The effectiveness of question student method in social studies learning on activity and learning outcomes

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Suggested Citation:

Received from February 16, 2023; revised from April 16, 2023; accepted from June 23, 2023.
Selection and peer review under the responsibility of Assoc. Prof. Dr. Zehra Ozcinar, Ataturk Teacher Training Academy, Cyprus
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Abstract
The purpose of this study is to analyze the effectiveness of the question students have a method in social studies learning to increase student activity and learning outcomes. This research uses quantitative methods. The population included seventh-grade students at junior high school in Yogyakarta, with a sample of 122. The sampling techniques cluster random sampling, while data collection used observations, interviews, and instruments. Data analysis used an independent sample t-test and an N-gain score test to determine student activity and learning outcomes. The results showed that the question student has a method in social studies learning was able to increase student activity and learning outcomes compared to conventional classes, based on the independent sample t-test test, and the N-gain score test was included in the medium category. The questions students have a method, have a very significant impact, thus making social studies learning more quality.

Keywords: Activity; learning methods; learning outcomes; questions students have; social science.
1. Introduction

In the world of learning, many various methods have not been used by social studies teachers in junior high schools so the teaching and learning process that takes place is still using the classical method. This causes the output and quality of learning to be below (Kormaz & Özturk, 2020; Hwang & Chang, 2016). The quality of education in Indonesia is currently still lagging compared to the quality of education in other countries (Syawaluddin et al., 2020). In this case, the teacher participates in efforts to improve the quality of learning. Teachers should play an active role and place their position as professional educators. Teachers should also always be creative and innovative in using learning methods so that students more easily understand the material presented. The learning method chosen must be under the subject matter to be delivered to achieve the learning objectives (Lee, Wang & Ren, 2020; Mariati et al., 2021). Maksum et al., (2021) suggest that one of the learning objectives is learning outcomes. Each teaching and learning process's success is measured by how far the learning outcomes are achieved by students. Success in learning can be done if there is interaction between teachers and students. To increase activity and learning outcomes, teachers should be able to choose and use suitable learning methods according to the characteristics of students.

The social studies learning process in which teachers have an important role in conveying information, training skills, and guiding student learning so that teachers are required to have certain qualifications and competencies so that the learning process can take place effectively and efficiently (Rosardi & Supardi, 2021). The existence of a high interest in learning and an effective learning approach will make students easy to accept and process the material presented (Bolinger & Warren, 2010; MacKay, Hughes, Marzetti, Lent & Rhind, 2019; Nganga et al., 2020). The learning method applied by the teacher when teaching at school is one of the determining factors in the development of student learning outcomes.

Inappropriate learning methods can cause low student learning outcomes and cause students not to be interested in following them (Yeti et al., 2020; Svanes & Andersson-Bakken, 2021; Machost & Stains, 2023). Inappropriate learning methods are caused because learning takes place in one direction, and is passive so that it cannot be related to students’ daily lives (Watson-Canning, 2020). Students feel afraid and anxious to ask questions, so students do not understand the material given by the teacher. The students lack the confidence to ask questions even though they did not understand the lesson (Güleç, 2020; Sporre, 2022). Factors that cause students to not actively ask questions are students who are not brave enough to ask questions even though they already have questions to ask (Ribeiro, Rosário, Moreira & Cunha, 2019; Caetano, Freire & Machado, 2020; Lee et al., 2021). With this passive attitude, there is no reciprocal interaction between teachers and students.

This condition is caused by classroom management problems. Because the purpose of classroom management is to work in an orderly manner so that teaching objectives are achieved effectively and efficiently (Kamza et al., 2021). By paying attention to these conditions, teachers are required to be able to make improvement efforts, namely choosing one of the learning methods that can support the success of the teaching and learning process and can improve social studies learning outcomes (Octaviyantari et al., 2020; Wati & Suarni, 2020). One of the learning methods that can improve student activity and learning outcomes is the Questions Students Have learning method (Herlina, 2017; Sari, 2020; Wu, Liu, How & He, 2023). The Questions Students Have learning method is learning that emphasizes students be active and unite opinions and measure the extent to which students understand the lesson through written questions (Firdaus, 2018).
The Question Students Have learning method requires students to write down questions about the subject matter that is not understood in the form of sheets of paper, then provide opportunities for other friends to read the existing questions (Uli, 2018). If students want to know the answer to the question, students can put a checkmark to the least (Awaluddin, 2017). The Question Student Have learning method is a broader concept encompassing all types of group work including forms that are more teacher-led or teacher-directed (Rohendi, 2017). The Question Student Have learning method was developed to train students to be active in asking questions (Zulfiani et al., 2020; Waldeck, 2010).

