Problem-Based Learning Model Experiment in History Learning History Learning Results for Class XI Students of SMAN 1 Pejagoan

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Abstract

This study aims to (1) Know the learning outcomes of students given the learning model Problem-Based Learning, (2) Find out the learning outcomes of students treated with the various lecture methods, (3) Investigate whether there is a significant difference between the learning outcomes of the students given the learning model Problem-Based learning and the various lecture methods. The population of this study was all of the eleventh graders of SMA Negeri 1 Pejagoan. The sampling technique in this study is simple random sampling. This study uses a quantitative approach with experimental methods and a Quasi-experimental design. The study's results explained that the students' historical learning outcomes given the Problem-Based Learning model were better than those given the various lecture methods. The average value of the pre-test and post-test for the experimental group was 61.63 and 79.51. Meanwhile, the history learning outcomes of the students given the various lecture methods were also categorized as good, as the value of the pre-test and post-test increased from 59.5 to 77.64. There is also a significant difference between the experimental and the control group because the t-value was higher than the t-table (t-value > t-table = 2.87 > 1.997).

Keywords: Learning Outcomes, Problems Based Learning, Historical Learning.

Introduction

Learning is the heart of the educational process in an educational institution. The quality of learning is complex and dynamic and can be viewed from various perceptions and points of view (Sanova et al., 2016; Husniyah & Masrur, 2017; Hanafi & Aprilia, 2017). The quality of learning is one of the professional responsibilities of a teacher, for example, through creating meaningful learning experiences for students and the facilities that students receive to achieve maximum learning outcomes (Budiningsih, 2010; Agista & Idris, 2016; Paiman & Meet, 2013). Kemp in Rusmono (2014, p. 6) states that learning is a complex process consisting of functions and parts that are interconnected with each other and organized logically to achieve learning success.

History is a branch of knowledge studied systematically, and the overall development process changes the dynamics of life for the public in all aspects. Community life includes all aspects of life that occurred in the past (Subagyo, 2011, p. 10). History lessons are purposeful, creating

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Historical insight or perspective (Sumawijaya & Eradicating, 2015). Besides that, a history lesson has a sociocultural function, raising historical awareness (Aman, 2011, p. 31). History learning in schools aims to develop knowledge. Also, it has a didactic function, as stated by Kartodirdjo (1992), that the purpose of teaching history is so that the next generation of young people can take wisdom and lessons from their ancestors (Agung & Wahyuni, 2013, p. 64).

One of the objectives of learning history in schools, especially in Senior High Schools (SMA), according to Minister of National Education Regulation no. 22 of 2006 concerning Content Standards for Primary and Secondary Education Units, is to train students' critical powers to understand historical facts correctly based on a scientific approach and scientific methodology (Aman, 2011, p. 58; Karyono, 2010; Putri, 2011). In implementing history learning in schools, problems are still encountered, including those related to learning models used by teachers in delivering material. According to Hamid Hasan in Alfian (2007), the current reality of history learning is far from expected to enable children to see its relevance to present and future life. History learning only uses historical facts as the primary material (Alfian, 2011). Students tend to be forced to memorize the figures' names, dates, and years of every historical event (Olivia, 2013). This learning is a series of year numbers and events that must be remembered and revealed when answering exam questions (Salihah & Liana, 2017). It is not strange if history education feels dry and uninteresting because it has no direct connection to their lives and does not provide opportunities for students to learn to explore the meaning of an event (Lamato, 2016). The learning system developed in history is inseparable from deep-rooted cultural influences (Wardani, 2016). Changing a one-way learning model where the teacher is the primary source of knowledge in learning activities is complicated.

Lack of careful selection of teaching strategies will have fatal consequences for the pattern of teaching and learning activities (Widja, 1989, p. 13). Errors in the learning methods or models teachers use are caused by factors including (1) The density of the subject matter makes it possible to take shortcuts, meaning ignoring affective and psychomotor aspects; (2) Teachers do not have the knowledge and skills to teach history interestingly. Students' interests: (3) Teachers tend to use one method in teaching the entire material without considering the characteristics of each presented topic. Low student learning outcomes will then follow this.

