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The Influence of Application of Portfolio-Based Learning Model on Student Learning Outcomes in History Class XI

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ABSTRACT

Purpose of the study: This research was conducted with the aim of knowing the effect of applying a portfolio-based learning model on student learning outcomes in history class XI.

Methodology: This type of research is experimental research. The experimental design used is the Pre test-Post test. The population in this study were all students of class XI social at Senior High School. Sampling was carried out using random sampling so that researchers got XI social A class as the experimental class and XI social B class as the control class.

Main Findings: From the results of data processing, it can be concluded that the contribution of the application of portfolio-based learning models to history learning outcomes is 26.11%, so the effect of applying portfolio-based learning models to history learning outcomes can be said to be significant.

Novelty/Originality of this study: This research has an update by measuring the effect of implementing a portfolio-based learning model on student learning outcomes in history subjects.

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1. INTRODUCTION

Education is a conscious effort carried out by the family, community and government through teaching, guidance and training activities both at school and outside of school which aims to provide life skills for students so that students are able to play their role in life in the present and in the future [1]–[3]. According to the Law of the Republic of Indonesia Number 20 of 2003 concerning the National Education System Article 1 paragraph 1 explains that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have spiritual strength, religion, self-control, personality, intelligence , and noble character. Educational activities are also aimed at forming Indonesian people whose attitudes and behavior in living in society, nation and state are imbued with the values of Pancasila [4], [5]. Education in Indonesia is expected to not only be able to produce future generations who are intelligent and able to compete with people from other countries but is also expected to be able to produce future generations who are moral, have personality and know the history of their nation.

One of the efforts to introduce the history of the Indonesian nation to the younger generation is through history lessons given at school. Through learning history, students are able to develop competence to think chronologically and have knowledge about the past that can be used to understand and explain the process of development and change in society as well as socio-cultural diversity in order to find and grow national identity in the midst of world community life[6]. Teaching history also aims to make students aware of the diversity of

life experiences in each society and the existence of different perspectives on the past to understand the present and build knowledge and understanding to face the future. Historical learning actually has a very important role in National Education, because it is through history that humans will have social attitudes, especially in personal or group life as a society or nation[7]. Without knowing history, it is impossible for a nation to know and have its identity.

Educational problems arise simultaneously with the development of improving student abilities, environmental situations and conditions, the influence of information and culture and the development of science and technology [8], [9]. Therefore, to improve the quality of education in Indonesia, the government always revises the existing curriculum in line with the changing times, as well as the learning model that is applied which is always developing [10]. Awareness of the importance of education encourages efforts from all levels of society to improve the quality of education. The existence of an education unit level curriculum that is currently implemented is expected to bring about a change in the old teaching method to a new, more relevant teaching method. The application of this curriculum is expected to bring about better changes with variations in learning methods. The existence of a variety of appropriate learning methods is expected to increase learning achievement [11].

Learning achievement can be used as an indicator of how far students can master a subject matter and can also find out how much student interest is in a particular subject matter. After taking teaching and learning activities for a certain period of time, students can find out their learning outcomes [12], [13]. The learning outcomes obtained by students from the learning process are influenced by two factors, namely factors that come from within the students themselves (internal factors) and factors that come from outside the students themselves (external factors) [1], [14], [15] . Internal factors consist of intelligence or intelligence, attention, talent, interest, motivation, maturity, readiness and fatigue. While external factors consist of the family environment, school environment (infrastructure, learning media and learning methods) and the environment [16], [17].

The learning model in history education theoretically can actually be chosen from the many available learning models. Teachers should have the ability to choose the right model for each subject [18]. In addition, learning history can also use various teaching media including displaying pictures, films, maps and others to increase understanding of visual data. The new paradigm of history education requires integrated and continuous innovation. One of its manifestations is innovation by teachers in classroom learning activities. Habits of teachers in gathering information about the level of understanding of students through questions, observations, giving assignments and tests will be very useful in determining the level of student mastery and in evaluating the effectiveness of the learning process [19], [20]. The important role of the teacher is to encourage and provide motivation and participation student learning, giving students the opportunity to learn passionately, because the teacher directly carries out the learning process. The teacher must also be precise in determining the use of the tools and resources needed to deliver lessons, especially history lessons, such as globes, maps and other learning media [21]. Teachers are required to be more creative in preparing and designing learning models that will be carried out along with the development of society and advances in technology [22], [23]. This is done to realize national goals in general and historical education goals in particular, which in principle aim to educate and guide students to become good citizens who are responsible both personally, socially/society, nation and state and even as citizens of the world.

