Two Stay Two Stray (TSTS) Assisted by Mind Mapping Media on Social Science Learning Outcomes

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ABSTRACT

Elementary social studies learning is still dominated by the role of the teacher as a material provider. This causes student involvement in social studies learning to be less than optimal. This research aims to analyze the Two Stay Two Stray (TSTS) learning model assisted by mind mapping media on the social studies results of class V students. This research is a quasi-experimental type with a nonequivalent post-test-only control group design. The sample was determined using simple random sampling with a lottery technique. The research sample consisted of Class V. The data collection method was the test method. The data analysis technique in this research uses descriptive statistical analysis techniques and data analysis prerequisite tests. Hypothesis testing uses the polled variance t-test. The results of calculating the average social studies learning outcomes for experimental group students are very high, while students in the control group are in the medium category. Based on calculations using the t-test, there is a significant influence of the Two Stay Two Stray (TSTS) learning model assisted by mind mapping media on class V students' social studies learning outcomes. Therefore, the TSTS learning model assisted by mind mapping media is suitable for improving students' social studies learning outcomes. This research implies that teachers can think more creatively and gain new insights and experiences regarding implementing innovative learning in the classroom, which is useful for developing students' critical thinking patterns.

1. INTRODUCTION

Education is something that is very influential in shaping human attitudes and personality. Education is an integral part of development in a nation or country (Maulidia & Hanifah, 2020). Education has a very big role in shaping the character, knowledge and mental development of a child, who will later
grow into an adult human being who will interact and do many things with his environment, both individually and as a social creature (Fauzi et al., 2017; Tanto et al., 2019). Through advanced education, the progress of a nation can be achieved. Humans can develop their potential and build a good personality within themselves through education. Education is not a process of forcing the will of adults (educators) on students, but rather an effort to create conditions that are conducive to student development, namely conditions that make it easy for students to develop themselves optimally (Adnan et al., 2017; Hutama, 2016). The educational process taken from birth to adulthood will influence the life of each individual. Good education will be able to produce students who are skilled, intelligent and have noble character (Arianto & Fauziyah, 2020; Ismayani & Fauziya, 2019). In line with this function, the aim of education is to improve the quality of human resources so that they are able to master science and technology for human survival itself. A person can obtain education either at school, at home or in the community (Hukunala et al., 2021; Saraswatha et al., 2016). The formal education process can be obtained through school. The main activity at every level of success at school is learning activities. The learning process that occurs in school is a determinant of success in achieving educational goals. Learning is an activity that is consciously and deliberately carried out by the teacher, so that student behavior which includes activities and student thinking patterns changes for the better. This process aims to help students gain various experiences and from these experiences the quality of student behavior will improve. For learning to take place effectively, teachers have a very important role. Teachers not only function as sources of knowledge, but must also be able to act as motivators and facilitators to develop students’ interest in seeking knowledge independently. In accordance with the current curriculum, the learning process carried out in the classroom is student-centered, therefore students are expected to be able to construct their own knowledge (Lubis et al., 2019; Nilayuniarti & Putra, 2020).

However, in reality, teachers still have difficulty activating students in learning so that the learning process does not meet the standards as expected. One of these things can be seen during social studies learning. Social Sciences (IPS) is a science that combines a number of selected concepts from branches of social sciences and other sciences and is then processed based on educational and didactic principles to become a teaching program at the school level (Kistyawati & Amien, 2020; Sukmanasa et al., 2017; Syafari & Montessori, 2020). Social Sciences is a combination or fusion of a number of subjects such as history, geography, economics, anthropology and politics. Social studies subjects in elementary schools are identical to subjects that examine in depth the history of Indonesia or relate to social problems that occur in society (Siska et al., 2021; Trisnadewi et al., 2020). Social studies learning is very important in Elementary Schools (SD) because through social studies learning students are able to become individuals who care about the current condition of society and are able to overcome problems that occur every day, both those that happen to themselves and those that happen to the surrounding community (Kurniawan et al., 2020; Susanto & Anti, 2017). Elementary social studies learning is currently still dominated by the role of the teacher as a material provider. Teachers do not involve students in the learning process, teachers tend to use lecture methods which only require students to have the strength of memory and memorize events and names of figures, without developing insight into thinking and problem-solving which allows students to learn more actively. This causes student involvement in social studies learning to be less than optimal. Based on the results of interviews with the class V homeroom teacher at Gugus II Elementary School, Bangli District regarding social studies learning, the results showed that teachers had difficulty implementing other models in learning because they lacked knowledge about effective learning models to make students active in social studies learning. Students do not participate either individually or in groups in the learning process. The use of learning media that is rarely used by teachers during the learning process. Students are less active in the social studies learning process. Students lack focus in ongoing learning because students’ interest in learning is still low.