Pejagoan 1 Public High School is one of the schools in the Kebumen district that implements the 2013 Curriculum, often called Kurtilas. One of the characteristics of The 2013 curriculum is to balance the development of spiritual and social attitudes, curiosity, creativity, and cooperation with intellectual and psychomotor abilities (Oviana, 2015; Mustaqim, 2014). The 2013 Curriculum learning process is carried out using a scientific (scientific) approach. The

scientific approach includes digging up information by observing, asking questions, experimenting, processing the data or information, presenting the data or information, then analyzing, reasoning, and concluding and creating (Ayuni, 2015; Morelent, 2015). The learning paradigm for students, according to the spirit of the 2013 Curriculum, is that students actively seek and are no longer students who receive. It can be concluded that the learning process in the 2013 Curriculum places great emphasis on student activity and involvement in learning.

In an interview with a history teacher, he said that the history learning at SMA Negeri 1 Pejagoan, which has been going on so far, has been almost good. However, he said it has not been fully implemented as recommended in the 2013 Curriculum, one of which is related to the models and methods used in teaching. The models and methods that are still frequently used are lectures and discussions, which often make students feel bored with monotonous and less varied history learning. This then impacts students' low cognitive learning outcomes, namely that many students still score below the KKM on tests (interview on Monday, 7 March 2016). The lecture method cannot be left alone in learning activities, especially history learning. The lecture method will be successful if it is assisted or supported by other methods such as questions and answers, assignments, exercises, and so on (Suryani & Agung, 2012, p. 56).

One of the innovative learning models is Problem-Based Learning. Problem-Based Learning was introduced by John Dewey, a student-centered program where students learn about subjects in diverse contexts and problems that occur (honest). PBL is a group learning model where, in the learning process, students form small groups to solve problems faced by their group. Studying in this group form will help students understand the material being studied because there is a relationship or interaction between one student and another, so it is possible for students' thinking to develop. The learning community in the classroom influences student engagement and achievement. It determines how a teacher's class will transform from just a group of individuals into a cohesive group characterized by high expectations, caring relationships, and productive information mining (Arends in Utomo, 2012, p. 99). In essence, the learning program aims not only to understand and master what and how something happens but also to provide understanding and mastery of "why it happened" (Made, 2009, p. 52). Ideally, learning activities should focus on gaining as much knowledge as possible and using all the knowledge gained to face new situations or solve specific problems related to the study field. Based on this, the Problem-Based Learning model is an innovative learning model that can be applied to achieve this goal.

Method

This research uses a quantitative approach with experimental methods and a Quasi-experimental design. Sugiyono (2010, p. 114) states that experimental research with a quasi-experimental design is used to find the effect of specific treatments on others under controlled conditions. The experiment applied in this research was to determine the differences in student learning outcomes with the Problem-Based Learning learning model and various lecture methods. This research divided the groups into two, namely the experimental group and the control group. The experimental group is the group that received treatment, namely by applying the Problem-Based Learning learning model. Meanwhile, the control group was used to compare to the experimental group. The control group used a variety of lecture learning models. The population of this study were students of class XI IPS SMA N 1 Pejagoan. There are five classes, namely class XI IPS 1, XI IPS 2, XI IPS 3, and XI IPS 4; in this research, Probability Sampling is used, divided into several types, one of which is simple random sampling. It is simple because sampling sample members from the population is carried out randomly without paying attention to the strata in the population (Sugiyono, 2015, pp. 118-119). After carrying out the sampling technique, two classes were determined to be the research object. Class XI IPS 2 (Experimental Class) and Class XI IPS 4 (Control Class) were the subjects of research.

