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The Importance of a Problem-Based Learning Model in History Education for Improving Historical Thinking

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Abstract

This study aims to describe the effect of using the Problem Based Learning (PBL) learning model on students' historical thinking skills. The research method used was a quasi-experimental design with a one-group pretest-posttest design. The research subjects were class X students with a total population of 407 students, while the sample was class X IPA 2, totaling 40 students for the control class and X IPA 7, totaling 39 students for the experimental class. The sampling technique in this study was using the proportionate stratified random sampling technique. The data analysis technique used the t-test independent sample t-test to see the effect of the model. The results showed that there was a significant effect of the use of the PBL model on the historical thinking skills of students of SMA Negeri 1 Sungai Penuh which was confirmed with a significance value (Sig.) Less than 0.05. The average score of historical thinking skills in the experimental class is higher than the control class. As a result, it is possible to conclude that the Problem-Based Learning (PBL) learning model has a significant impact on the improvement of historical thinking skills of students at SMA Negeri 1 Sungai Penuh.

Keywords: *Problem Based Learning (PBL); Historical Learning; Historical Thinking Skills*

Introduction

There has been substantial progress in the field of history education during the last 40 years, particularly in the teaching of history with the goal of strengthening historical thinking abilities (Lee, 1983). Similarly, under the 2013 curriculum, one of the purposes of high school history classes is to build historical abilities (SMA). The manner in which historical concepts are processed, handled, and employed to form historical arguments is defined as historical thinking skills (Méndez Lozano & Tirado Segura, 2016). Historical thinking, according to Smith Crocco and Livingston, is the activity of mimicking historians' behavior (Crocco & Livingston, 2017). Understanding of history as a historical practice demands students to engage in historical topics by modeling how to solve historical problems (Wineburg, Martin, & Monte-Sano, 2012). According to Baron (2012), historical thinking is the process by which historians begin to understand historical phenomena, gather information about future events, stratify findings based on evidence, form hypotheses, and use empathetic insights to understand the factors that cause historical events to occur.

Historical thinking focuses on students' grasp of how to utilize historical concepts to comprehend historical stories or events, as well as their ability to build historical understanding (Laksana, 2020). Historical thinking skills are important for students because they provide several benefits, including: (1) promoting historical understanding and understanding of the nature of historical subjects; (2) increasing the role of students in the learning process; and (3) encouraging historical learning from multiple perspectives. Laksana conducted research on the teaching of history in Thailand and discovered several issues with learning history in the classroom, including: (1) the teacher used a traditional learning model with lecture-based learning, (2) history as a subject was considered unimportant because students couldn't understand the impact of past events, and (3) history as a subject was considered unimportant because students couldn't understand the impact of past events. Today, and (3) instructors and students continue to have misconceptions about the nature and quality of history (Laksana, 2016).According to the findings of a preliminary study conducted by researchers through interviews with history teachers at SMA Negeri 1 Sungai Penuh, (1) the learning process is still dominated by the expository model with the lecture method which places the teacher as the center of information; (2) the learning process that occurs only develops low-level thinking skills (LOTS), namely memorizing facts in the form of dates, picture names, and so on; (3) the learning process that occurs in the classroom only develops low-level thinking skills (LOTS), namely memory.

The expository-based learning paradigm focuses on students' knowledge of the content rather than their ability to change their thinking abilities (Fishing, 2013). Because learning is motivated by explanations and questions about the topic being studied, expository learning approaches are sometimes labeled as inadequate and conventional (Seaak, De Jing, & Van Joolingen, 2004). Students are passive in their learning when using the expository model. In learning, students are seen as objects rather than subjects. Because the expository approach emphasizes the capacity to listen effectively, this paradigm restricts students' thinking inventiveness. During the learning process, the capacity to listen to pupils typically deteriorates. This condition causes a loss of concentration or focus. Students lose focus during the first 10 minutes on average, capturing 70% of all information explanations, then decreasing to only capturing 20% (Rüütmann & Kipper, 2011). As a result of the absence of students' ability to solve issues, the learning environment becomes monotonous, and the learning process becomes dull. History learning, on the other hand, is not limited to the acquisition of surface facts such as the character's name, the event's date, and the event itself (Gardner, 2011). Learning management that encourages students to find their own solutions and supporting arguments, such as problem-based learning models, can be used to overcome obstacles in history learning and enhance students' historical thinking abilities (Problem Based Learning). PBL (Problem-Based Learning) is a learning model based on constructivism's theoretical foundation. This PBL Learning Model allows students to research, analyze, and solve problems that are related to the phases of historical tasks (Hadi & Junaidi, 2018). The PBL learning paradigm offers a challenge that must be solved using advanced thinking abilities.