Based on the results of observations in Cluster II, Bangli District, several problems were found during the social studies learning process. The first, the learning process is too teacher-centered. The second, class management is not carried out optimally. Teachers do not provide variety and motivation to students in using learning methods while playing and discussing in the learning process so that students quickly feel bored when following the learning process. The third, the lack of use of creative and innovative learning media in the learning process. The learning process that occurs only uses the media and has been provided and uses interesting media no less. So the learning process becomes less interesting and boring for students. Fourth, lack of student motivation and interest in learning in the learning process. Students were less active during the learning process and there were some students who seemed less focused and joking with their friends while taking part in social studies lessons. Based on the results of the document recording carried out, data on the number of students was obtained. The social studies learning results of class V students of Cluster II, Bangli District, still had many scores that were less than the KKM. It can be seen that the percentage of students who have completed ranges from 35.71% - 42.30%, while the
percentage of students who have not completed ranges from 57.69% - 64.8%. This indicates that the majority of students have not met the KKM. In response to this problem, efforts need to be made to increase students’ understanding of social studies subject matter which will have a positive impact on student learning outcomes.

Efforts that can be implemented are by applying innovative models that focus more on developing students’ participation and active role during learning. Cooperative learning is a broader concept encompassing all types of group work including more educator-directed forms in which educators set tasks and questions and provide materials and information designed to help students solve intended problems (Ekayani et al., 2020; Sulistyanti et al., 2019). The Two Stay Two Stray type cooperative learning model is a group learning model by forming students into small groups of 4 where later two students stay in the group to provide information and two students visit another group to get information, so that students become active and responsible. responsible for conveying and receiving information related to the material in the learning process (Arthaningsih & Diputra, 2019; Ekayani et al., 2020; Sunbanu et al., 2019). Mind mapping is a creative way for each learner to generate ideas, record what they learn, or plan new assignments (Arsana et al., 2019; Febiyanti et al., 2020). Mind mapping is an excellent way to generate and organize ideas before starting to write. Mind mapping is a note-taking technique that uses words, colours, lines, symbols and images by combining and developing the working potential of the brain which makes it easier for someone to organize and remember all forms of information (Bystrova & Larionova, 2015; Lan et al., 2015; Rahayu et al., 2020). The Two Stay Two Stray (TSTS) type cooperative learning model assisted by Mind Mapping media is a learning model with the process of exchanging partners with other pairs, and later having to return to their original partners with the help of visual mind map media to make it easier for students to share results and information with other groups (Ekayani et al., 2020; Febiyanti et al., 2020; Ruhama & Erwin, 2021).

Previous research findings state that the Two Stay Two Stray type cooperative learning model through Lesson Study improves mathematics learning outcomes (Arthaningsih & Diputra, 2019). The effectiveness of the TSTS (Two Stay Two Stray) cooperative learning model influences critical thinking skills in mathematics learning (Handayani, 2018; Leniati & Indarini, 2021). Increasing interest and group learning outcomes through LKPD based on cooperative learning type Two Stay Two Stray (Farid & Sudarma, 2022; Mulyantini et al., 2019). This research applies the Two Stay Two Stray (TSTS) cooperative learning model combined with mind mapping media used in this research, because this learning model and media can train cooperation and understanding between students so that they are more active in learning and can provide a smooth learning process more meaningful. This model and media emphasizes the learning process which provides opportunities for students to gain direct and meaningful experience in developing their thinking patterns (reasoning). This research aims to analyze the Two Stay Two Stray (TSTS) cooperative learning model assisted by Mind Mapping media on the social studies learning outcomes of Class V Elementary School Students in Gugus II Bangli District for the 2022/2023 academic year.

2. METHOD

This type of research is experimental research with a non-equivalent post test only control group design which is carried out at the end of the research. Non-equivalent post-test only control group design pattern. SA sample is a portion of a population that is taken using a certain technique (Agung, 2014). The sample is part of the number and characteristics of the population (Sugiyono, 2011). So from the statements of these two opinions it can be concluded that the sample is part of the population taken or selected through certain techniques and is in accordance with the characteristics of the population and can represent the population. The sample was determined using simple random sampling with a lottery technique. The simple random sampling technique is a random sampling method, where the sample is selected based on class, not individual, each member of the population or part of the population has the same opportunity to be selected as a member of the sample. Based on the drawing carried out, the research sample can be determined Class V of SD N 2 Bebalang as the experimental class will be treated in the form of learning using the Two Stay Two Stray (TSTS) model assisted by mind mapping media and in class V of SD N 1 Bebalang as the control class treatment will be applied in the form of learning using the Two Stay Two Stray model. Stray (TSTS) assisted by mind mapping media. In this research there is one independent variable, namely the learning model Two Stay Two Stray (TSTS) assisted by mind mapping media and one dependent variable is social studies learning outcomes.

