observation guidelines, learning outcomes tests and documentation guidelines. The data analysis technique used is descriptive statistical analysis and inferential statistical analysis. Based on the results of descriptive data analysis obtained values, namely the pretest control class with an average value of 68 is in the high category and the posttest with an average value of 77 is in the high category which shows a significant increase in the learning outcomes of students taught using LKPD based on the Problem Based Learning learning model, while in the experimental class the pretest with an average value of 67 is in the high category and the posttest with an average value of 86 is in the very high category which shows a significant increase in the learning outcomes of students taught using LKPD based on the NHT type cooperative learning model. And in the effectiveness test with the N-Gain formula, it is known that the N-Gain value in the control class is 0.149 and the experimental class is 0.295. Because it has a value greater than the significance value of 0.05, it is concluded that both learning models are effective in improving student learning outcomes. The implication in this study is that the use of Problem Based Learning-based Learner Worksheets (LKPD) and NHT-type cooperatives affects student learning outcomes, therefore teachers should disseminate the use of media to be able to improve student learning outcomes. The school is also expected to increase school facilities and infrastructure, especially providing facilities for using LKPD.

Keywords: Learner Worksheets (LKPD), Problem Based Learning, Problem Based Learning, Numbered Head Together, Cooperative Learning Models, Learning Outcomes.

Introduction

Ideally, the learning process takes place through interaction between learners and educators and

learning resources in a learning environment to achieve the planned learning objectives, namely the achievement of learner competencies. This is also related to the selection of learning models.

Where teachers are expected to be able to choose a learning model that is in accordance with the material being taught. The selection of learning models includes a broad and comprehensive approach to a learning model, so that the objectives of the learning can be achieved properly.

A learning model is a pattern or plan designed to create learning in the classroom effectively and efficiently to achieve learning objectives. Learning models consist of several kinds, including the Problem Based Learning (PBL) learning model and the Numbered Head Together (NHT) type cooperative learning model. The Problem Based Learning (PBL) model is a learning model that provides active conditions for students by solving problems through the stages of the scientific method so that students gain knowledge through these problems as well as gain skills in problem solving. While the Numbered Head Together (NHT) type cooperative learning model is a learning model in the form of sheets containing questions that must be answered by students by implementing group learning, where students have a part of the task (question) with different numbers.

The advantage of the Problem Based Learning (PBL) learning model is that problem solving will be very effective in understanding the content of the lesson. Problem solving will break down and challenge learners' abilities and provide satisfaction to discover new knowledge. Problem solving makes students' learning activities increase. While the advantages of the Numbered Head Together (NHT) type cooperative learning model are that students do not depend too much on the teacher. However, it can increase confidence in their own thinking ability, can develop the ability to express ideas or ideas and can empower students to be more responsible in the learning process. These two learning models are both able to develop students' thinking skills but differ in the process. Where in the PBL learning model the exploration of insight is done individually while in the NHT type cooperative learning model it is done in groups.

Meanwhile, based on the results of initial observations of students at MTs Arifah Gowa, it is known that there are some students who prefer to

spend time outside the classroom. One of the reasons is because the teacher only relies on the lecture method from the beginning of learning to the end so that students are trapped in a monotonous learning situation and tend to be boring which has an impact on students' reduced learning motivation and causes low learning outcomes.

Based on the description above, it is known that there is a gap in the learning process which has an impact on the value of students. Where the average student only gets a score of 77 which is not far from the minimum completeness criteria of 75.

Therefore, researchers make learning tools by utilizing Learner Worksheets (LKPD). Learner Worksheets (LKPD) in general are one of the learning tools used and part of the Learning Implementation Plan (RPP). The use of Learner Worksheets (LKPD) as one of the educator's learning tools in teaching is expected to help students to improve student learning outcomes, especially in Islamic Cultural History subjects which can be known through learning outcomes or outputs.

The Learner Worksheet (LKPD) used must be in accordance with the applicable curriculum so that the learning process can run optimally and learning achievement can increase. The advantage of using this Learner Worksheet (LKPD) is that learning can be more varied than using a textbook alone, learning will be easier to convey to students.

