The Application of the Student Teams Achievement Division (STAD) Cooperative Learning Model on the Ability to Understand the Concept of Elementary School Students

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Abstract. This research is motivated by the importance of students' conceptual understanding ability. However, the ability of students to understand concepts in reality is still low. A STAD type cooperative learning model is applied to overcome these problems. The problem studied is the influence of the ability to understand concepts of elementary school students on social studies learning is reviewed as a whole. This research is a quasi-experimental study with a *pre-test-post-test control group design. The* research instrument used is a multiple-choice test for understanding social studies concepts. The results showed: 1) There were differences in the *pre-test* and *post-test* of students' understanding of social studies concepts in the experimental class that applied STAD-type cooperative learning, 2) There were differences in *pre-test* and *post-test* of students' understanding of social studies concepts in the control class that applied TGT-type cooperative learning, 3) STAD-type cooperative learning students outperform TGT-type cooperative learning students in terms of pre-test and post-test understanding of social studies concepts. Based on these results, it can be concluded that cooperative learning type *Student Teams Achievement Division* (STAD) can improve students understanding of social studies concepts.

Keywords: Cooperative Learning, *Student Teams Achievement Division,* Understanding of Social Studies Concepts.

INTRODUCTION ~ A decent person is someone who can be a good person being. Humanity needs education in order to become a good citizens. Education is a process of preparing people to be decent citizens (Siswoyo, et al, 2013: 21). Social studies is a crucial subject that should be taught to kids in primary school in order to prepare them to be excellent Indonesian citizens and citizens. This is in line with the needs of elementary school students, who will still require the basics of knowledge in order to survive in the future. The social studies subject is one of the subjects that covers the basics science in relation to social concerns, with a focus on comprehension, memorization, and not logical reasoning. Humanities and social sciences is also a topic that combines concepts from multiple social sciences that are constructed using psychological and psychological approaches, as well as feasibility and significance for students in their daily lives.

In principle, social studies learning materials comprise topics that students must understand. These topics are social concepts that are relevant to children' experiences in elementary school. To be able to apply these concepts, pupils must be able to accept, absorb, and comprehend the concept appropriately. According to (Uno and Mohamad 2015), comprehension is defined as a person's ability to comprehend. Interpret, translate or state something in his own

way about the knowledge he has received. Ability at the level of understanding includes the ability to classify, describe, discuss, explain, express, define, show, allocate, report, acknowledge, review, select, state, and translate. Demonstrate that understanding is the ability to re-express the meaning of the material learned from the teacher, whether spoken, written, or drawn (Anderson and Krathwohl 2010: 99). If students can connect new knowledge to previous knowledge, they are said to be able to understand the content. The ability to understand, exemplify, classify, summarize, conclude, and compare are all cognitive functions that fall within this category. As a result, students must be able to connect problem solving to the topics they have learned. As a result, one of the most significant factors to consider when assessing pupils' cognitive ability is their knowledge of the concept.

However, it turned out that the reality of social studies learning that I encountered in the field, at Elementary School 5 Kuningan there were still many shortcomings, learning tends to only be at the level of remembering the material being studied so that later students can answer the questions in the exam, so that what is learned is less meaningful, meaning what is being learned. Studied as if only for academic purposes at school, without being associated with the real life faced by students. As for other problems that often arise when students are asked to re-explain in their own language about the material that has been conveyed by the teacher, they only answer questions based on the exact meaning described by the teacher or written in the book. They seem to have difficulty explaining a concept in their own language. A student

is said to understand something if he can provide a more detailed explanation or description of it using his own words.

Understanding of a concept in learning is needed by students so that there are no *misconceptions* or misunderstandings that can lead to erroneous and fatal perceptions (Supardan, 2015). Furthermore (Alma 1987, p. 211) explains that failure to understand the concept will result in errors in forming generalizations. These conditions will hinder students in mastering the learning material provided by the teacher so that the planned learning objectives will not be achieved properly.

Based on the explanation above, it appears that students' understanding of social studies concepts in elementary schools is very important important. Therefore, efforts need to be made to encourage students to practice linking students' understanding of social studies concepts. So that the task of the teacher is needed to be able to teach and guide students so that the expected learning goals are achieved by teaching innovative and creative learning according to the level of education. This is in line with what which is in PP No. 74 of 2008 Article 1 concerning Teachers is "teachers as professional educators" with the main task of educating, teaching, guiding, directing, training and evaluating participants students in early childhood education through formal education, basic education, and secondary education.

After seeing and studying the problems that exist in the field, there are problems in student teaching methods so that learning is less effective and innovative. The method of learning that can be used

by teachers so that teaching and learning activities can run effectively and fun for students, however, a teacher should be right in choosing a method or learning. Teachers also need to encourage students to be actively involved in learning by interact so that learning will bring out the potential that is in him. Therefore we need a learning that can encourage students to be actively involved in activities learning fun. This is in accordance with the regulations in Low No.20 of 2003 article 1 on the national education system. So that in the end it will have a positive impact on understanding of students' concepts.