1.1. Purpose of study

Previous studies (Setiawan et al., 2020; Hakim, 2015) explained that the Question Student Have learning method in social studies learning can have a good impact on student learning outcomes so that in the learning process students are always actively thinking to answer the questions that have been provided. Of course, the method is very effective and efficient when implemented in the social studies learning process so that learning objectives can be achieved optimally (Putra et al., 2021). The purpose of this study is to analyze the effectiveness of the Question Students Have a method in social studies learning to increase student activity and learning outcomes with the material for the proclamation of Indonesian independence. So, the Question Students Have learning method is expected to support learning activities and provide the right situation so that the potential of students develops under the goals of education and learning that have been determined.

2. Materials and Methods

2.1. Research design

This study uses a quantitative method with a quasi-experimental non-equivalent control group design by dividing two class groups, namely experimental and control (Sugiyono, 2020), which aims to analyze whether the Question Students Have method is effective in social studies learning to increase student activity and learning outcomes (Teo, 2013; Krishnan, 2018).

2.2. Participants

The population used the seventh-grade students at state junior high school 2 Sleman, Yogyakarta with a sample of 122 students. In determining the sample, it is divided into two class groups, namely the experimental class (given treatment) and the control class (not given treatment or conventional). The group before being given treatment must be given a test first with a pretest and posttest, the aim is to be able to analyze the changes that occur between the two groups. The sampling technique used cluster random sampling by dividing the sample into several separate groups (clusters).

2.3. Data collection instrument

Data collection techniques used in this study were observation, interviews, and tests. Observations and interviews in this study were used to measure student activity variables and test instruments were used to measure student learning outcomes.

2.4. Data analysis

Data analysis uses parametric statistical methods, which aim to test hypotheses by involving population parameters. Data analysis was carried out with the help of the IBM Statistics SPSS 22 Program, through the N-gain test to determine the effectiveness of the Question Students Have a method in social studies learning to increase student activity and learning outcomes. Before testing the hypothesis, it is necessary to analyze the description and test prerequisites to test whether the data has
met the requirements. The prerequisite test consists of normality and homogeneity tests. Analysis of normality test data using the Kolmogorov-Smirnov path model with a significance level of \( p > 0.05 \). Homogeneity test using One Way ANOVA analysis through Levene's Test with a significance level of \( p > 0.05 \). An independent sample t-test was conducted to determine the difference in significance level between the two classes (experimental and control) using a significance level of \( p < 0.05 \). The N-gain score test is used to determine the increase in the ability of student learning outcomes which describes the improvement indicators as in Table 1, indicating that the N-gain score is greater than 0.7 \( (g > 0.7) \), then the critical thinking indicator is in the high category, if the score is between 0.3 and 0.7 \( (0.3 \leq g \leq 0.7) \) then it is in the medium category, while the score is less than 0.3 \( (g < 0.3) \) then it is in a low category (Hake, 1999).

### Table 1

<table>
<thead>
<tr>
<th>N-gain Value</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>( g &gt; 0.7 )</td>
<td>High</td>
</tr>
<tr>
<td>( 0.3 \leq g \leq 0.7 )</td>
<td>Medium</td>
</tr>
<tr>
<td>( g &lt; 0.3 )</td>
<td>Low</td>
</tr>
</tbody>
</table>

#### 3. Results

##### 3.1. Descriptive of Statistical Analysis

Table 2 explains that the description of the statistical analysis of the number of samples is 122 with details of 89 experimental classes and 33 control classes. The average score of the experimental class was 71.08 pretest and 83.50 posttest, while the average score of the control class was 68.07 pretest and 77.38 posttests. Based on the results of the average scores obtained from the two class groups, there are differences, so the implementation of the Question Students Have a method in social studies learning is to increase student activity and learning outcomes.