The definition of a portfolio is a collection of students' work with a specific and integrated purpose that is selected according to specified guidelines [24]. These guidelines vary depending on the subject matter and the purpose of the portfolio assessment. Usually a portfolio is the selected work of a student, but in this learning model each portfolio contains selected work from one class of students as a whole who work cooperatively selecting, discussing, searching for data, processing, analyzing and finding solutions to a problem being studied. Basically a portfolio as a learning model is an effort made by the teacher so that students have the ability to express and express themselves as individuals and groups. This ability is obtained by students through learning experiences so that they have the ability to organize the information they find, make reports and write down what is in their minds, and then fully pour it into their work. Portfolio-based learning provides a variety of learning resources. Various methods can be used in portfolio learning, such as inquiry methods, discussions, problem solving, E-learning, value clarification techniques, role playing.

The strategy for implementing this learning data is carried out in various ways according to the abilities and creativity of the teacher. In general, a portfolio is a collection of student work or notes about students that are well documented and organized. Portfolios can take the form of tasks done by students, student answers to teacher questions, notes on teacher observations, notes on teacher interviews with students, student activity reports and essays or journals made by students [24], [25]. The application of a portfolio-based learning model can be a solution to current problems. The purpose of this study is to determine the effect of applying a portfolio-based learning model to class XI student learning outcomes.

2. RESEARCH METHOD

The approach used in this study is a quantitative approach to the experimental type. Experimental research is a research method used to find the effect of certain treatments on others under controlled conditions [26], [27]. This experimental study used the Randomized Control Group Pretest-Postest Design, in which two groups were randomly selected, then given a pretest to determine whether there was a difference in the initial state between the experimental group and the control group [26], [28].

Table 1. Experimental research design

Group	Pre Test	Treatment	Post Tes
Experiment	Tes	Portfolio-based Learning Model	
Control	Tes	-	

The population is all research subjects [29]. In this study, researchers used all students of class XI social at senior high school as the study population. The sample is part or representative of the population studied [5], [30]. The sample in this study did not use all XI social class students, but only used some students. The sampling technique used in this study was random sampling because the sampling of members of the population was carried out randomly without regard to strata in the population, namely by taking two classes from the population.

The research procedure includes the following steps: (1) Taking 2 research classes, namely 1 class as a control class and 1 experimental class, by means of a randomized population. (2) Develop research instruments which include learning tools, student worksheets, observation sheets, Pre-Test questions and questions. (3) Conduct testing of test devices, and calculate validity and reliability. (4) Providing comparable treatment, in the learning experimental group coupled with a portfolio-based learning model. (5) Give post-test questions to both groups. (6) Calculate the difference between the results of the Pre-test and Post-test items for each group. (7) Comparison of these differences, to determine whether applying treatment X was associated with greater changes in the experimental group. (8) Apply a t-test to determine whether the difference in test results is significant. (9) Then the regression analysis.

In the research carried out, the data analysis was divided into three stages, namely the population data analysis stage, the initial stage, and the final stage which includes the value of the test results.