The low understanding of the concept can certainly be overcome through the application of various learning models. One of the learning models that can be developed in classroom learning and theoretically able to facilitate the development of learning abilities to develop students' understanding of social studies concepts is thetype cooperative learning *Student Team Achievement Division* model where the STAD model emphasizes activities and interactions between students to motivate and support each other. Assist in mastering the subject matter in order to achieve maximum achievement (Slavin, 2009; Isjoni. 2010). Because the STAD type cooperative learning makes students interact and discuss with each other in bringing up effective problem-solving strategies, and can foster cooperative skills, in conveying a problem or task.

According to (Slavin 2011: 21) "Student Teams Achievement Division, namely: students are placed into learning teams consisting of four people who are mixed with performance levels, gender, and ethnicity". The teacher presents the lesson and then the students work in their teams to ensure that all team members have mastered the subject matter, but the value element needs to be internalized in student behavior, which is the integration between attitudes, skills, and knowledge (Sabri, T. 2017). Finally, all students follow the lesson wholeheartedly, and cooperate with each other in solving Social Studies Education problems assigned by the teacher.

In this study as a comparison for the models taken, namely the STAD cooperative model for the experimental class and the TGT type cooperative model for the control class. Because these two models are from the same family, namely the cooperative model. Learning using TGT involves the activities of all students, to increase students' sense of responsibility for their own learning and there is an element of the game.

Supported by the results of the research data analysis presented (Nida, 2012 VOL. XIII NO. 1, 150-172), it can be concluded that there are differences in increasing mathematical understanding skills between students who take STAD type cooperative learning and students who follow conventional learning in terms of school level (good, moderate and poor). Where the increase in mathematical understanding skills between school levels that receive STAD type cooperative learning is better than the increase in mathematical understanding skills between school levels that receive ordinary learning. In addition, the increase in mathematical understanding at the good school level who received STAD type cooperative learning was

better than mathematical understanding at other levels.

Thus, from the description above, we can see that students' ability to understand social studies concepts is still low. Then problems related to students' understanding of concepts must be addressed immediately, therefore teacher awareness is very important in preparing learning so that the problems above can be resolved.

METHOD

The research method that will be used in this study is a quasi-experimental research method. In its

implementation, this research was conducted on two different groups of research subjects, namely the experimental group and the control group. The experimental group was the group that was treated with thetype of cooperative learning *Student Teams Achievement Division* (STAD), while the control group was the group that was treated with the TGT type of cooperative learning. The experimental design that will be used in this research is the *"Noneequivalent Control Group Design" design.* The design pattern is described as follows:

| O | X | O |
| O | | O |
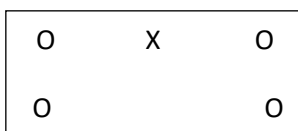
Description:

X   :   Treatment using cooperative learning type *Teams Games Tournament*

O1   : *Pretest* and *posttest*

The participants in this study were all fourth grade kids from Elementary School

5 Kuningan, which was divided into two classes, IVA and IVB. Class IVA is made up of 22 pupils, while class IVB is made up of 22 kids. Class IVA received STAD cooperative learning treatment, and class IVB received TGT cooperative learning treatment.

The research procedure is grouped into three stages, namely, the preparation stage, the implementation stage and the data analysis stage. The preparatory stage begins with observations at the school that is used as the research site. At this stage, the preparation of research instruments, instrument testing, and instrument repair are also carried out, so that at this stage research instruments are obtained that are ready and suitable for use. Second, the research implementation stage, at this stage the research implementation is carried out. The activity begins by giving a pretest to the two experimental groups to determine the students' initial ability in understanding concepts. After the pretest was carried out, it was continued by carrying out learning with STAD and TGT in the experimental and control groups. After all learning activities were completed, a posttest was carried out in both groups. Posttest provides an overview of the influence of the two learnings on understanding the concept. Data analysis stage, at this stage the processing and analysis of research data is carried out as well as writing complete research results.

DISCUSSION AND RESULTS

Concept Understanding (Pre- and Post-Test)

The findings of the concept understanding pretest data achieved an average value of 51.59 in the control class

and a value of 42 in the experimental class, with an average difference of 9.59 between the two classes. The control class's posttest understanding of the idea has an average value of 66.22, whereas the experimental class's average value is 80.90, resulting in a 14.68 difference between the two classes. The average value of the outcomes, pretest and posttest understanding of the concept, demonstrates that the control class's grasp of the concept ranges from 51.59 to 66.22 (an increase of 14.63); the experimental class's average value ranges

from 42 to 80.90. (an increase of 38.9). As a result, the impact of the STAD cooperative learning model on conceptual understanding differs dramatically from that of the control class learning model, namely TGT.