This research uses a test method, namely by distributing a number of instruments in order to determine students’ social studies learning outcomes. The instrument given is an objective test or multiple choice questions consisting of 30 questions with four options, namely a, b, c, and d. The new test was distributed after the two classes received different treatment as the control class and the experimental class,
which was called the post test. To meet the quality of the instruments used, content validity tests or judges tests are carried out by experts in the field of social studies, test reliability tests, item validity tests, test differential power analysis tests, and difficulty level analysis. The data analysis process in this research uses descriptive statistical methods and data analysis prerequisite tests. Descriptive statistical analysis aims to calculate the mean, median, mode, variance and standard deviation. The prerequisite tests for data analysis include the normality test of data distribution and the homogeneity of variance test. The normality test used in this research is Chi-Square analysis. Meanwhile, the homogeneity of variance test used in this study is the Fisher (F) test. These two tests must be applied before hypothesis testing is carried out. Hypothesis testing in this study uses an uncorrelated (independent) sample t-test with the polled variance formula to determine the truth of the hypothesis that there is an influence of the type of cooperative learning model Two Stay Two Stray (TSTS) assisted by mind mapping media on students' social studies learning outcomes.

3. RESULT AND DISCUSSION

Result

The learning outcomes measured were in the cognitive domain obtained from the post test after holding 8 meetings with each group of experimental and control class students. The post test is carried out by giving objective questions (multiple choice) of 30 validated questions. The number of students whose social studies learning outcomes were analyzed in the experimental group was 24 students and in the control group there were 26 students. The description of the research results of students' social studies learning outcomes data can be seen in Table 1.

Table 1. Description of Social Sciences Learning Results Data for Experimental Group and Control Group

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Experimental Group</th>
<th>Control Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>22.70</td>
<td>17.23</td>
</tr>
<tr>
<td>Median</td>
<td>23.50</td>
<td>16.70</td>
</tr>
<tr>
<td>Mode</td>
<td>25.10</td>
<td>14.40</td>
</tr>
<tr>
<td>Variance</td>
<td>15.17</td>
<td>15.94</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>3.89</td>
<td>3.99</td>
</tr>
<tr>
<td>Maximum Score</td>
<td>28.00</td>
<td>25.00</td>
</tr>
<tr>
<td>Minimum Score</td>
<td>13.00</td>
<td>10.00</td>
</tr>
<tr>
<td>Range</td>
<td>16.00</td>
<td>16.00</td>
</tr>
</tbody>
</table>

Based on Table 1, it is known that the average social studies learning outcome for experimental group students is 22.7, while the average social studies learning outcome for control group students is 17.23. These results show that the average social studies learning outcome for the group of students who follow the learning model The Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media was higher than the group of students who did not follow the Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media. After carrying out descriptive statistical analysis, it continues with the analysis stage with prerequisite tests and t-tests to test the hypothesis. The first prerequisite test is the normality test which is tested using Chi-Square analysis. Based on the results of the analysis in the experimental group, the results were obtained $X_{count}^2 = 2.035$ and $X_{table}^2 = 7.815$ with a significance level of 5% and df = 3, this shows that $X_{count}^2$ is smaller than $X_{table}^2$. The results of the analysis in the control group were obtained $X_{count}^2 = 3.59$ and $X_{table}^2 = 7.815$ with a significance level of 5% and df = 3, this shows that $X_{count}^2$ is smaller than $X_{table}^2$.

The next prerequisite test is the homogeneity of variance test using the Fisher Test (F-Test). In the experimental and control classes, after the homogeneity test was carried out, the Fcount was 1.05 while the $F_{table} = 4.04$ (df1=1, df2=48, with a sig level of 5%). This means that the $F_{count} < F_{table}$ Value means that it can be concluded that the post-test data from students in the control and experimental classes has a homogeneous variance. After determining the normality test for data distribution and the homogeneity of variance test, the results showed that the data met the prerequisites so that hypothesis testing could be carried out. To test the hypothesis, the polled variance t-test formula is used. The results of the t-test analysis of students' social studies learning outcomes data can be seen in Table 2.