1. Population Data Analysis
   Population data analysis was carried out before the study. This analysis aims to determine whether there are similarities in the initial conditions of the population. The data used is the history midterm exam scores of class XI social students of senior high schoo;.
   a) Population Normality Test
      The normality test is used to determine whether the data being analyzed is normally distributed or not. The formula used for data normality is the chi-square formula.
   b) Population Homogeneity Test
      This test is to find out whether or not the variance of the samples taken from the same population is uniform. In this study the number of classes studied there were two classes. After the new homogeneous data were taken samples with random sampling technique. The variance similarity test of k classes (k> 2) in the population was carried out using the Barlett test.
2. Early Stage Analysis
   The initial stage of analysis is the analysis of the pre-test values of the experimental class and the control class taken at the beginning of the meeting. This analysis aims to prove that there is no significant difference in the average pre-test scores between the experimental class and the control class or it can be said that the two groups started from the same starting point.
   a) Normality Test
      The normality test is used to determine whether the data being analyzed is normally distributed or not. The formula used for data normality is the chi-square formula.
   b) Variance Similarity Test
      The variance test was carried out to find out whether the variance of the experimental class test data was the same as the control class.
   c) Two Means Difference Test (Two Sides Test)
      The two-sided test was used to prove the hypothesis which stated that there were differences in learning outcomes in the material on the development of Islamic religion and culture in various bloodlines in Indonesia, between the experimental group and the control group.
3. Analysis of the final stage

After the two groups received different treatment, a final test (post test) was held. From the final test, data is obtained that is used to test the research hypothesis, whether H0 is accepted or Ha is accepted. The stages of the final stage of analysis are basically the same as the initial stage of analysis, but the data used is test data after being given treatment. These stages are:

a) Normality Test
   The normality test steps at this stage are the same as the normality test steps at the initial stage. The sample normality test is intended to determine whether the distribution of research data obtained is normally distributed or not.
b) Variance Similarity Test
   The test steps at this stage are the same as the two variants similarity test steps at the initial stage. This test is intended to determine whether the two samples have the same variance or not.
c) Hypothesis Test
   Hypothesis testing is used to prove the truth of the proposed hypothesis. Testing the hypothesis in the research that will be carried out using a two-party test. This two-party test uses the t test using normally distributed data.

3. RESULTS AND DISCUSSION

3.1. RESULTS

3.1.1.Implementation of Learning

After carrying out the pre test. At the next meeting, teaching and learning activities were carried out in the Experiment class (XI social A) and the control class (XI social B). The lesson plan is carried out for 3 meetings. The material discussed in the experimental class (XI social A) is as follows: the first meeting is the introduction of Islamic culture and religion in Indonesia, the second meeting is the emergence of Islamic kingdoms in Indonesia and their development, and the third meeting is the development of Islamic traditions in various regions in Indonesia. While the implementation of learning in the control class (XI social B) was carried out for 3 meetings which discussed the following material: the first meeting was the introduction of Islamic culture and religion in Indonesia, the second meeting was the emergence of Islamic kingdoms in Indonesia and their development, and the meeting third is the development of Islamic tradition in Indonesia.

a. Learning in the Experiment class

In this study, the experimental class was class XI social A. As a benchmark for the initial value before being subjected to treatment, the teacher conducts an initial pre-test first. After the pre-test was held, the results of the pre-test were obtained for the experimental class with the highest score of 57 and the lowest score of 43 with an average of 51.17. At the first meeting, using the Portfolio-Based learning method. The teacher begins the activity by giving an opening greeting and prayer, followed by checking the attendance list of students. Then the teacher explains the learning objectives and the scope of the material to be delivered. Then divide the class into 4-8 groups, each group is given learning resources and given the task of reporting the results of each group's discussion. After all the groups collect the results of their discussions. The teacher gives the opportunity for each group to explain the results of their discussion in front of the class. The other groups are given the opportunity to ask questions if something is not clear. Alternately each group gets a turn to explain the results of their discussion. The teacher together with the students draws conclusions and gives assignments to each group about the material to be discussed at the next meeting. The teacher conveys closing greetings.

The second meeting, with a portfolio-based learning model. The teacher asks for the results of each group's homework and randomly selects one of the assignments collected to be accountable in front of the class and explains the sources used. Learning looks more interesting and the activeness of students is more visible. Unlike the first meeting the students looked still awkward in carrying out learning. After all groups have had their turn to come to the front, the teacher draws conclusions and gives assignments for the next meeting. The third meeting, the teacher gave questions to each group about the tasks given at the previous meeting and asked about the sources used. One by one the groups get questions from the teacher. Then the teacher draws conclusions and gives awards to the group that gets the highest score in completing the tasks given by the teacher. After all the material is discussed, a post test or final evaluation is held to find out student learning outcomes and find out the students' ability to understand the lessons taught by the teacher. The time allocation given to work on evaluation questions is 40 minutes. In addition to working on post test questions, students. Students look serious in working on and filling in the post test questions.