Furthermore, the control and experimental classes' pretest and posttest data were analysed using the normality test, homogeneity test, and t test to establish both groups' initial and final capacity to absorb concepts.

Normality Test of Concept Understanding Ability

Table 1. Pretest

Normality Test Normality Test	Experiment	Class Control Class
Sig. Kolmogorov-Smirnov	0.200	0.200
Value	0.05	0.05
Description	Normal	Distribution Normal Distribution

Table 2. Posttest

Normality Test Normality Test	Experiment	Class Control Class
Sig. Kolmogorov-Smirnov	0.138	0.101
α value	0.05	0.05
Description	Normal distribution	Normal distribution

The calculation for data normality test pre-test and post-test for the ability of understanding concepts oftest *Kolmogorov-Smirnov* has sig. respectively 0.200 and 0.200 greater than 0.05. And

for posttest class has sig. respectively 0.138 and 0.101 It can be concluded that the pretest and posttest data are normally distributed.

Homogeneity Test of Concept Understanding Ability

Based on the homogeneity test of the pretest and posttest, the significance value was 0.924 and 0.262 > 0.05, so it can be said that the variance for the social science concept understanding ability of the pretest and posttest classes was homogeneous in the STAD and TGT groups.

T-test or Difference Test in the mean score of Concept Understanding Ability

After it was known that the pretest score data was normally distributed, then to find out the difference in the mean of the pretest understanding of the Social Sciences concept ability of students, it was continued using the t-test, namely the *independent sample t- test,* at a significant level = 0, 05.

For pretest data, it is known that the value of *sig. 2-tailed* 0.030 < 0.05. Therefore, the test results are statistically significant rejecting H0. This means that there is a significant difference between the mean pretest scores for understanding the social science concept of control and experimental class students. And for the posttest data, it is known that the value of *sig. 2-tailed* 0.001 < 0.05. Therefore, the statistically significant test results rejected H0. This means that there is a significant difference between the average post-test scores for understanding the social science concept of control and experimental class students.

Calculating N Gain

The gain calculation is used to determine the magnitude of the increase in students' conceptual understanding skills before and after receiving treatment in both the experimental class and the control class. The data is obtained from the pretest and posttest scores. The criteria for normalized gain value are low category if $g < 0.30$; medium if $0.3 < g < 0.7$ and high if $g > 0.7$. The description of the results of the gain test of students' conceptual understanding abilities in the experimental and control classes is shown in table 3.

Table 3. Gain Test of Concept Understanding in the Experimental and Control

Classes Class	N	Score Maximum	Average pretest	Average scorepostt est score	Average Gain	Category
Experiment	22	100	51.59	80.90	0.60	Moderate
Control	22	93.00	42.00	66.22	0.47	Medium

From the table above, it can be concluded that there was an increase in students' understanding of concepts before and after being given treatment. The magnitude of the increase in concept understanding between the experimental and control class students was different. It can be seen from the average normalized gain value which is the result of calculating the difference between the pretest and posttest values. The average increase (gain) normalized in the

experimental class that received treatment with the STAD model was included in the medium category, namely 0.60. And in the control class that received treatment with the TGT model, the average normalized gain value was 0.47 which was included in the medium category. It can be seen that students who apply the STAD cooperative learning model have a higher averagescore *N-gain* than students who apply the TGT type cooperative model.

So based on the explanation of the results above, there is a significant difference between learning with the STAD type cooperative model and the TGT type cooperative learning model, where the ability to understand concepts of students who take part in learning with the STAD type cooperative model is better than the ability to understand concepts of students who follow the learning model. TGT. And learning using the STAD type cooperative model can improve students' conceptual understanding skills.

CONCLUSION

Based on the results of research that has been carried out at the State Elementary School 5 Kuningan, West Java and the results of data processing obtained from the results of the pretest and posttest understanding of concepts in social studies subjects, the general conclusion is that there is a significant difference between the STAD type cooperative learning model and TGT type cooperative learning model, where the ability to understand concepts of students who follow the STAD type cooperative learning model is better than the concept understanding ability of students who follow the TGT learning model. And learning using the STAD type cooperative

model can improve students' conceptual understanding skills.

SUGGESTIONS

Based on the findings of the researchers' research, it is suggested that readers, particularly instructors and aspiring teachers:

1. Because students are more active in interacting and communicating during in the learning process, and because teachers can train students to motivate each other in their groups in understanding the material given to their respective groups, the use of the model Student Teams Achievement Division learninghas a positive impact on the students' understanding of concepts and communication skills, especially in social science learning, it is recommended for teachers in the field of social science studies.
2. For researchers who want to do more research on the Student Teams Achievement Division's application in order to be able to use time as efficiently as possible since learning by adopting the Student Teams Achievement Division The Achievement Division of Student Teams takes time to master the lesson so that it may be carried out in accordance with the learning objectives.

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