This is the basis for researchers to raise the title "The Effectiveness of Using Learner Worksheets (LKPD) Based on Problem Based Learning (PBL) and Numbered Head Together (NHT) Cooperative Learning Models on Islamic Cultural History Learning Outcomes at MTs Arifah Gowa"

Materials and Methods

This review was guided by Arksey and O'Malley's methodological framework for conducting scoping reviews. The five main stages of the framework are: (1) identifying the research question; (2) ascertaining relevant studies; (3) determining study selection; (4) charting the data; and (5) collating,

summarizing and reporting the results.(Trulls et al., 2022)

The type of research used in this study is a type of quasi-experimental research, which is a type of experimental research that investigates the possibility of mutual cause-and-effect relationships by imposing on one or more experimental groups one or more treatment conditions and comparing the results with one or more control groups that are not subjected to treatment conditions.(Suryabrata, 1998)

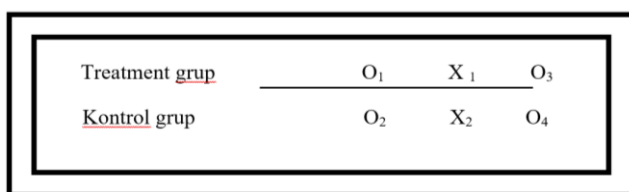


Figure 1. Research design (X1 = Use of PBL-based LKPD, X2 = Use of NHT-based LKPD, O1&O2 = Giving Test before treatment, O3 & O4 = Giving Test After Treatment).

This research will be conducted at MTs Makassar. There are several reasons why researchers chose this location. First, the research location is affordable and strategic for researchers so that it can minimize the energy and cost of this research. Second, both teachers and students are very responsive and enthusiastic in providing the information needed in this research. The population in this study were class VIII students consisting of 10 classes with a total of 285 students. A sample is a number of members selected or taken from a population. This study took samples by cluster sampling. Class VIII.1 and VIII.2 were obtained as sample classes through this technique. The two classes were then drawn to determine

which class used the Problem Based Learning (PBL) and Cooperative learning model of the Numbered Head Together (NHT) type, from the results of the lottery obtained, class VIII.1 was determined as the class taught using the Problem Based Learning (PBL) learning model and class VIII.2 was taught using the Cooperative learning model of the Numbered Head Together (NHT) type. So, the total sample in this study was 66 people. Data processing of the research results used two techniques, namely descriptive analysis and inferential analysis.

Results and Discussion

Result

The results of the study are answers to the formulation of predetermined problems that can strengthen hypotheses or temporary conjectures. The results of the research that has been carried out at MTs Arifah are as follows:

Description of Learning Outcomes of Islamic Cultural History Taught Using Learner Worksheets (LKPD) Based on Problem Based Learning Model (PBL) at MTs Arifah Gowa.

1. Pre-test Data of Control Class Learning Outcomes Using Learner Worksheets (LKPD) based on Problem Based Learning (PBL) learning model.

The pre-test of learning outcomes of Islamic Cultural History of the control class was conducted before being given treatment. Pre-test data is processed to determine the frequency distribution data of the pre-test in the control class.

Table 1. Frequency Distribution Data of Pre-test Learning Outcomes of Islamic Religious Education and Ethics in the Control Class (VIII.1).

Interval	F1	Fk	Xi	(fi.xi)	(xi-x)	(xi-x) ²	F(xi-x) ²	Percentages (%)
54-60	7	7	57,5	402,5	24,5	600,25	4201,75	21,21%
61-67	8	15	64,5	516	31,5	992,25	7938	24,24%
68-74	15	30	71,5	1072,5	38,5	1482,25	22233,75	45,45%
75-81	2	32	78,5	157	45,5	2070,25	4140,5	6,06%
82-88	1	33	85,5	85,5	52,5	2756,25	2756,25	3,03%

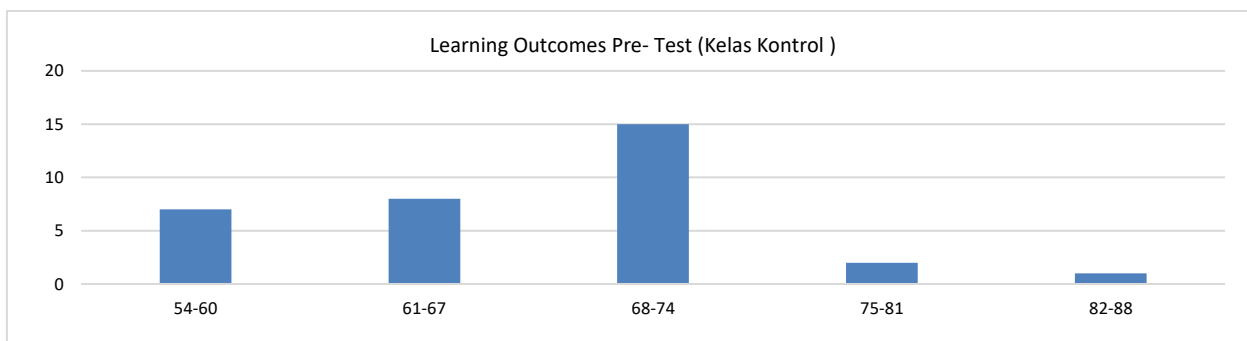


Figure 2. Histogram of Pre-test Values of Islamic Religious Education and Ethics Learning Outcomes of Control Class (VIII.1).