Results and Discussion

This research used a population of all classes. Sampling in this study used a random sampling technique; the researcher randomly selected the classes that would be used as subjects in the research. However, an analysis is carried out on the population to determine whether the classes to be sampled come from the same point. The data used for this analysis are history test scores for semester 1 Class XI IPS SMA Negeri 1 Pejagoan. The population analysis results are known for each class having a normal distribution and classes having the same homogeneity, so it can be said that the population is in the same condition, and class selection can be done randomly. Class XI IPS 2 was chosen as the experimental class with the Problem-Based Learning learning model, and class XI IPS 4 as the control class with varied lecture methods. A trial test of 40 questions was carried out in class. The initial analysis stage includes a test for normality of pre-test data, a test for homogeneity of pre-test data, and a test for equality of two averages of pre-test data. The analysis process uses Microsoft Office Excel and calculator calculations. After the initial analysis stage is complete, the final stage of analysis is continued, namely, post-test data. Based on the final data analysis, it was found that there were significant differences between the two classes. The experimental class was given a learning treatment using the

problem-based learning model, and the results were better than those of the control class, which was given a learning treatment using the lecture method. The final analysis stage includes a normality test, a test for equality of two variances, and a mean difference test.

Experimental Class Learning Results with the Problem-Based Learning Model

After being given treatment, an evaluation test (*posttest*) was carried out; the highest score obtained for the experimental class was 93, with very high criteria. For the control class, the highest score was also obtained at 93, with very high criteria. However, let us look at the average learning outcomes. The experimental class is superior to the control class; the average learning outcome for experimental class students is 79.51, with the minimum completeness criteria (KKM) set by the school, namely 75. The learning outcomes obtained by the experimental class are possible. Influenced by several factors, one of which is the learning process, the experimental class, which was treated with the model Problem-Based Learning, places more emphasis on student activity in learning; students seek and find their answers to the problems they face so that students have the opportunity to understand better the material being studied. This is adapted to the learning theory used by researchers, namely constructivism theory, where constructivism theory has the following characteristics: (1) Orientation, students are allowed to develop motivation in studying a topic. They are also allowed to observe the topic they want to study. In Problem-Based Learning, students look for problems and analyze problems found in the subject of Western colonialism in Indonesia. (2) Elicitation: Students are helped to express their ideas clearly by discussing, writing, making posters, etc. In this process, students discuss with predetermined groups. (3) Reconstructing ideas, including (a) clarifying ideas that are contrasted with the ideas of other people or friends through discussion or collecting ideas, (b) building new ideas, which can occur if, during the discussion, the idea conflicts with other ideas or the idea is not can answer questions asked by friends, and (c) evaluate new ideas with experiments. (4) Use of ideas in many situations. Ideas or knowledge that students have formed need to be applied to various situations so that they become more complete and even more detailed in all kinds of conditions. (5) Review how ideas change. It can happen that in applying their knowledge, someone needs to revise their ideas by adding or changing them to make them more complete (Matthew in Rusmono 2014:17). Based on the characteristics of constructivism theory above, experimental class students who are treated with the Problem-Based Learning learning model have more learning opportunities to explore more information on the subject matter being studied, because during the process students can search and find resources from anywhere, including visiting the library to look for learning resources or other books and using cellphones to add reference sources that support learning material.

Control Class Learning Results with Varied Lectures

The average learning outcomes of the control class treated with the lecture method varied, namely 77.64, with the highest score being 93 with very high criteria and the lowest score being 66. However, if we look at the average learning outcomes of the students in the treated class, class XI IPS 2 can be better than the control class, with an average of 79.51. Similar to the experimental class, the history learning outcomes of the control class are also influenced by several factors, including the learning process. The lecture method focuses on the teacher as the only provider of information, so students only listen to what the teacher says and are not involved in learning as in experimental classes. By only focusing on teachers as providers of information, students cannot develop creative thinking and explore their potential due to the lack of interaction between students. Students become bored because they only listen to the teacher's explanation during the lesson, which results in the students not focusing on following the lesson. Moreover, answer questions if the teacher asks. In fact, in essence, to achieve the learning objectives that have been set, the interaction process between students and teachers, students and students must run effectively and efficiently.

