Jurnal Learning Geography
Volume 4, No 2, 2023, pp. 69-73
ISSN 2722-2322 (Print) | ISSN 2746-5020 (Online)
http://jurnal.fkip.unila.ac.id/index.php/jlg/index

Comparison Of Students' Analitical Abilities In Learning Geography Using Models Problem Solving And Problem Posing at SMAN 1 Salimpaung

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ARTICLE INFORMATION

Article status:
Received: September, 25th ,2023
Accepted: September, 30th ,2023
Published: October, 04th ,2023

Keywords:
comparison of analytical skills; problem solving; problem posing

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DOI:
10.23960/jlg.v4.i2. 28615

ABSTRACT

This research aims to see a comparison of the analytical abilities of students in class X using problem solving and problem posing learning models. The research method uses quantitative descriptive. The type of research used is quasi experimental research. Based on the research results, it was found that the comparison of the analytical abilities of students in the experimental class 1 class obtained an average of 75.76, experimental 2 obtained an average of 80.47, while the control class obtained an average of 71.41. Based on the results of the hypothesis that has been carried out, it is found that the Sig of experiment class 1 and control is .019, experiment 2 and control is .000 and experiment 1 and experiment 2 is .009 which is <0.05 which is significant which means H0 is rejected and Ha is accepted. From these three classes, it can be concluded that there is a comparison of students' analytical abilities where the problem posing learning model has a higher average than the problem solving learning model.

INTRODUCTION

Education is the spearhead of the nation's progress in welcoming a better future. Based on Law NO. 20 of 2003 concerning the National Education System states 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, religious strength, self-control, personality, intelligence, noble morals and skills. needed by himself, society, nation and state. National education is education based on Pancasila and the 1945 Constitution of the Republic of Indonesia which is rooted in religious values, Indonesian national culture and responsive to the demands of changing times. (Gunawan, 2017)

Analytical ability is one element in the cognitive domain of student learning outcomes. (Novita et al., 2016) states that students' analytical skills are students' ability to explain existing relationships and combine elements into one whole. This analytical ability includes three processes, namely students can analyze relevant elements of information and determine their point of view regarding the purpose of studying information. Analytical skills are very important for high school (SMA) students. High school students are required to have good analytical skills (Ministry of Education and Culture, 2013). Analytical abilities are in the fourth level cognitive process domain, after remembering (C1), understanding (C2), and applying (C3). Analytical skills are one of the focus goals of 21st century education.

Students who have good analytical skills will be able to achieve good learning outcomes, while students who have poor analytical skills will hinder the achievement of their learning outcomes (Muslimin et al., 2018). The good or lack of analytical skills possessed by students can be measured through observation. The results of observations that researchers carried out on January 9 2023 at SMAN 1 Salimpaung, showed

that the geography learning method at the school still uses conventional methods, namely the Expository Strategy, where learning is centered on the teacher as the provider of information. The learning method that is often used is the discussion learning method or lecture method. Based on the results of the Geography Class This is because most students take part in learning without being serious (not concentrating), not paying attention to the teacher, so that students find it difficult to understand the material and participate less in learning. Based on the problems found, to obtain Minimum Completeness Criteria (KKM).

Therefore (Mariezki et al., 2021), learning strategies are very necessary in learning activities, and the strategies used can also influence student success in learning. Choosing inappropriate learning strategies can lead to students' boredom and laziness in learning. According to Sanjaya (Darung et al., 2020) one of the principles of learning that is held is that it can be fun. This principle of fun can be realized, one way, through the use of learning patterns and models, media and relevant learning resources that are able to arouse students' learning motivation.

This is done so that students are not indifferent when participating in learning, it is easy to understand what is conveyed by the teacher, and learning outcomes can reach the Minimum Completeness Criteria (KKM). This is done so that students are more motivated to carry out their own learning in depth. One of the alternative learning strategies chosen is the Problem Posing and Problem Solving learning strategy. In the problem posing strategy, students are required to understand the concept of the material and then create simpler questions and answers from the material presented, while in problem solving, students are immediately faced with a problem, which then has to be solved by students both in groups and individually. The questions and answers chosen in problem posing tell the content or concept of the material which is prepared based on experiences of daily events, so that students can understand more easily.