Several previous studies on Problem-Based Learning models, such as Saputro, Atun, Wilujeng, Ariyanto, and Arifin (2020), Tambunan (2019), and Jailani, Sugiman, and Apino (2017), have focused on the application of PBL models in enhancing higher order thinking skills (HOTS) in general. However, research on the impact of the PBL paradigm on historical thinking abilities is currently few. As a result of the above context, the goal of this study is to explain the impact of the Problem Based Learning (PBL) model on the students of SMA Negeri 1 Sungai Penuh's historical thinking skills.

Methods of Research

This study utilized a quasi-experimental design using a one-group pretest-posttest design, that is, a research design that included a pretest before treatment and a posttest after treatment (Sugiyono, 2001). The following is a description of the research design:

O1 X O2

Figure 1: Formula for research design Pre- and post-testing in a single group

This research was conducted at SMA Negeri 1 Sungai Penuh, Jambi from August 2019 to October 2019. From August to October 2019, this study was done in SMA Negeri 1 Sungai Penuh, Jambi. The research participants were class X students, with a total population of 407 students, and the sample was class X IPA 2, which consisted of 40 students for class control and class X IPA 7 for the experimental class, totalling 39 participants. In this study, proportional stratified random sampling was employed as the sampling method. When the population contains an uneven number of people in each class, proportional stratified random sampling is employed. Before applying the Problem Based Learning (PBL) learning paradigm to the two groups, a pretest test of historical thinking abilities of SMA Negeri 1 Sungai Penuh students was conducted to check if the two groups had the same beginning ability. The pretest data were examined using an independent sample t-test, and the pretest results indicated a significance value (Sig) of 0.228 (more than 0.05), indicating that there was no significant difference in early historical thinking abilities between classes. In this study, observation sheets and historical thinking skills assessments were utilized to collect data. The observation sheet is used to record information regarding the classroom's learning model. The test is intended to assess pupils' historical reasoning abilities. Following the adoption of the Problem Based Learning model in the experimental class, the historical thinking skills exam was conducted. To assess if there was an impact of administering therapy or not, data was analyzed using an independent sample t-test with a significant threshold of 5%. Prior to performing the t-test, the historical thinking skills data were subjected to normality and homogeneity testing. The research data was statistically analyzed using IBM SPSS version 25 software.

Results and Discussion

Research Result

The following are the findings of a study data analysis performed with SPSS version 25:

Table 1. Control and experimental groups descriptive statistics

Descriptive Statistics						
	N	Range	Min	Max	Mean	SD
Control Class	40	25	60	85	68.13	6.669
Experiment Class	39	25	65	90	80.38	5.892
Valid N (listwise)	39					

Table 1 displays the descriptive statistics of the historical thinking skills test results in the control and experimental classes utilizing the expository and problem-based learning models, respectively. According to the statistical data, the experimental class had an average value of 80.38, whereas the control class had an average value of 68.13. The average value of the experimental class is greater than the control class, indicating that there is a difference in historical thinking abilities between the control and experimental classes, according to the statistical data.

A t-test with an independent sample t-test was also used to see if there was an effect of using the Problem Based Learning (PBL) model on the students' historical thinking skills at SMA Negeri 1 Sungai Penuh. It is important to examine the prerequisites of the study data, which include the normality and homogeneity tests, before assessing the effect using the t test. The Kolmogorov-Smirnov test was used to determine normalcy, and the results are shown in table 2.

Table 2. Results of the Kolmogorov-Smirnov normalcy test

One-Sample Kolmogorov-Smirnov Test			
		Control Class	Experiment Class
N		40	39
Normal Parameters[a,b]	Mean	70.25	80.38
	Std. Deviation	7.841	5.892
Most Extreme Differences	Absolute	.213	.218
	Positive	.213	.167
	Negative	-.118	-.218
Test Statistic		.213	.218
Asymp. Sig. (2-tailed)		.104	.108
a. Test distribution is Normal.			