### Table 2

<table>
<thead>
<tr>
<th>Class</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>89</td>
<td>52.00</td>
<td>88.00</td>
<td>71.0862</td>
<td>9.38263</td>
</tr>
<tr>
<td>Experiment</td>
<td>89</td>
<td>56.00</td>
<td>97.00</td>
<td>83.5090</td>
<td>8.13526</td>
</tr>
<tr>
<td>Post-test</td>
<td>89</td>
<td>55.00</td>
<td>88.00</td>
<td>68.0725</td>
<td>7.51939</td>
</tr>
<tr>
<td>Pre-test Control</td>
<td>33</td>
<td>55.00</td>
<td>88.00</td>
<td>68.0725</td>
<td>9.45996</td>
</tr>
<tr>
<td>Post-test Control</td>
<td>33</td>
<td>65.00</td>
<td>91.00</td>
<td>77.3813</td>
<td>7.51939</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>33</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 3.2. Pre-requisite Analysis Test

A prerequisite test is conducted to determine whether the hypothesis testing can be continued or not. Data variance requires that the data come from a normally distributed population and that the groups being compared are homogeneous. Analysis of variance of prerequisite test data used normality and homogeneity test, normality test used Kolmogorov-Smithov path model, while the homogeneity test used one-way ANOVA.
3.2.1 Normality test

Table 3 shows that the results of the normality test analysis using the Kolmogorov-Smirnov model, the acquisition of the significant value of the experimental class group is 0.169 and the control class is 0.200, then the data from these two classes are normally distributed because the acquisition value of both classes is greater than 0.05 (p > 0.05).

Table 3

<table>
<thead>
<tr>
<th>Class</th>
<th>Kolmogorov-Smirnov Statistic</th>
<th>df</th>
<th>Sig.</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>.345</td>
<td>89</td>
<td>.169</td>
<td>Normal</td>
</tr>
<tr>
<td>Control</td>
<td>.442</td>
<td>33</td>
<td>.200</td>
<td>Normal</td>
</tr>
</tbody>
</table>

3.2.2. Homogeneity Test

Based on Table 4, the results of the homogeneity test of the control class and experimental class obtained a significance value of 0.125, then the two groups compared were declared homogeneous because the acquisition of the significant value of the two classes was greater than 0.05 (p > 0.05).

Table 4

<table>
<thead>
<tr>
<th>Class</th>
<th>Test of Homogeneity of Variances</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Levene's Statistic</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Statistic</td>
<td>df1</td>
</tr>
<tr>
<td>Experiment &amp; Control</td>
<td>2.578</td>
<td>1</td>
</tr>
</tbody>
</table>

3.3 Hypothesis Testing Analysis with Independent Samples T-Test and N-Gain Score

Based on the output of Table 5, the results of the independent sample t-test obtained the value of Sig. (2-tailed) was (t-test; p) 0.000 < 0.05, because the significance value of both classes was less than 0.05 (p < 0.05). So, there is a difference in the average value of the results of student learning using the Question Student Have a method in social studies learning with conventional learning methods.

Table 5

<table>
<thead>
<tr>
<th>Test results of independent sample T-Test</th>
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<tbody>
<tr>
<td>Independent samples test</td>
</tr>
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<table>
<thead>
<tr>
<th>Result</th>
<th>Levene's Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>Equal variances assumed</td>
<td>.113</td>
<td>.323</td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>4.105</td>
<td>62.943</td>
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30
The results of the independent sample t-test have been strengthened by the results of the N-gain score which shows that the implementation of the Question Student Have a method in social studies learning can increase student activity and learning outcomes, which can be seen in Table 6.

**Table 6**

<table>
<thead>
<tr>
<th>Class</th>
<th>N-gain Score</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment 1</td>
<td>0.4</td>
<td>Medium</td>
</tr>
<tr>
<td>Experiment 2</td>
<td>0.4</td>
<td>Medium</td>
</tr>
<tr>
<td>Experiment 3</td>
<td>0.3</td>
<td>Medium</td>
</tr>
<tr>
<td>Control</td>
<td>0.2</td>
<td>Low</td>
</tr>
</tbody>
</table>

The output results of Table 6 show that the N-gain values obtained from the experimental classes 1, 2, and 3 are 0.4 and 0.3 with a level (0.3 ≤ 0.7) which is categorized as medium. The N-gain score from the control class was 0.2 with a level (≤ 0.3) in the low category. The results of the N-gain score analysis have shown that there is a significant increase in the gain from the average test score of the experimental class with the control class. The results of the average pre-test experimental class 1 were 76.08 and post-test 86.22, experiment 2 pretest 71.67, and post-test 83.89. Experiment 3 pretest was 61.33 and the posttest 81.79, while the average score for the control class pretest is 61.0 and the posttest is 78.38. Thus, the results of the N-gain score have provided an explanation that the use of the Question Student Have a method in social studies learning is proven to increase student activity and learning outcomes.