b. Learning in the Control class

In this study, the control class was class XI social B The control class does not use a portfolio-based learning model. As was done in the experimental class, as a benchmark for the initial value before being subjected to treatment, the teacher held a pre-test first. After the pre-test was held, the results of the pre-test were

obtained for the Control class, which received the highest score of 57 and the lowest score of 43 with an average of 50.46. At the first meeting, various Lecture learning methods were used. The teacher begins the activity by giving an opening greeting and prayer, followed by checking the attendance list of students. Then the teacher explains the learning objectives and the scope of the material to be delivered. The teacher directs students to open and listen to books supporting learning activities. The teacher gives questions about the material to be studied. The teacher delivers the material. The teacher asks the students if there is anything they don't understand. The teacher together with the students draw conclusions. Conveying closing greetings.

The second meeting was not much different from the previous meeting. The teacher conveys the material then asks students questions about the metrics that have been delivered. At the third meeting, the teacher uses the question and answer method. The teacher provides opportunities for students to read learning material, then the teacher provides opportunities for students to ask questions about things that are considered unclear. After everything is considered clear, the teacher draws conclusions and closes the lesson.

After the history learning process was complete, at the end of the third meeting the teacher held a final post test as was done in the experimental class. The time allocation given is 40 minutes. Students look more prepared in facing this post test. They looked confident in doing the post test. After the allotted time is up, they collect their work.

3.1.2 Population Data Analysis

Population data analysis was carried out before the study. This analysis aims to determine whether there are similarities in the initial conditions of the population. The data used are the odd midterm exam scores for history class XI social at senior high school.

Table 2. Odd midterm exam results

Source of Variation	N	Average	Variance	Standard Deviation	Max	Min
XI social B	37	75,89	67,08	72,99	88	58
XI social A	35	77,34	61,05	62,47	92	65
XI social C	35	78,80	54,66	40,52	92	60

1. Population Normality Test

The normality test is used to determine whether the data being analyzed is normally distributed or not. The normality test results for the historical odd midterm exam data can be seen in table 3.

Table 3. Normality Test Results

	Class	χ^2_{count}	χ^2_{table}	Criteria
Middle Grade Odd Semester History	XI social B	2,9840	7,81	Normal
	XI social A	2,4964	7,81	Normal
	XI social C	3,9340	7,81	Normal

Based on the results of this analysis, it is obtained that χ2count < χ2table with dk=4 and α= 5%, it can be concluded that Ho is accepted, which means that the data is normally distributed. The results of the analysis concluded that the data on the final semester history exam scores were normally distributed so that the next test used parametric statistics. The calculation of the normality test for the historical mid-semester value data is in the appendix.

2. Population Data Homogeneity Test

The condition for using the random sampling technique is if all classes in the population are homogeneous. Therefore, before using the random sampling technique, a homogeneity test was carried out using the Chi Square technique.

Table 4. Homogeneity Test Results

	χ^2_{count}	χ^2_{table}	Criteria
Middle Grade Odd Semester History	3,0586	5,99	Homogen

Based on the analysis results obtained χ2count <χ2table with dk=4 and α= 5%, it can be concluded that Ho is accepted, which means that the population has the same (homogeneous) variance. The results of the analysis conclude that the population has the same variance so that sampling can be done by random sampling technique. The random sampling technique is to randomly select the existing population by taking two classes,

one class as the experimental class and one class as the control class. The calculation of the population homogeneity test is in the appendix.

3.1.3 Analysis of Learning Outcomes

a) Early Stage Analysis

The initial stage of analysis is the analysis of pre-test scores on the spread of Islamic Religion and Culture in Indonesia taken at the beginning of the meeting. This analysis aims to prove that there is no significant difference in the average pre-test scores between the experimental class and the control class or it can be said that the two classes started from the same situation.