Based on the pre-test results of Islamic Cultural History and Ethics of the control class, the average score was 68.7 medium scores and 25 high scores and 1 very high score. Based on the data obtained from 33 students, the learning outcomes of pre-test students are in the High category, namely with a percentage of 75% as many as 25 people.

The results of this study were obtained after the Islamic Cultural History subject teacher explained the teaching material, as observed by the researcher. The subject teacher in teaching this material uses the lecture method and does not provide variations in the learning process. The conditions in the classroom at that time were

actually not very conducive because not a few of the students did not show good attention in learning so it is not surprising that when the pre-test was carried out it did not get ideal results.

2. Post-test Data on Learning Outcomes of Control Classes Using Learner Worksheets (LKPD) based on Problem Based Learning (PBL) learning model Class VIII.1

The post-test of Islamic Cultural History learning outcomes of the control class was conducted before treatment. Post-test data is processed to determine the frequency distribution of post-test data in the control class.

Table 2. Frequency Distribution Data of Post-test Learning Outcomes of Islamic Religious Education and Ethics in the Control Class (VIII.1).

Interval	F ₁	F _k	X _i	(f _i .x _i)	(x _i -x)	(x _i -x) ²	F(x _i -x) ²	Presentase (%)
67-71	3	3	69,5	208,5	-7,5	56,25	168,75	9,09 %
72-78	11	14	74,5	819,5	-2,5	6,25	68,75	33,33%
77-81	14	28	79,5	1113	2,5	6,25	87,5	42,42 %
82-86	4	32	84,5	338	7,5	56,25	225	12,12%
87-91	1	33	89,5	89,5	12,5	156,25	156,25	3,03 %

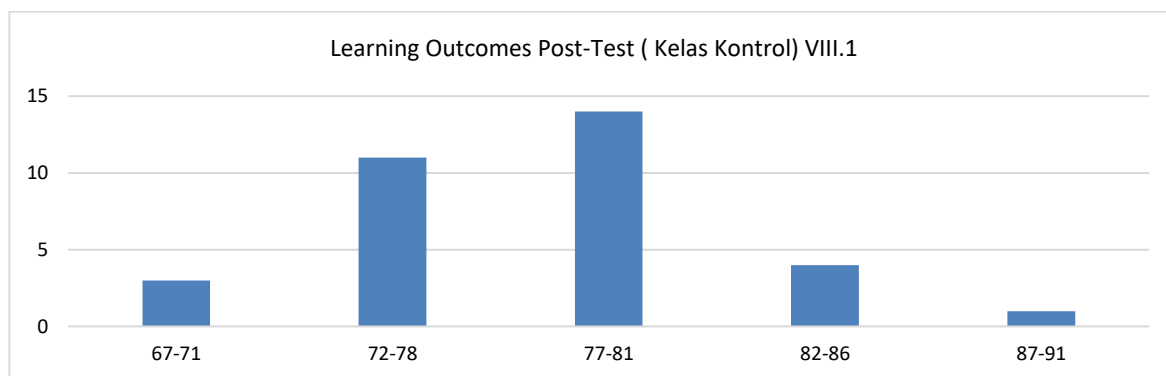


Figure 3. Histogram of Post-test Values of Islamic Religious Education and Ethics Learning Outcomes of Control Class (VIII.1).

The results that have been obtained from the pre-test and post-test, there is an increase in the learning outcomes that have been given in general in the description of learning outcomes which originally only 1 person who achieved a very high score and the average pre-test result was only 68 increased to 5 students with very high scores with an average learning outcome of 68 to 77.

Actually these results have been illustrated when researchers provide material using PBL-based learning, where researchers have prepared material to be taught in the form of LKPDs that have been arranged systematically starting from learning instructions, basic competencies, learning objectives, teaching materials containing (dalil, stories, material points, examples of behavior, ibrah to structured tasks). The results of observations from students provide sufficient materials that support learning can make students more focused in learning, which usually students do not do anything because they usually do not

have adequate learning resources such as books, notes, presentation slides from subject teachers and so on.

The use of the Learning Model by providing adequate material with structured tasks that stimulate students in solving problems in learning has a significant impact on learning outcomes, which from the results of researcher observations students are seen doing the assigned tasks contained in the LKPD, especially in the LKPD there is a description of the answers that students must find.

