

# The Influence of Cooperative Learning Model STAD Type-Assisted Technique Mind Map On Activity and Outcomes Of Learning Students Grade Iv Elementary School Penambangan Sidoarjo

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**Abstract-** Learning is a process to create a state of conducive and able to make individuals feel comfortable in learning situations. In order to have a good interaction in the teaching-learning process only acts as a facilitator and learners are required to be active in digging his knowledge. In the learning process, a lot of learning models and techniques that can improve creativity and learning activities of learners so as to achieve the objective of learning which one of them is the cooperative learning model of STAD type and mind map techniques.

This research aims to determine the influence of: (1) The influence of the model of cooperative learning of the type of a-kind technique of mind map on student learning activities in class IV Elementary School Penambangan Sidoarjo and (2) influence of study model cooperative type STAD assisted technique mind map towards student learning outcomes in class IV elementary School Penambangan Sidoarjo.

This research is an experimental study with one group pretest-posttest control group design. Data collection techniques are done through observation, documentation, and test results. Data analysis techniques to know the influence of the cooperative model of cooperatives type STAD assisted technique mind Map carried out using the test T-Test with the help of software SPSS 25 for Windows.

Data analysis results show significant differences between activity and study results before and after treatment. Both on activity and learning outcomes, the Posttest value gained higher than the pretest value. The T-test result results in a T-table > T-count value, with the significance of the 0.05 known Sig. 2 tailed value of  $0,000 < 0.05$  so it is declared  $H_0$  is rejected. This means there is a significant difference in experimental learning outcomes with the control class at the time of Posttest.

Based on the results of data analysis can be concluded that: (1) There are influences of the model of cooperative learning of type STAD with technical mind map techniques to study activity in class IV and (2) there is the influence of model cooperative learning type the STAD is assisted with mind map techniques towards student learning outcomes in class IV.

**Index Terms-** STAD Learning Model, Mind Map, Activity, Learning Outcomes

## I. INTRODUCTION

Elementary school is the initial foundation of moral and character formation for learners. Teachers play a very important role. Teachers are tasked to print a qualified generation of the nation through effective learning. The teacher serves as a facilitator directing and guiding learners to develop their own knowledge. In learning, learners must be able to experience a change of mindset that initially did not know to know and understand. To embed knowledge to learners, learning and teaching excitement should be systematic, balanced, interconnected, and influence each other.

If the teacher is active and dominates the learning activities, the learners will not be able to develop their talents and abilities. According to Ahmad (2010:03), students will understand the knowledge when hearing directly and prove the truth. So, learning by doing and learning by experience. They will be easier to understand the knowledge gained by their own evidence than simply listening to the teacher who is speaking and telling the knowledge.

The implementation of the 2013 curriculum aims to remove the separation boundaries between subjects because it is considered to limit the scope of learners' knowledge. As such, teachers must follow the age of the ages by giving students the ability to face the 21st century including critical, creative, innovative, communicative and collaborative thinking. The task and role of the teacher should be in accordance with the father of national education KI Hajar Dewantara, the teacher in front as exemplary, in the middle of giving an idea, and behind to give encouragement to the participants. To achieve effective learning outcomes, students' ability should be used as a goal in designing learning activities. In delivering the material, the teacher must adapt to the students' condition. Includes a selection of appropriate models and learning techniques.

In this case, researchers offer a learning solution that is with the model of cooperative learning of type STAD with technique

mind map techniques in the learning process. With the help of the STAD-type cooperative learning model, learners will experience learning by being directly involved by emphasizing the activity and interaction between learners in the group. Thus, it will create an active learning atmosphere and not just one direction. Using the STAD-type cooperative learning model, learning will be more meaningful because of mutual cooperation in completing tasks. This is in accordance with the concepts of the Zone of Proximal Development and Scaffolding on constructivism learning theories where students are able to accomplish assignments with the help of teachers and their peers who are more of the matter through cooperation in Study Group. With the concept of Zone of Proximal Development and Scaffolding, it will increase the knowledge of learners to be more structured and fuller.

This type of cooperative learning Model is assisted by mind map techniques so that learning becomes more interesting and can help make it easier for students to understand and remember the material. According to Suryosubroto (2009:21), learning techniques are part of a learning method. The technique is used to implement learning methods that will be implemented by observing the students' conditions and the learning environment. Every teacher surely has different teaching techniques. In this case, researchers use mind maps to facilitate students' understanding. According to Beaulieu (2008:17), the image always has more power than a word. So, learners will more easily absorb knowledge delivered through images than words.

After observations on the average of middle semester scoring and daily assessment of class IV of the Elementary School of Sidoarjo, the students' study results of 35% are still under the Minimum eligibility Criteria (KKM) set at The 2018/2019 school year of 78. On the beautiful theme of diversity in my country requires learning models and techniques that can facilitate the delivery of the material to the learners. The basic competency of social sciences on the material relates to the economic activities that exist in the community. Researchers choose the model of cooperative learning STAD type with technique mind map because it is considered able to facilitate the delivery of materials

to students. Through the cooperative learning model of STAD type, students will discuss and instruct his knowledge with his group friends on the economic activities that exist around his residence and pour his idea in the form of a mind map. In the implementation of the STAD type Cooperative learning model, learners are grouped heterogeneously with differing academic abilities, gender, tribe, and performance levels.