Table 5. Odd midterm exam results

Source of Variation	N	Average	Variance	Standard Deviation	Max	Min
XI IPS 1 (Control)	37	50,46	12,8108	3,579	57	43
XI IPS 2 (Eksperiment)	35	51,17	8,8521	2,546	57	43

1. Normality Test

The normality test is used to determine whether the data being analyzed is normally distributed or not. The normality test results for the pre-test value data can be seen in the following table.

Table 6. Normality Test Results

Group/Class	χ^2_{count}	χ^2_{table}	Criteria
Control (XI social B)	3,4493	7,81	Normal
Eksperiment (XI social A)	4,3154	7,81	Normal

Based on the results of the analysis, it was obtained that $\chi 2count < \chi 2table$ with dk=3 and α= 5%, it can be concluded that Ho is accepted, which means that the data is normally distributed. The results of the analysis conclude that the pre-test value data is normally distributed so that the next test uses parametric statistics. The calculation of the pre-test normality test is in the appendix.

2. Variance Similarity Test (ANAVA test) between the Experiment class and the Control class

The ANAVA test is a test to determine whether there is a significant difference in the average between the experimental class and the control class. The results of the test for the similarity of variance in the experimental class and the control class (ANAVA test) can be seen in the following table.

Table 7. Results of the Variance Equality Test (ANOVA Test)

Group/Class	Variance	F_{count}	F_{table}	Criteria
Control (XI social B)	12,8108	1,4472	1,78	have the same variance
Eksperiment (XI social A)	8,8521			

Based on the analysis results obtained Ftable < Ftable, it can be concluded that Ho is accepted, which means there is no difference between the two experimental groups. The results of the analysis concluded that there was no difference between the experimental class and the control class so that the samples departed from the same situation. The calculation of the variance similarity test (ANAVA test) is in the appendix.

3. Test the difference between the two pre-test averages between the experimental class and the control class

The two-way difference test (two-party test) is a test to determine whether there is a significant difference in the mean between the experimental group and the control class. The results of the two-way difference test (two-party test) can be seen in the following table.

Table 8. Two-Party Data Pre-Test Calculation Test Results

Group/Class	Average	Variance	T_{count}	T_{table}	Criteria
Control (XI social B)	50,46	12,8108	0,915	1,78	No difference
Eksperiment (XI social A)	51,17	8,8521			

Based on the results of the analysis, tcount < ttable, it can be concluded that Ho is accepted, which means there is no difference between the two experimental groups. The results of the analysis can be concluded that the experimental class is not better than the control class. Calculations for the two-party test are in the appendix.

3.1.4 Final Stage Analysis

After the treatment was given, a post test was held to collect data on student learning outcomes in the experimental group (XI social A) and the control group (XI social B). The purpose of the final stage of analysis is to answer the hypothesis that has been put forward. The data used are post-test scores from the experimental group (XI social A) and the control group (XI social B).

Table 9. Data on Post-test Learning Outcomes

	N	Average	Variance	Standard Deviation	Max	Min
Control (XI social B)	37	76,78	34,3226	18,3964	87	70
Eksperiment (XI social A)	35	82,09	37,6836	28,0807	93	70

The final stage of analysis includes the normality test, variance similarity test and hypothesis testing.

1) Normality test

The results of the Post Test data normality test can be seen in the table.

Table 10. Normality Test Results

Group/Class	χ^2_{count}	χ^2_{table}	Criteria
Control (XI social B)	1,2678	7,81	Normal
Eksperiment (XI social A)	7,0379	7,81	Normal

Based on the results of the analysis, it is obtained that χ2count < χ2table with dk=3 and α= 5%, it can be concluded that Ho is accepted, which means that the data is normally distributed. The results of the analysis conclude that the post test value data is normally distributed so that the next test uses parametric statistics.

2) Test the Similarity of the Two Post Test Variances between the Experiment class and the Control class

The results of the post test data similarity variance test can be seen in the following table.

Table 11. Post Test Variance Similarity Test Results

Data	F_{count}	F_{table}	Criteria
Post Test	1,5264	1,75	have the same variance

Based on the results of the analysis, it was obtained that Fcount < Ftable, so it can be concluded that Ho is accepted, which means that the two experimental groups have the same variance.

