



The Effect of Learning Using Script Methods and Cooperative Articulation Methods Against Student Mathematical Learning Outcomes

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Abstract. The purpose of this study was to determine the effect of learning by using the Script and Cooperative Articulation methods on improving student mathematics learning outcomes. This research is a comparative study with a research design that is only posttest design. The population of this research is grade VII students of SMP Negeri 2 Palasah, Majalengka Regency, academic year 2017/2018. The sample in this study were 59 students who were determined using cluster random sampling techniques. Data collection techniques used: (1) learning outcomes using the Cooperative Script method (2) learning outcomes using the Cooperative articulation method (3) differences in the effect of the cooperative script method with the Cooperative articulation method.

Keywords: Cooperative Script method, Cooperative Articulation method, student learning outcomes

INTRODUCTION ~ Mathematics is one of the subjects that needs to be taught in school, because mathematics has a very important role to be able to master the Science in life. But in reality it shows that math subjects are still considered difficult subjects by students. This view will certainly affect the students in receiving the lessons presented by the teacher, so that the understanding of the material being taught is lacking. The presence of such a view is due to lack of precisely the teacher in selecting and determining learning methods.

Asrori (2011:241) argues that math learning is often felt difficult by students so it tends not to be loved by the child. In fact, it's not uncommon for children to see math lessons scary. Looking at these problems therefore required a learning system that educators can use to activate students is

to use Cooperative Script learning methods with Cooperative Articulation learning methods.

The Cooperative Script method is a learning method that requires students to work in pairs and turns roles as readers and listeners to identify the material and express his or her opinion directly with his group friend. With this method, students can work or think for themselves not only relying on one student in his or her group. While the Cooperative Articulation method is a learning method that demands students active in learning where the students are formed into small groups each student in the group has the task of reexplaining the material The teacher has explained to his group's friend. Cooperative Articulation method as a form of training of students in speaking



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words or speech, so that students will become active speaking in learning.

To find out which method is more effective in learning mathematics that aims to spur active students and foster a sense of student responsibilities, thereby influencing the development of students' mathematical learning outcomes. Based on the introduction described above, the author is motivated to do research with the title "The Effect Of Learning Using Script Methods And Cooperative Articulation Methods Against Student Mathematical Learning Outcomes".

The purpose of this research is to obtain an overview of the influence of learning by using the Cooperative Script method and Cooperative Articulation method to improve students' mathematical learning outcomes.

METHOD

Darmawan (2013:127) argues that a method of research is a way by researchers to get data and information on matters relating to the issues being researched. In line with the research objective is to obtain an overview of the influence of learning by using the Cooperative Script method and Cooperative Articulation method to improve students' mathematical learning outcomes in the lesson In class VII SMP Negeri 2 Palasah. Implementation of the research is estimated for 4 months, this research was conducted when the learning process took place.

The research method used is a comparative research method. According to Sudijono (2010:247) The comparative research method is the research comparing its nature, which is done to compare between two or more groups in a given variable.

The design in this research is posttest only design that in this design there are two groups that each group in random. The first group was given treatment (X_1) and the second group was given treatment (X_2).

RESULTS AND DISCUSSION

Based on the results of hypothesis testing the average value of experimental learning outcomes 1 of 66.4063 rounded to 66 is greater than the standard deviation and the average value of experimental learning outcomes 2 of 53.8889 rounded to 54 greater than the standard deviation.. So the results of experimental learning 1 is greater than the results of experimental learning 2, meaning that the outcome of learning by using Cooperative Script method is better than the result of learning by using Cooperative Articulation method, then based on Independent Samples test Result T-Test significant value of 0.333 and t Count 0.976. Due to the significant value greater than 0.05 and t count (0.976) smaller than T table (2.00247) then H_0 is rejected, meaning there is no difference in learning outcomes of the affective aspect of the experimental Class 1 with the results of learning the affective aspect of experimental Class 2.