According to (Arianti et al., 2019) found several advantages of the problem posing learning model, namely as follows. 1) Educate students to think critically. 2) Students are active in learning. 3) Differences in opinion between students can be identified so that they can easily be directed to healthy discussions. 4) Learn to analyze a problem. 5) Educate children to believe in themselves. According to (Sugita et al., 2016) the disadvantages of the problem posing model are as follows: 1) It requires quite a lot of time, 2) It cannot be used in lower grades, 3) Not all students are skilled at asking questions. There are several advantages of the Problem Solving model according to (Harefa, 2020), namely: 1) Can make students appreciate everyday life more, 2) Can train and familiarize students to face and solve problems skillfully, 3) Can develop students' ability to think creatively 4) Students have begun to be trained to solve problems, 5) Train students to design an invention, 6) Think and act creatively, 7) Solve problems faced realistically, 8) Identify and carry out investigations. It is hoped that the advantages and learning strategies of Problem Posing Learning and Problem Solving can be an alternative solution for overcoming problems encountered at school, making students more active in taking lessons and motivating them to study independently, especially in Geography subjects. After knowing that the application of each learning strategy can influence student learning outcomes, the researcher also wants to find out which learning strategy is more effective (achieving good learning outcomes) between the two.

According to (Nugroho & Anugraheni, 2021) in the title Comparison of Problem Solving and Problem Posing Learning Models on the Mathematics Critical Thinking Ability of Fifth Grade Elementary School Students, based on the results of their research it can be concluded that the problem posing learning model is more effective in improving students' mathematical critical thinking abilities compared to with a problem solving learning model. This can be proven by looking at the average result of the class using the Problem Posing learning model, which is 80.6, which is higher than the Problem Solving learning model, namely 74.7. Therefore, the average results explain that the problem posing model is more effective in improving the development of critical thinking skills in fifth grade mathematics in elementary schools. So in this research the author is interested in conducting research on "Comparison of Students' Analytical Abilities in Geography Learning Using Problem Solving and Problem Posing Models at SMAN 1 Salimpaung".

METHOD

This research is quasi-experimental research. This research uses three homogeneous classes. Three classes were chosen as experimental class 1, experimental class 2, and control class. Experimental class 1 learning uses a problem solving model, Experimental class 2 learning uses problem posing, control class learning uses a conventional lecture method. with each class totaling 34 students with a population of 102 students.

RESULTS AND DISCUSSION

Based on the results of data collection obtained from research results, the data is processed based on the results of test questions that have been collected through data collection tools obtained from post-test results in experimental class 1 which uses the problem solving model, experiment 2 uses the problem posing model and the control class uses conventional method (lecture)**.**

Table 1.
Descriptive Analysis of Students' Analytical Ability

Descriptive Analysis	Experiment 1	Experiment 2	Control
Mean	75,76	80,47	71,41
Median	76	80	72
Modus	80	76	76
Standard Deviation	7,097	6,947	6,947
Maximum Value	92	92	80
Nilai Minimum	64	64	60
Range	28	28	20

From the table above, you can see the descriptive analysis of students' analytical skills where there are differences in the descriptive analysis values starting from the mean, median, mode, standard deviation, maximum value, minimum value and range for each experimental and control class, where the average or mean of the experimental class 2 higher than experimental class one or control.

Based on the distribution table of learning outcomes, it also shows that the frequency of control class learning outcomes is in the 60-65 interval class, namely 8 students (23%), the 66-71 interval class, namely 6 students (18%), the 72-77 interval class, namely 6 students (18%), the 72-77 interval class, namely 6 students. 14 students (41%), interval class 78-83, namely 6 students (18%) Meanwhile in experimental class 1 in the 60-65 interval class, namely 3 students (9%), 66-71 interval class, namely 5 students (5%), 72-77 interval class, namely 13 students (38%), interval class 78-83, namely 8 students (23%), interval class 84-89, namely 3 students (9%), interval class 90-95, namely 2 students (6%). Meanwhile in experimental class 2 in the 60-65 interval class, namely 1 student (3%), 66-71 interval class, namely 1 student (3%), 72-77 interval class, namely 12 students (35%), interval class 78-83, namely 5 students (15%), interval class 84-89, namely 12 students (35%), interval class 90-95, namely 3 students (3%)

Based on the results of the frequency comparison of implementation class analysis results, the average value for experimental class 2 was 80.47, followed by experimental class 1 with an average of 75.76 and the lowest class average was the control class, namely 71.41. The following data on the frequency distribution of learning outcomes can be depicted using the histogram below:

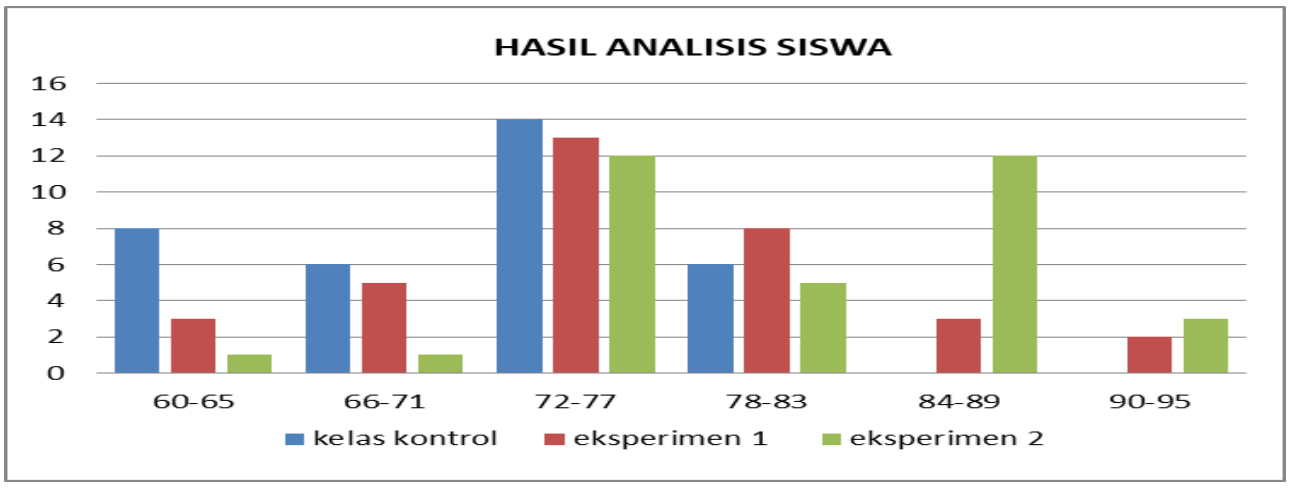

Figure 1. the frequency distribution of learning outcomes

Hypothesis Testing (Twsting U-test)

The U-test uses an independent sample U-test because the data is not normally distributed. To find out the difference in the averages of two independent groups. In this research, the U-test is used to determine the hypothesis test in this research, namely to determine the analytical ability of experimental class 1 and experimental class 2. The basis for decision making is if thit > ttab is significantly different (H0 is rejected), and thit < ttab is not significantly different. significant (H0 is accepted). For testing, use the independent sample U-test obtained from the following SPSS data.

Tabel 2.
Testing Hypothesis U-Test

Class	Mann Whitney-U	Asymp.Sig	Keterangan
Experiment 1 - Control	389.500	.019	Significant
Experiment 2- Control	207.500	.000	Significant
Experiment 1- Experiment 2	367.000	.009	Significant

Based on the results of the hypothesis test above, a comparison of the analytical abilities of students in experimental 1, experimental 2 and control classes was obtained. Asymp.Sig < 0.05, which means significant. Thus, H0 is rejected and Ha is accepted, which means that it can be said that there is a comparison of students' analytical abilities in learning problem solving and problem posing at SMAN 1 Salimpaung.

After conducting data analysis, it was found that the comparison of students' analytical skills in learning problem solving and problem posing at SMAN 1 Salimpaung as seen in the Pre-test and Post-test results from the results of table 15 Mann Whitney-U was declared significant where all the hypothesis results H0 and Ha were accepted. This means that it can be said that the problem based learning model has a significant influence on students' analytical abilities and it was found that the learning model using problem posing has an average performance compared to the problem solving learning model and conventional learning methods. with the average result being the average of experimental class 2, namely 80.47, followed by experimental class 1 with an average of 75.76 and the lowest class average was the control class, namely 71.41.

This is in line with research conducted by Pramesti (2021) in the title Comparison of Problem Solving and Problem Posing Learning Models on the Mathematics Critical Thinking Ability of Grade V Elementary School Students. Based on the results of his research it can be concluded that the problem posing learning model is more effective in improving thinking abilities. critical mathematics in students compared to problem solving learning models. This can be proven by looking at the average result of the class using the Problem Posing learning model, which is 80.6, which is higher than the Problem Solving learning model, namely 74.7. Therefore, the average results explain that the problem posing model is more effective in improving the development of critical thinking skills in fifth grade mathematics in elementary schools.

Then this is also in line with Prihatnani (2020) entitled Differences in problem solving abilities from the application of problem solving and problem posing in high school where based on the results it can be concluded that the problem posing learning model significantly produces better problem solving abilities compared to the existing problem solving learning model. seen from the percentage of implementation results of the two models, respectively 77.86% and 84.18%.

CONCLUSION

Based on the results of the research that has been carried out, a comparison of the analytical abilities of students in experimental 1, experimental 2 and control classes was obtained. The result was Asymp.Sig < 0.05, which means significant. Thus, H0 is rejected and Ha is accepted, which means that it can be said that there is a comparison of students' analytical abilities in learning problem solving and problem posing at SMAN 1 Salimpaung. Based on the explanation above, it can be concluded that the problem posing learning model has a higher average than the problem solving learning model and conventional methods. So using the problem posing learning model can improve the analytical skills of class X students at SMAN 1 Salimpaung.

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