3) Hypothesis testing

Hypothesis testing is used to prove the truth of the proposed hypothesis. Hypothesis testing uses a two-party test. This two-party test uses the t test by departing from normally distributed data. The two-sided test was used to prove the hypothesis which stated that there were differences in history learning outcomes between the experimental class and the control class. The results of the calculation of the two-party test post test data can be presented in the following table.

Table 12. Two-Party Data Pre-Test Calculation Test Results

Group/Class	Average	Variance	T_{count}	T_{table}	Criteria
Control (XI social B)	82,09	18,3964	4,651	1,67	There is a difference
Eksperiment (XI social A)	76,78	28,0807			

Based on the calculation of the two-party test between the experimental class and the control class, tcount = 4.651 while ttable = 1.67. Because tcount > ttable, Ho is rejected and Ha is accepted, which means that there is a significant difference between the experimental class and the control class after they are given different treatments.

3.1.5 Regression Analysis

a. Simple Linear Regression Equations

From the calculation results obtained a simple regression equation is Y = a + bX, with a value = 40.174 and a value of b = 0.411, variable (X) the application of portfolio-based learning models and variable (Y) student learning outcomes. The coefficient b is positive, this indicates that changes in X (portfolio-based learning model) are in the same direction as changes in Y (student learning outcomes). So the value of Y will increase if the value of X increases, conversely if the value of Y decreases then the value of X will also decrease. The regression equation is Y = 40.174 + 0.411 X (detailed calculations see in the attachment). To test the significance of the regression equation, using analysis of variance for regression as shown in the attachment

page, the price is obtained Fcount = 11.66, while Ftable = 4.139, with dk numerator = 35 and denominator dk = 1 and α = 5%, because Fcount = 11.66 > Ftable, it can be concluded that the simple regression equation is significant, thus it can be explained that there is a significant influence between the application of the portfolio-based learning model on history learning outcomes class XI social at senior high school.

b. Correlation Coefficient and Coefficient of Determination

The calculation of the coefficient of determination is r2 = 0.2611, meaning that the magnitude of the contribution of the application of portfolio-based learning models to student learning outcomes is 26.11%.

c. Objection Test and Correlation Coefficient

To test the significance of the correlation coefficient, the t test is used with the formula:

$$t = \frac{r_{xy}\sqrt{n-2}}{\sqrt{1-r^2_{xy}}}$$

Figure 1. The t test formula

Based on the formula obtained t = 3.414 at α = 5% and dk = 33 obtained t(0.975)(33) = 2.03. So because t is in the area of Ho rejection, it means that the correlation coefficient is significant.

3.2. DISCUSSION

This study used a population of all students of class XI social at senior high school which consisted of three classes with a total of 107 students. The sampling in this study used a random sample and it was found that two classes were normally distributed and had the same homogeneity. Class XI social A was selected as the experimental class which received learning treatment with a portfolio-based learning model and class XI social B as the control class which received learning treatment with the lecture method. Test questions of 50 questions were carried out in class XI social B which was not an experimental class and a control class of 32 students to test questions.

After the sample is determined, an initial analysis is carried out to find out whether the two classes taken as samples depart from the same starting point or not. The initial stage of analysis includes the normality test, the two variance similarity test, and the two mean difference test. Based on calculations for both classes, it is known that both classes are normally distributed and the F test shows that both classes have the same variance. Furthermore, in the t test the initial learning outcomes obtained tcount (0.915) < ttable (1.67) which means there is no significant difference in the initial abilities of the two classes, so that it can be said that the two classes before getting the treatment were in the same initial state. Then to find out the relationship between student learning outcomes in history lessons and the use of portfolio-based learning models, regression analysis was carried out using t = 3.414 at α = 5% and dk = 33, t(0.975)(34) = 2.03. So because t is in the area of Ho rejection, it means that the correlation coefficient is significant.