In the initial observations made by researchers when the teacher only explained the material contained in the printed book that was held, some students seemed indifferent, some took notes but not what the teacher said, some seemed to bother each other with their classmates. This is different from the situation when researchers gave tasks contained in the LKPD that had been prepared.

Description of Learning Outcomes of Islamic Religious Education and Humanities Taught Using Learner Worksheets (LKPD) Based on Numbered Head Together (NHT) Cooperative Learning Model at MTs Arifah Gowa.

1. Pre-test Data of Experimental Class Learning Outcomes Using Learner Worksheets (LKPD) Based on Numbered Head Together (NHT) Cooperative Learning Model in class VIII.2.

Table 2. Frequency Distribution Data of Pre-test of Islamic Culture History in Class (Experiment).

Interval	F1	Fk	Xi	(fi.xi)	(xi-x)	(xi-x) ²	F(xi-x) ²	Presentase (%)
56-60	7	7	58,5	409,5	-8,5	72,25	505,75	21,21 %
61-65	6	13	53,5	321	-13,5	182,25	1093,5	18,18 %
66-70	13	26	68,5	890,5	823,5	678152,25	8815979,25	39,39 %
71-75	4	30	73,5	294	227	51529	206116	12,12 %
76-80	3	33	78,5	235,5	168,5	28392,25	85176,75	9,09 %

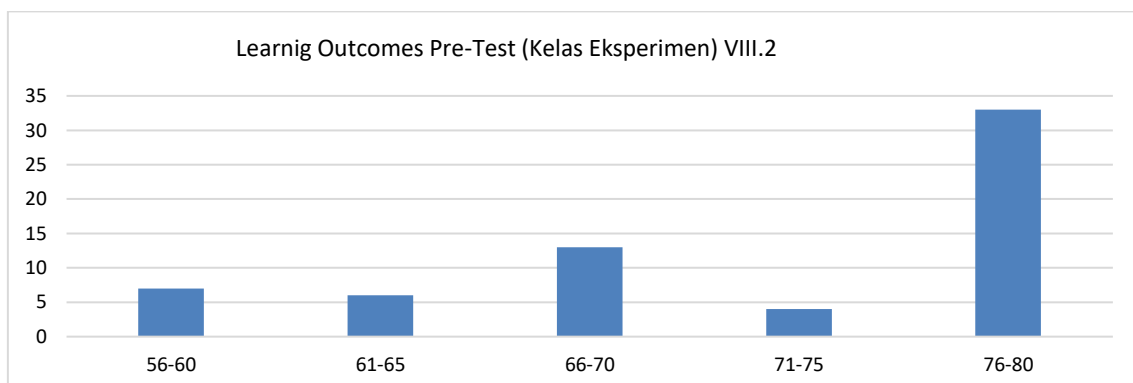


Figure 4. Histogram of Pre-test Values of Learning Outcomes of Islamic Culture History and Ethics of the Experimental Class.

Based on the table above, it can be seen that the pre-test learning outcomes of Islamic Cultural History in the experimental class obtained an average score of 67. The highest score was 77 and the lowest score was 56. There are 7 students who are in the Medium category with a percentage of 21% and there are 26 students in the High category with a percentage of 79%.

The results of this study were obtained after the religious education subject teacher explained the teaching material, the results of observations made

by researchers. The subject teacher in teaching this material uses the lecture method, even in its implementation, students have not comprehensively understood the learning material delivered by the teacher, they do not provide feedback in the form of questions or signs that they are listening to the material properly so it is not visible whether the students really understand or not, so that when the pre-test is done, it has not obtained the expected results.

2. Post-test Data of Experimental Class Learning Outcomes Using Learner Worksheets (LKPD) Based on Numbered Head Together (NHT) Cooperative Learning Model Type VIII.2.

The post-test of Islamic Cultural History learning outcomes of the experimental class was conducted after treatment. Post-test data is processed to determine the frequency distribution of post-test data in the experimental class.