Hopefully, when teachers apply to learn Model STAD assisted Technique Mind Map then the activity and student learning outcomes will increase. As such, researchers will conduct research titled **“The Influence Of Cooperative Learning Model Stad Type-Assisted Technique Mind Map On Activity And Outcomes Of Learning Students Grade IV Elementary School Penambangan Sidoarjo”**.

## II. METHOD

The type of research used in this research is quantitative research. The type of quantitative research used is experimental research. The purpose of this research is to know the effect of a treatment on something controlled. In this study, researchers used Pre-Experimental design with the form of One group Pretest-Posttest Design. In this case, the treatment is a learning model of STAD assisted technique mind map. In this study are all students of class IV School of Penambangan Sidoarjo which amounted to as much as 48 learners. Sampling is done by purposive sampling technique. The time used for this study was in the even semester of the 2018-2019 school year.

## III. RESULTS AND DISCUSSION

### RESULTS

Research results related to the activity and outcomes of students' learning before and after the treatment model of learning STAD with the technique of mind map techniques. Can be seen in the table below:

**Average student learning activities**

Value	Student Learning Activities	
	Before Treatment	After Treatment
Average	64, 7	80,9
Highest value	83, 3	91, 6
Lowest value	50, 0	75, 0

**Average learners Pretest and Posttest**

Nilai	Student Learning Outcomes	
	Pretest	Posttest
Average	62,60	80,41
Highest value	80	90
Lowest value	25	65

From data on the average value of activity and student learning outcomes, there can be a significant improvement. In the hypothesis testing, researchers conducted the t-test test with the results in the table below.

**Paired Samples Test Learning activities**

Paired Differences	t	df	Sig. (2-tailed)
95% Confidence Interval of the Difference			
Upper			
-12,895	9,993	47	,000

**Paired Samples Test Learning Outcomes**

Paired Differences	t	df	Sig. (2-tailed)
95% Confidence Interval of the Difference			
Upper			
-13,863	8,073	47	,000

**IV. DISCUSSION**

Research results related to students' learning activities, indicating a significant difference in activity value. Before the treatment obtained the value of learning activities by 64,7 and the value of learning activities after giving a treatment of 80.9. Starting from the data that has been obtained, the researcher processed the data using SPSS for Windows and resulted in a signification (2-tailed) value of 0.000. So the significance value is smaller than 0.05. Thus, the learning model of the STAD-assisted technique mind map affects the learning activities of students in elementary School of Penambangan Sidoarjo.

Researchers using the learning model of STAD assisted technique mind map. During the learning process, active learners begin to look. All passive becomes active when discussing. The influence of these students' activity also occurred in the study conducted by Ernawita (2018) which was an increase of 12.65% and after the data was processed, the hypothesis test showed that the signification (2-tailed) level of < 0.05. The STAD learning model affects the activities of the students. In his research revealed, that the increase in the value of student learning activities is influenced by the exactness of the learning model, in this case, the student learning activities on the basic social sciences are influenced by the model Type Cooperative learning. Through this STAD model, they have the opportunity to become a peer tutor who will make them more active in learning.

The measurement of learners' learning results is done by giving study results test of pretests and Posttest. Before being taught with the STAD type Cooperative learning model, the results of the study were very much below average and after treatment, the learners' learning results increased. In the results of early observation, results can be obtained average pretests value of 62.60. After the treatment was given the average posttest value of the learners increased to 80.41. Starting from the data that has been obtained, the researcher processed the data using SPSS for Windows and resulted in a signification (2-tailed) value of 0.000. So the significance value is smaller than 0.05. Thus, the learning model of the STAD-assisted technique mind Map has an effect on

the outcomes of students' learning in elementary School of Penambangan Sidoarjo.

**V. CONCLUSION**

Based on the results of the research and data processing can be concluded that the model of cooperative learning STAD type with mind map technique affects the activity and learning outcomes of learners in grade IV Elementary School. It can be seen from the difference of results t-test pretest and Posttest both activity and learning outcomes of learners. For the calculation of learners' learning activities through observation obtained a significance value of 0.000. As for the calculation of student learning results through pretests and posttest administration and obtained significance value of 0.000.

Data analysis results show significant differences between activity and study results before and after treatment. Both on activity and learning outcomes, the Posttest value gained higher than the pretest value. The T-test result results in a T-table > T-count value, with the signification of the 0.05 known Sig. 2 tailed value of 0,000 < 0.05 so it is declared Ho is rejected. This means there is a significant difference in experimental learning outcomes with the control class at the time of Posttest. Based on the results of data analysis can be concluded that: (1) There are influences of the model of cooperative learning of type STAD with technical mind map techniques to study activity in class IV and (2) there is the influence of model cooperative learning type the STAD is assisted with mind map techniques towards student learning outcomes in class IV. So, it can be concluded that the learning Model of STAD with a technique mind map affect the activity and learning outcomes of students in class IV elementary School Penambangan Sidoarjo.

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