3.2.1 Learning Outcomes

Learning outcomes are the abilities, skills, attitudes and skills that students acquire after they receive the treatment given by the teacher so that they can construct that knowledge in everyday life. This confirms that different learning processes will produce different learning achievements. Based on the final data analysis, it was found that there was a significant difference between the two classes where the experimental class was given learning treatment using a portfolio-based learning model with better results than the control class which was given learning treatment using the lecture method. The final stage of analysis includes the normality test, the two variance similarity test, and the average difference test. The results of the final normality test show that the two classes are normally distributed and have the same variance, and by using regression analysis that the relationship between student learning outcomes in history lessons and the use of portfolio-based learning models can be said to be significant.

a. Results of learning history of the experimental class

   After being given a different treatment, namely being given learning with a portfolio-based learning model, student learning outcomes increased. This can be seen from the class average which was 51.17 to 82.09. This indicates an increase in students' initial learning outcomes before being given different treatment from the portfolio-based learning model.

b. Control class history learning outcomes

After being given the learning treatment using the lecture method, student learning outcomes did experience an increase, but the increase was less when compared to the increase in experimental class learning outcomes. This can be seen from the class average which was 50.46 to 76.78.

c. Differences in history learning outcomes of the experimental class and the control class

After different treatments were given to the two classes, namely the experimental class and the control class, then an evaluation test (post test) was carried out, the average student learning outcomes in the experimental class, namely class XI social A which were given learning using a portfolio-based learning model was 82.09 while the average student learning outcomes in the control class, namely class XI social B using the lecture method was 76.78. Then a mean difference test was carried out to find out whether there were significant differences in student history learning outcomes in the experimental class, namely class XI.IPS.2 and the control class, namely class XI social B. The test for differences in average learning outcomes (Post test) obtained tcount = 4.651 while ttable = 1.67. Because tcount ≥ t (0.95)(70) then H0 is rejected, which means the hypothesis is accepted. Thus it can be concluded that there is a significant difference between the history learning outcomes of the experimental class which was treated with learning using a portfolio-based learning model and the control class which was given learning using the usual learning method.

3.2.2 The advantages and disadvantages of learning with the application of a portfolio-based learning model

Students in the experimental class who received learning using a portfolio-based learning model actually got better learning outcomes than students in the control class who received learning using the usual lecture learning method. This is because learning in the experimental class is very appropriate to use to increase students' enthusiasm and interest in participating in history learning in class. In addition, the portfolio-based learning model has also been designed and adapted to improve student learning outcomes in the experimental class. These advantages include:

1. Students already have an idea or know the material that will be taught in class.
2. Implement the principles of cooperation and intellectual freedom.
3. Students can use the learning resources they like.
4. Students have a high sense of responsibility, because they have an obligation to report their learning outcomes.
5. This learning makes students more independent.

Even so, there are weaknesses that become obstacles in implementing the portfolio-based learning model in the experimental class, these weaknesses include:

1. It is difficult to condition learning time, because the learning material can expand.
2. Not all students want to carry out the tasks given by the teacher.
3. Educators must work harder to discipline students so that students do not get out of the procedure of learning activities.

4. CONCLUSION

The contribution of the application of portfolio-based learning models to history learning outcomes is 26.11%, so the effect of applying portfolio-based learning models to student learning outcomes can be said to be significant. Based on the calculation of the Objection Test and the Correlation Coefficient, t = 3.414 at α = 5% and dk = 33 obtained t(0.975)(33) = 2.03. So because t is in the area of Ho rejection, it means that the correlation coefficient is significant. Then there is a significant difference in student learning outcomes between students who are given learning using a portfolio-based learning model and students who are given learning using ordinary learning methods. This is shown from the results of the calculation of the average difference test obtained tcount = 4.651. For α = 5% and dk = 35+37 - 2 = 70, t(0.95)(70) = 1.67 is obtained. Because tcount ≥ t t(0.95)(70) then H0 is rejected, this means that there is a significant difference in learning outcomes between the experimental class and the control class. Meanwhile, the results of studying history for class XI social at senior high school who used a portfolio-based learning model had the highest score (93), lowest score (70), and average (82.09). As well as the results of studying history for class XI social at senior high schoo; who use the usual/lecture learning model, the highest score is (87), the lowest score is (70), and the average is (76.78). Then the last one is that there are differences in the results of learning history for class XI students of senior high school between those who use a portfolio-based learning model and the usual/lecture method. This can be seen from the average value of learning outcomes using the portfolio-based learning model (82.09) while those using the usual / lecture model (76.78).

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