Table 2 shows that the control class has a normalcy value of 0.104 and the experimental class has a normality value of 0.108. Because the control and experimental classes' normality values are both larger than 0.05, the data for the control and experimental classes can be assumed to be normally distributed. Furthermore, the homogeneity test is the second necessary exam. A homogeneity test was done to determine whether or not the study data employed was homogenous. Table 3 shows the results of the homogeneity test.

Table 3. Homogeneity test results

Test of Homogeneity of Variances					
		Levene Statistic	df1	df2	Sig.
Historical thinking skills test results	Based on Mean	3.155	1	77	.080
	Based on Median	2.999	1	77	.087
	Based on Median and with adjusted df	2.999	1	74.126	.087
	Based on trimmed mean	2.574	1	77	.113

Table 3 demonstrates that data homogeneity of historical thinking skills of SMA Negeri 1 Sungai Penuh pupils has a significant value of 0.08 larger than 0.05. Based on the information presented above, the data is homogeneously distributed. A t-test using an Independent sample t-test was used to assess the influence of the Problem Based Learning (PBL) learning paradigm on historical thinking abilities. Table 4 summarizes the findings of the t test.

Table 4. t-test results

		t-test for Equality of Means		
			df	Sig. (2-tailed)
Historical thinking skills test results	Equal variances assumed	-6.482	77	.000
	Equal variances not assumed	-6.505	72.351	.000

The t test is used to measure the influence of the Problem Based Learning (PBL) learning model on historical thinking skills, as shown in Table 4. The test findings indicate a significance value (Sig) of 0.000 (less than 0.05), indicating that the Problem Based Learning (PBL) learning model has a substantial impact on SMA Negeri 1 Sungai Penuh students' historical thinking skills.

Discussion

The results of the study demonstrate that the Problem Based Learning (PBL) learning model has an influence on the historical thinking abilities of SMA Negeri 1 Sungai Penuh students, as evidenced by the significant value of 0.000 on the t test (less than 0.05). In the experimental class, the average value of students' historical thinking skills was greater than in the control class. This implies that using the PBL learning model has a beneficial impact on the pupils of SMA Negeri 1 Sungai Penuh's historical thinking skills. This study's findings are in line with Gunter and Alpat's (2017) findings, which indicated that students who studied using the problem-based learning model had greater academic success than students who studied using the traditional learning model. Imamah, Yudianto, Sari, and Laily (2020) found that including problem-based learning models into the learning process might help students to think more critically and obtain better learning outcomes.

Students learn to think and analyze information in order to solve issues using the PBL learning model, in which the teacher motivates them with high-level questions. Students use the thinking process to discover data, interpret the data, evaluate the data, and draw conclusions from the data in order to solve issues. Because the PBL syntax and historical thinking skills stages have something in common, namely the form of scientific methods in addressing issues, the PBL model is well suited to be utilized in the historical learning process that strives to enhance historical thinking abilities. The benefits of PBL for each syntactic have an impact on pupils' problem-solving abilities (Zulida, Nor Hazana, & Berhannudin, 2016).

Higher order thinking talents include historical thinking skills (Sutimin, Joebagio, Sariyatun, & Abidin). To enhance these skills, children must be exposed to a learning model that encourages them to think at a higher level, rather of merely remembering facts, which includes low-level thinking skills (LOTS). Problem-based learning, which is based on constructivism, allows students to actively improve their thinking abilities in order to solve issues (Kuvac & Koc, 2019). Learning becomes more fascinating and enjoyable when students are required to analyze problems because they are actively participating in the learning process, which has an impact on academic accomplishment and student learning success (Saputro, Atun, Wilujeng, Ariyanto, & Arifin, 2020). Students are encouraged to construct arguments, ask questions, and solve issues in groups under the direction of the teacher in order to develop higher order thinking abilities (HOTS).

According to the findings of the study, the expository learning approach is ineffective in improving historical thinking abilities. Expository learning is a type of traditional learning that rejects the idea that the teacher is in charge of knowledge distribution. The expository learning approach stresses the instructor delivering material to students verbally, with students not being obliged to look for the material. As a result, the expository learning approach will only improve low-level cognitive abilities (LOTS).

Conclusion

According to the findings of the study, the Problem Based Learning learning model had a good impact on the students of SMA Negeri 1 Sungai Penuh's historical thinking skills, as evidenced by the value of Sig. (2-tailed) 0.000. (less than 0.05). The influence of the PBL model in history learning on other factors such as literacy skills, reasoning skills, and historical consciousness should be investigated further. Furthermore, experts suggest that the PBL model be used in the online learning process.

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