Table 4. Frequency Distribution Data of Pre-test Learning Outcomes of Islamic Culture History and Ethics in the experimental class

Interval	F1	Fk	Xi	(fi.xi)	(xi-x)	(xi-x) ²	F(xi-x) ²	Presentase (%)
78- 80	6	6	79,5	477	-6,5	42,25	253,5	18,18%
81-83	4	10	82,5	330	-3,5	12,25	49	12,12%
84-86	9	19	85,5	769,5	-0,5	0,25	2,25	27,27%
87-89	6	25	88,5	531	2,5	6,25	37,5	18,18%
90-92	8	33	91,5	732	5,5	30,25	242	24,24 %

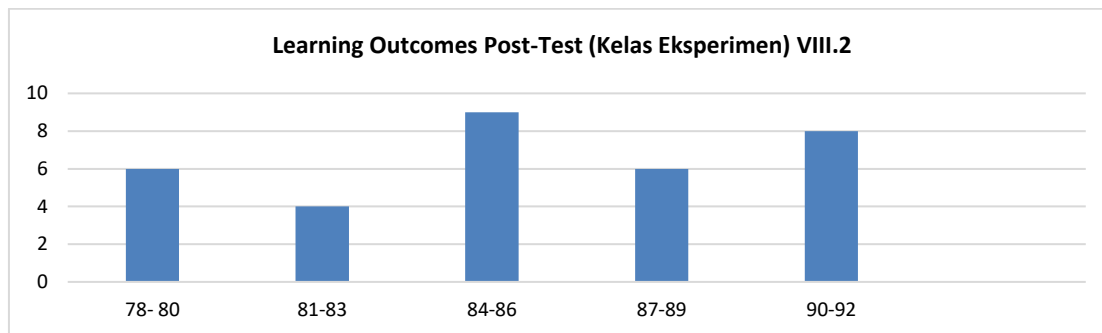


Figure 4. Histogram of Post-Test Values of Learning Outcomes of Islamic Culture History and Ethics of the Experimental Class.

Based on the data above, it can be seen that the average value of learning outcomes Islamic Culture History class, the control class which uses the Learner Worksheet (LKPD) based on the Problem Based Learning (PBL) learning model and the experimental class which uses the Learner Worksheet (LKPD) based on the Numbered Head Together (NHT) Cooperative learning model) has increased. Namely, the average value of the control class pre-test of 68 increased by 9% after being treated to 77. The Experiment class also

experienced an increase with an average pre-test value of 67 increasing by 19% to 86. The highest score in the control class during the pre-test was 87 and the post-test was 89, the lowest score during the pre-test was 54 and the post-test was 67. While the highest score in the experimental class during the pre-test was 77 and the post-test was 92, the lowest score during the pre-test was 56 and the post-test was 78.

The results that have been obtained from pre-tests and post-tests in the use of NHT-based LKPD

are that there is an increase in learning outcomes, learning outcomes that initially had an average of 67 increased to 86. These results have been illustrated when researchers provide material using NHT-based learning where researchers have prepared material to be taught in the form of LKPD which has been arranged systematically starting from learning instructions, basic competencies, learning objectives, teaching materials containing (dalil, stories, material points, examples of behavior, ibrah to structured tasks). From the results of observations of students by providing sufficient materials that support learning can make

students more focused in learning, which usually students do not do anything because they do not have adequate learning resources such as books, catan, presentation slides from subject teachers and others. In addition to providing sufficient teaching materials instructing students collectively in their groups can make the synergy of fellow group members well established, so that they jointly discuss and understand the learning material assigned in the group and they try to give their opinions from what they understand from the material presented according to what was assigned by the researcher.

3. The use of Learner Worksheets (LKPD) based on the Problem Based Learning (PBL) learning model and Numbered Head Together (NHT) cooperative type is effective for improving the learning outcomes of Islamic Cultural History taught at MTs Arifah Gowa.

Table 5. Normality Test of Pretest and Posttest Data for Experimental-Control Classes

Data		Kolmogrov-Smirnov	Asimp Sig (2tailed)	Result
Control	<i>Pre-test</i>	0,121	0,307	normally distributed.
	<i>Post-test</i>	0,200	0,886	normally distributed
Experimental	<i>Pre-test</i>	0,200	0,102	normally distributed
	<i>Post-test</i>	0,164	0,046	normally distributed

In the pre-test data normality test results, it is known that the value of Asimp Sig (2tailed) of 0.307 using a significance level of 0.05. This means that the sign value is greater than α greater than α ($0.307 > 0.05$) so it can be concluded that the pre-test data of the control class data is normally distributed. While the results of the post-test data normality test are known Asimp Sign (2-tailed) value of 0.886 using a significance level of 0.05. This means that the sign value is greater than α ($0.886 > 0.05$) so it can be concluded that the control class post-test data is normally distributed.

In the pre-test data normality test results, it is known that the value of Asymp. Sign (2-tailed) of 0.102 using a significance level of 0.05. This means that the sign value is greater than α ($0.102 > 0.05$) so it can be concluded that the experimental class pre-test data is normally distributed. While the results of the post-test data normality test known values Asymp. Sign (2-tailed) of 0.046 using a significance level of 0.05. This means that the sign value is greater than α ($0.046 > 0.05$) so it can be concluded

that the experimental class post-test data is normally distributed.