**4. Discussion**

Social Studies as a subject is defined as a subject that discusses the developments and changes that occur in the hemisphere involving people or an era that will not be separated from the concepts of space and time (Rusyanto, 2021). So far, learning tends to be thematic and theoretical which consists of mere memorization, so many students have the assumption that social studies subjects are easy (Rahmat, 2018; Agung, 2011). The learning process carried out by educators currently tends to achieve material targets and does not guide students in understanding concepts, especially in social studies learning (Kaliappen et al., 2021; Crowley & Smith, 2015). Learning activities in the classroom are mostly dominated by the teacher with the lecture method, where students just sit, take notes, and listen to what he has to say, with very few opportunities for students to ask questions (Khader, 2012; Uygun & Arslan, 2020). Thus, the learning atmosphere is not conducive so students become passive. As a result, the impact on student learning outcomes is less than optimal. Therefore, a new learning method is needed to increase student activity and student learning outcomes.

This is under the theory of Permatasari et al. (2019), and McCulley & Osman (2015) that the success factor is also one of the factors that affect student learning outcomes. Learning will be more successful if students feel able to do the desired activity and students get satisfaction in their success in carrying out these activities. In addition, the success of these students is also influenced by the performance of teachers who can provide direction and become good facilitators. so that students feel motivated to take part in the historical social studies learning process by using the active learning model Question Student Have method (Asy’ari & Rahimah, 2021).

Questions Students Have is an active learning strategy for students to ask questions about the lessons they need so that student's abilities can be explored to the fullest. Asking referred to in this study is a question issued by students to express their problems to the teacher in writing (Desputra, 2020). Asking (question) in this study can also be asked by students to the teacher and the teacher...

https://doi.org/10.18844/ijire.v10i1.9004

throws the question at the students, so that the activity of asking questions does not only occur between students and teachers, but the teacher can ask students instead. Questions Students Have is one of the effective and efficient learning methods to increase learning activity (Azizah & Maristanty, 2021). Because Questions Students Have been developed to train students to have the ability to ask questions.

Putra (2022) explained that the Questions Students Have method can increase student activity which is assumed to improve student learning outcomes in social studies learning. Student learning activities are activities or behaviors that occur during the teaching and learning process (Indra et al., 2022). Activities that lead to the learning process such as asking questions, asking opinions, doing assignments, being able to answer teacher questions, and being able to be cooperating with other students, as well as being responsible for the tasks given (Wuryandani & Herwin, 2021).

According to Susanto (2016) that an interesting learning process will motivate students and give meaning to students so that the subject matter does not seem rote. From the students’ responses, it was stated that by using the active learning method, the Question Student Have model, students became easier and clearer in understanding the material presented, because if it was not clear, there was no need to be afraid to ask questions (Nurbaya, 2021). Supported by discussion activities so that students become more active in the learning process, not only in one direction (Nilawati, 2020). This can be seen from the responsibility, the teacher’s assistance to students who experience difficulties, the presence of the teacher as a facilitator, and the learning resource.

The Questions Students Have method has a very important role in determining and encouraging students to be more active and creative in the learning process to receive the material taught by the teacher so that the goals expected by students are achieved, namely the learning outcomes shown by the increasing level of understanding (Erlina, 2019). The Questions Students Have method is an alternative for social studies teachers or others to be used in the learning process to make it more optimal and of high quality (Setiawan et al., 2020). It is hoped that this method will be able to realize more student participation so that they can develop thoughts or ideas that are outlined in questions or writings owned by students from the material being studied.

5. Conclusions

The implementation of the question student method in social studies learning has proven to be effective on student activity and learning outcomes, based on the results of the Independent Sample T-Test test which obtained a significance value of (t-test; p) 0.000 <0.05, meaning that there is a significant difference between the experimental class using the question student have a method and the class control (conventional). It is confirmed by the results of the N-gain score test, which is included in the medium category, with the intention that the question student has a method in social studies learning that can respond to activeness and improve student learning outcomes.

The implications of the research, in general, can be used as a reference and further research on similar themes, especially social studies learning design. Practically it can be used as an alternative by teachers to use the question student have a method in social studies learning to be more effective and maximal in achieving learning goals, so that social studies learning will remain of high quality in improving students' competencies, abilities, and skills. In addition, the use of the question-student method can reach the abilities of students who have been obtained through the subject matter, so it is very relevant for teachers to use this method in learning practice.
6. Recommendations

Suggestions from this research, hope that readers or other researchers should be more critical in analyzing how to increase student activity and learning outcomes in learning, especially in social studies. A good learning design will certainly affect the process of the learning practice itself; it is necessary to collaborate with other learning approaches or methods. This study realizes that there are still many shortcomings in the results of the research so further research must be more innovative in designing learning to be more optimal.

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