Table 2. Recapitulation of Calculation Results: t-test

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>$\bar{X}$</th>
<th>$s^2$</th>
<th>$t_{count}$</th>
<th>$t_{table}$ (sig 5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment</td>
<td>24</td>
<td>22.70</td>
<td>15.17</td>
<td>4.88</td>
<td>2.010</td>
</tr>
<tr>
<td>Control</td>
<td>26</td>
<td>17.23</td>
<td>15.94</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Based on Table 2, the results of the t-test calculation show that the t-value is 4.88. Meanwhile, \( t_{\text{table}} \) with degrees of freedom \( df = 48 \) at a sig level of 5% is 2.010. This means that \( t_{\text{count}} > t_{\text{table}} \) so \( H_1 \) is accepted while \( H_0 \) is rejected. Therefore, it can be concluded that there is a significant influence of the Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media on social studies learning outcomes for fifth grade elementary school students in Gugus II Bangli District for the 2022/2023 academic year. In the control and experimental classes, significantly different learning outcomes were obtained due to the different treatment given to the learning steps and student discussion activities during learning. The steps of the Two Stay Two Stray (TSTS) learning model assisted by mind mapping media are able to encourage all students to actively participate in the learning process so that it has a positive influence on student learning outcomes in the social sciences subject area.

Discussion

The results of the research show that there is an influence of the Two Stay Two Stray learning model assisted by mind mapping media on the social studies learning outcomes of fifth grade elementary school students in Gugus II Bangli District for the 2022/2023 academic year. The impact of implementing this model includes being able to make students more active, creative in discovering new things and students taking part in learning activities more deeply and being able to discover concepts related to learning material independently or in groups without always relying on the teacher (Arthaningsih & Diputra, 2019; Leniati & Indarini, 2021; Sunbanu et al., 2019). Students are also given the opportunity to convey ideas, opinions and knowledge they have regarding learning material through mind maps which also create and develop creative elements in students (Juniantari & Kusmaryanti, 2019). Apart from that, the use of the Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media can foster an attitude of cooperation and responsibility among students in working on assignments in groups as well as an attitude of mutual respect for their friends' opinions when discussing (Apriakanti et al., 2020; Ekayani et al., 2020; Sulistyanti et al., 2019). This model can also foster curiosity, mutual respect and increase students' self-confidence. The learning outcomes obtained by students are also better by using this model compared to the model usually used by teachers in class.

The Two Stay Two Stray cooperative learning model, assisted by Mind Mapping, trains students to participate actively in learning evenly and requires students to work together with their groups. Therefore, the learning taught to students is not only teacher-centered but this learning is student-centered. The Two Stay Two Stray cooperative learning model assisted by Mind Mapping is expected to foster a sense of cooperation, responsibility and a more active role in the learning process so that it influences student learning outcomes (Arthaningsih & Diputra, 2019; Dharso & Sidabutar, 2018; Ekayani et al., 2020). Based on the results of this research, this research has implications for the implementation of learning in the classroom. The use of the Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media in learning has had many positive influences or good impacts during the implementation of learning, especially in social studies subjects.

The findings of this research are strengthened by previous research the Two Stay Two Stray type cooperative learning model through Lesson Study improves mathematics learning outcomes (Arthaningsih & Diputra, 2019). The effectiveness of the TSTS (Two Stay Two Stray) cooperative learning model influences critical thinking skills in mathematics learning (Handayani, 2018; Leniati & Indarini, 2021). Increasing interest and group learning outcomes through LKPD based on cooperative learning type Two Stay Two Stray (Farid & Sudarma, 2022; Mulyantini et al., 2019). The implication of this research is that teachers can think more creatively and gain new insights and experiences regarding the implementation of innovative learning in the classroom which is useful for developing students' critical thinking patterns. Teachers are also able to develop their experience regarding the use of the Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media in other learning activities.

4. CONCLUSION

The results show that there is a significant influence of the Two Stay Two Stray (TSTS) cooperative learning model assisted by mind mapping media on the social studies learning outcomes of fifth grade elementary school students in Gugus II Bangli District for the 2022/2023 academic year. Suggestions that can be conveyed include to students, so that they can participate well in learning activities in class and can participate actively during learning activities. Teachers are able to innovate in the learning process by implementing calming and more varied models in learning and supported by the use of suitable and appropriate learning media to make students interested and active in learning, therefore students' social studies learning outcomes are able to increase. School principals must be able to determine strategies and decisions by implementing a fun and effective learning model in schools with the Two Stay Two Stray...
learning model assisted by mind mapping media, especially schools whose students have problems with social studies learning outcomes. It is recommended for other researchers who will carry out similar research, so that this research can be used as a reference and consideration to refine and improve the research they wish to carry out.

5. REFERENCES