Thorough discussion represents the causal effect mainly explains for why and how the results of the research were taken place, and do not only re-express the mentioned results in the form of sentences, not repeat them.

Table 6. Homogeneity Test of Pretest Learning Outcomes of Control and Experiment Classes

Data	Sig	Results	
		Keterangan	Conclusion
<i>Pre-test class control dan Eksperiment</i>	0,612	Sig. > 0,05	Homogen

Table 7. Homogeneity Test of Post-test Learning Outcomes of Control and Experiment Classes

Data	Sig	Results	
		Keterangan	Conclusion
<i>Post-test class Eksperiment-control</i>	0,516	Sig. > 0,05	Homogen

Based on the statistical analysis requirements test, it was found that the data on the learning outcomes of the two groups in this study were normally distributed and both groups in this study were normally distributed and homogeneous. homogeneous. Therefore, hypothesis testing can be done using the t test formula or independent Samples Test with a significance level of alpha 5% (0.05), namely Ho is rejected if the significance probability (sig) <0.05. If the value significance probability (sig) <0.05 then the null hypothesis (Ho) is rejected, otherwise if the significance value (sig) > 0.05 then the null hypothesis (Ho) is accepted.

Table 8. Post-test Results of Islamic Religious Education Learning Outcomes of Experimental Control Classes.

Data	T	Df	Sig. (2-tailed)	Conclusion
Post-Test class control-Eksperiment	8,207	64	0,000	There is a difference which significant

Based on the table above, the t-test data obtained for the post-test of Islamic Cultural History learning outcomes in the control class and experimental class with a t value of 8.207 > t table 1.66 and sig value. (2- tailed) 0.000 <0.05. So it can be concluded that Ho is rejected and Ha is accepted, which means that there is a significant difference between the post-test learning outcomes of Islamic Cultural History of the control class and the post-test learning outcomes of Islamic Cultural History of the experimental class. This means that there is a significant difference in learning outcomes between classes that use Problem Based Learning (PBL) based Learner Worksheets (LKPD) and classes that use Numbered Head Together (NHT) based Learner Worksheets (LKPD).

Discussion

1. Learning Outcomes of Students at MTs Arifah Gowa by Using Learner Worksheets (LKPD) based on the Problem Based Learning (PBL) learning model.

Boud and Feletti argue that problem-based learning is the most significant innovation in education. Furthermore, problem-based learning helps to enhance the development of lifelong learning skills in an open, reflective, critical and active learning mindset. Problem-based learning curriculum facilitates successful problem solving, communication, group work and interpersonal skills better than other approaches.(Rusman, 2010)

According to Arends, problem-based learning is a learning approach in which students work on authentic problems with the intention of compiling their own knowledge, developing inquiry and higher-level thinking skills, developing independence and self-confidence.(Suprihatiningrum, 2013) Learning outcomes are the results obtained by someone who is characterized by a change in a person. There is a change in a person. The changes in question are changes in level of learning outcomes and mastery of the material, to measure learning outcomes must be in accordance with cognitive achievement objectives tailored to the abilities of students.(Daryanto, 2009).

After testing the statistical analysis given to each student after using the Learner Worksheet (LKPD) model based on the Problem Based Learning (PBL) learning model can be said to be effective in improving student learning outcomes in Islamic Cultural History subjects at MTs Arifah Gowa.

Based on the pre-test results of the learning outcomes of Islamic Religious Education and Ethics of the control class, the average score was 68. 7 medium scores and 25 high scores and 1 very high score. Based on the data obtained from 33 students, the learning outcomes of pre-test students are in the High category, namely with a percentage of 75% as many as 25 people. While the post-test of Islamic Cultural History learning outcomes of the control class obtained an average score of 77. The highest score was 89 and the lowest score was 67. There were 28 students in the High category with a percentage of 85%, and 5 students in the Very High category with a percentage of 15%.

This is in line with the theory expressed by Arends in Trianto's book which states that the

Problem Based Learning (PBL) learning model is a learning approach where students work on authentic problems with the intention of compiling their own knowledge, developing inquiry and higher order thinking skills, developing independence and self-confidence.(Trianto., 2007)

Problem-based learning has five (5) characteristics, among others: Through collaborative activities, students are positioned as problem solvers, encouraging students to be able to find problems and elaborate them by making conjectures and planning solutions, students are facilitated to be able to explore various alternative solutions and their implications and collect and distribute information, students are trained to skillfully present findings, and familiarize students to reflect on the effectiveness of their way of thinking and solving problems.(Oktaviarini, 2015)

The elements of PBL learning which include orienting students to the problem, organizing students to learn, guiding individual and group investigations, developing and presenting work, to analyzing and evaluating the problem-solving process are well implemented. This is shown in the results of the teacher's assessment to the researcher of the implementation of the process in accordance with the PBL learning model. So it can be concluded that the results of research related to the use of PBL-based LKPD to students require students to complete their assignments individually which makes them have to be involved in learning by understanding the material then answering the problems in the questions that have been designed by researchers. This involvement is in accordance with the results of research that shows a significant effect on learning outcomes.