Differences in Average Student Learning Outcomes in Experiment Class and Control Class

After knowing the average learning outcomes between the experimental and control classes, an average difference test was carried out to determine whether there were significant differences in learning outcomes between the experimental and control classes. Theoretically based calculating the two averages obtained $t = 2.87$ while the t table with a significance level of 5% with dk 35+36-2=69 obtained 1.997; thus, it can be concluded that there is a significant average difference between the results of learning history in the experimental class who were treated with the Problem-Based Learning learning model with the control class being treated with varied lecture methods. The average learning outcomes of the experimental class experienced an increase in average learning outcomes of 17.88 from the average before being treated with the Problem-Based Learning model, 61.63 to 79.51 after being treated with the Problem-Based Learning learning model. Meanwhile, the control class experienced an increase in average learning outcomes of 18.44 from a pre-test average of 59.5 to 77.64 after being treated with various lecture methods. When compared, the increase in the average learning outcomes for the control class was higher than the increase in the average learning outcomes for the experimental class. This is possible because, in implementing the Problem-based Learning model, the teacher does not use multimethods and multimedia as in the control class. Apart from that, the learning process in the experimental class, which is carried out during the

day, affects the learning process, which causes students' enthusiasm not to be outstanding because learning is carried out in the last 4 hours with various possible conditions for students who feel tired and the history lesson is 4 hours at the same time. This is different from the learning atmosphere in the control class, which is held in the morning, and if you look at the condition of the students, they are still very fresh to take part in the lesson. Even though the lecture method varies, it is not uncommon for students to show bored and sleepy attitudes during the learning process and divert their attention to other things, such as chatting with friends, going to the bathroom, scribbling on their books, and occasionally being seen playing with their cell phones. Another factor that caused the increase in the post-test average for the control class was the media used by the teacher in teaching; for the control class, there were media such as maps and pictures of shipping figures, while the experimental class only focused on solving problems.

Other things, such as students' ability to digest the information provided by the teacher, are likely to be higher in the control class, so even with the lecture method, students who can absorb more information will still produce superior learning outcomes, as seen from the average value of the student's daily test scores. Between the control class and the experimental class, it can be seen that the average daily test for the experimental class is 74.28, and the control class is 75.02. Based on interviews with control class students, it can be concluded that students understand better when they have received an explanation from the teacher. Apart from that, several control class students stated that when they did not understand the teacher's explanation, they tried to read books themselves to understand the material. The learning media used in lectures varies to make students interested in following the lesson; this may also be a factor in differences in average student learning outcomes. Meanwhile, for the control class, because the problem-based learning model has only been implemented for the first time, students only focus on solving the problems they face. Because the learning process takes place in groups, sometimes there are differences of opinion between individual students, which influence the learning process. For example, students have different opinions, whose opinions are not accepted, and experience decreased interest in learning. Apart from that, forming groups where students do not fully agree with the random formation of groups makes students reluctant to study with friends who are not wanted in their group. Lastly, the factor that causes the increase in the experimental class is not very significant is that researchers as initial researchers may still not be perfect in implementing the Problem-Based Learning learning model due to the limited abilities researchers possess, and they are still at the stage of being learners.

Conclusion

Based on the description above, the research concludes that the historical learning outcomes of students who were given learning using the Problem-Based Learning learning model are in the excellent category based on the criteria assessment of the average learning outcomes on the subject of Colonialism and Western Imperialism in Indonesia seen from the average class score. Experiments before and after treatment obtained a value of 61.63 to 79.51, and the total increase was 17.88. The results of students' history learning using various lecture methods are also included in the excellent category because, as seen from the average learning results after and after the post-test, the average value was obtained from 59.5 to 77.64. However, the average value of the experimental class learning outcomes is still better. There is a significant difference between the learning outcomes of the experimental class, which was treated with the Problem-Based Learning learning model, and the control class, which had varied lecture methods. Thus, Ha is accepted, and Ho is rejected. This is proven by the test of the difference between the two means; the count is 2.87, while the table with a significance level of 5% is 1.997. These differences are influenced by several factors, including the learning atmosphere, students' conditions, differences in students' abilities, and researchers' limitations in implementing the Problem-Based Learning learning model.

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