2. Learning Outcomes of Students at MTs Arifah Gowa by Using Student Worksheets (LKPD) based on the Numbered Head Together (NHT) Cooperative Learning model.

Achievement is the result that has been achieved, done and done. Nana Sudjana and Ibrahim explained that learning achievement can be seen from the cognitive achievement of students in the subjects they take over a period of time, including knowledge / recognition, understanding,

application, analysis, synthesis, and evaluation.(Ibrahim, 2001) Learning outcomes are the abilities, skills and attitudes of a person in accomplishing something. The results of a learning (abilities, skills and attitudes) can be realized if learning (teaching and learning activities) occurs, either individually or in teams.(Maisaroh & Rostrieningsih, 2010) According to Suprijono, cooperative learning is a broader concept covering all types of group work including forms that are more teacher-led or directed. By learning using NHT, it can improve the assessment of the process and learning outcomes of students. The improvement of process assessment is directly proportional to the learning outcomes of students. The more the student learning process improves, the better the learning outcomes.(Agus, 2009)

Based on the results of the pre-test of Islamic Culture History learning outcomes of the experimental class, the average score was 67. The highest score was 77 and the lowest score was 56. There were 7 students who were in the Moderate category with a percentage of 21% and there were 26 students in the High category with a percentage of 79%. Meanwhile, the post-test learning outcomes of Islamic Religious Education and Ethics of the experimental class obtained an average value of 86. The highest score was 92 and the lowest score was 78. There are 6 students who are in the High category with a percentage of 18% and there are 27 students in the Very High category with a percentage of 82%.

From several theories and information about cooperative learning type Numbered Head Together (NHT) as well as the results of the teacher's assessment to researchers on the implementation of the process in accordance with the NHT learning model which has learning elements including preparation, group formation, each group must have a guidebook, discussion problems, calling numbers or providing answers, to giving the conclusion, it was implemented well. So it can be concluded that by doing Numbered Head Together (NHT) type cooperative learning, students will discuss seriously. Learners are able to deepen their understanding, develop a positive attitude, curiosity, and increase their confidence in conveying the results of the discussion.

The results in this study also show the same thing, that students who actively collaborate in learning are able to understand the material taught better than students who are not involved. And after being tested, students are able to know and interpret the learning more than when only taught by the lecture method. Competition between groups is also seen when this learning takes place, in groups also quietly pay attention to other groups and try to make the best answers in order to be able to beat other groups so that involvement between students becomes better, when students are actively involved then they will be much more understanding of the teaching material than not involved at all.

3. The Effectiveness of Using Learner Worksheets (LKPD) based on Problem Based Learning (PBL) and Cooperative Numbered Head Together (NHT) learning models to Improve Learning Outcomes of Islamic Cultural History taught at MTs Arifah Gowa.

The results of prerequisite testing of pre-test and post-test data analysis of Islamic Culture History learning outcomes of control and experimental classes, namely by conducting normality tests and homogeneity tests. In the pre-test data normality test results, it is known that the Asimp Sig (2itailed) value is 0.307 using a significance level of 0.05. This means that the sig value is greater than α (0.307 > 0.05) so it can be concluded that the control class pre-test data is normally distributed. While the results of the post-test data normality test showed that the Asimp Sig (2itailed) value was 0.886 using a significance level of 0.05. This means that the sign value is greater than α (0.886 > 0.05) so it can be concluded that the control class post-test data is normally distributed.

While the pretest data normality test is known to have an Asymp. Sign (2-tailed) of 0.102 using a significance level of 0.05. This means that the sign value is greater than α (0.102 > 0.05) so it can be concluded that the experimental class pre-test data is normally distributed. While the results of the post-test data normality test known values Asymp. Sign (2-tailed) of 0.046 using a significance level of 0.05. This means that the sign value is greater than α (0.046 > 0.05) so it can be concluded that the

experimental class post-test data is normally distributed.

Based on the Levene statistic test, the Pre-test of the Control and Experiment classes obtained a significance of 0, 612 > 0.05, so it can be concluded that the learning outcomes of Islamic Culture History students in the control and experimental classes have the same variance or homogeneity. While the Post-test of the Experimental-Control class obtained a significance of 0.516 > 0.05, so it can be concluded that the learning outcomes of students in the control class and experimental class are homogeneous (the same).

T-test (t-test) post-test learning outcomes of Islamic Culture History control class and experimental class with a t value of 8.207 > t table 1.66 and sig value. (2- tailed) 0.000 < 0.05. So it can be concluded that Ho is rejected and Ha is accepted, which means that there is a significant difference between the post-test learning outcomes of Islamic Culture History of the control class and the post-test learning outcomes of Islamic Culture History of the experimental class. This means that there is a significant difference in learning outcomes between classes that use Problem Based Learning (PBL) based Learner Worksheets (LKPD) and classes that use Numbered Head Together (NHT) based Learner Worksheets (LKPD).

The t-test of post-test learning outcomes of Islamic Culture History of the control class and experimental class with a t value of 8.207 > t table 1.66 and sig value. (2- tailed) 0.000 < 0.05. So it can be concluded that Ho is rejected and Ha is accepted, which means that there is a significant difference between the post-test of Islamic Culture History learning outcomes of the control class and the post-test of Islamic Culture History learning outcomes of the experimental class. This means that there is a significant difference in learning outcomes between classes that use Problem Based Learning (PBL) based Learner Worksheets (LKPD) and classes that use Numbered Head Together (NHT) based Learner Worksheets (LKPD).

When referring to the discussion of the research results of each learning model, both Problem Based Learning (PBL) and Numbered Head Together (NHT) have a positive influence on student learning. This indicates that the use of Learner

Worksheets (LKPD) with these two learning models can improve student learning outcomes.

When referring to the discussion of the research results of each learning model, both Problem Based Learning (PBL) and Numbered Head Together (NHT) have a positive influence on student learning.

Conclusions

The learning outcomes of Islamic Cultural History of students at MTs Arifah Gowa class VIII.1 (control class) who used the Learner Worksheet (LKPD) based on the Problem Based Learning (PBL) learning model, namely the average value for the pretest obtained was 68 while for the posttest was 77. Shows a significant increase in learning outcomes. Students better understand the learning material taught using LKPD based on the PBL model compared to learning using the lecture method. The learning outcomes of Islamic Cultural History of students at MTs Arifah Gowa class VIII.2 (experimental class) using Learner Worksheets (LKPD) Based on Numbered Head Together (NHT) Type Cooperative Learning Model can be interpreted that involving students in learning has a significant impact on learning outcomes which originally had an average learning outcome value of 67 to 86. The research results of each learning model, be it Problem Based Learning (PBL) or Numbered Head Together (NHT) have a positive influence on student learning. This indicates that the use of Learner Worksheets

(LKPD) with these two learning models is effective for improving student learning outcomes.

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References

- Agus, S. (2009). Cooperative learning teori dan aplikasi paikem. *Yogyakarta: Pustaka Pelajar*, 5–6.
- Daryanto. (2009). Panduan proses pembelajaran kreatif dan inovatif. *Jakarta: Publisher*.
- Ibrahim, N. S. (2001). Penelitian dan penilaian Pendidikan. *Bandung: Sinar Baru Algesindo*.
- Maisaroh, M., & Rostrieningsih, R. (2010). Peningkatan hasil belajar siswa dengan menggunakan metode pembelajaran active learning tipe quiz team pada mata pelajaran keterampilan dasar komunikasi di SMK Negeri 1 Bogor. *Jurnal ekonomi dan pendidikan*, 7(2), 17197.
- Oktaviarini, A. (2015). Penerapan model pembelajaran berbasis masalah untuk meningkatkan kemampuan komunikasi matematis. *Prosiding Semnas Matematika dan pendidikan matematika UIN*. *Yogyakarta: UIN*, 77–82.
- Rusman. (2010). *Raja Grafindo Persada*. Jakarta.
- Suprihatiningrum, J. (2013). Strategi pembelajaran teori dan aplikasi. *Yogyakarta: Ar-ruzz media*.
- Suryabrata, SV. (1998). Metodologi penelitian. *Jakarta: Raja Grafindo Persada*.
- Trianto. (2007). Model-model pembelajaran inovatif berorientasi Konstruktivistik. *Jakarta: Prestasi Pustaka*.
- Trulls, J. C., Blay, C., Sarri, E., & Pujol, R. (2022). Effectiveness of problem-based learning methodology in undergraduate medical education: a scoping review. *BMC medical education*, 22(1), 104.