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In the cognitive aspect using the Independent Sample t-test, a significant value of 0.010 and a t count of 2,664. Because the significant value is smaller than 0.05 and t arithmetic (2664) is greater than t table (2.00247) then H_0 is rejected, meaning that there are differences in learning outcomes of the cognitive aspects of Experiment Class 1 with the cognitive aspects of learning outcomes of Experiment Class 2. Hypothesis testing results on the affective aspects using the Independent Sample t-test a significant value of 0.333 and t arithmetic 0.976. Because the significant value is greater than 0.05 and t arithmetic (0.976) is smaller than t table (2.00247) then H_0 is rejected, meaning that there is no difference in the learning outcomes of the affective aspects of Experiment Class 1 with the cognitive learning outcomes of Experiment Class 2. And the results of testing the hypothesis on the psychomotor aspects by using the Independent Sample t-test a significant value of 0.023 and t arithmetic 2.341. Because the significant value is smaller than 0.05 and t arithmetic (2,341) is greater than t table (2.00247) then H_0 is rejected, meaning that there are differences in learning outcomes of the psychomotor aspects of Experiment Class 1 with the psychomotor learning outcomes of Experiment Class 2.

The research was conducted in junior high School 2 Palasah in class VII A and Class VII B. Class VII A, which is the class during the learning process using Cooperative methods of education, and class VII B,

which is the class during the lesson Using Cooperative Articulation Learning method.

Cooperative Script Learning method is learning that requires students to work in pairs and alternating roles as readers and listeners to identify the material and express his opinion directly with his group friend. While the Cooperative Articulation method is a learning that demands students active in learning where the students are formed into small groups each student in the group has the task of reexplaining the material that has been Teacher told his group's friend.

Having obtained the research data in the field using posttest, then do data processing, the obtained results of statistical calculations. The data analysis begins with the prerequisite test analysis to analyze any sample from the population distribution is normal or not. For normality test results show that the data are normally distributed because the Sig. $0.169 > 0.05$. Thus, it can be concluded that the data experiment 1 using the method of Cooperative Script and second experimental data using the method Articulation Cooperative normal distribution.

Testing homogeneity done with the help of SPSS Statistic 21 software with a significance of 0.05, as for the test result of significant value homogeneity (Sig.) of 0.473 because of the significant value of the Experiment 1 using the Cooperative method Scripts and experiments 2 using



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the Cooperative Articulation method is greater than 0.05 then the data is homogeneous.

According to Slavin that has been proposed by Trianto (2010:61), the main concept in cooperative learning IS group appreciation, individual responsibility and the first opportunity for sukses. This is in accordance with the opinion of Wena (2013:192) that in cooperative learning elements students are taught directly to have the skill of establishing an interpersonal relationship one of which is not to dominate each other. So cooperative learning allows all students to be active in learning and each student has a shared responsibility to succeed in learning. Both participation in the group and to improve its ability. So with cooperative learning, it is not possible to be asked between students in the group, because students in the group have their own duties.

Purwanto (2002: 82) argues that learning outcomes is the ability earned by individuals after learning takes place, which can provide a change in behavior of both the knowledge, understanding, attitudes and skills of students so as to be better than before, so the effects of learning by using Cooperative Script method and Articulation Cooperative methods students can be active in learning and every student has a sense of shared responsibility for success in learning.

CONCLUSION

There is a difference of students ' mathematical learning outcomes using the Cooperative Script method seen from the average value of experimental learning outcomes 1 of 66.4063 greater than the standard deviation and mathematical learning outcomes of students using the method The Cooperative Articulation is seen from the average value of experimental learning outcomes 2 of 53.8889 greater than the standard deviation. So the results of experimental learning 1 is greater than the results of experimental learning 2, meaning that the learning results using Cooperative Script method is better than the results of learning using Cooperative Articulation method. Significant value of 0.005 and T Count 2,902, as the significant value smaller than 0.05 and T count is greater than t of Table 2.00247 then Ho is rejected, meaning there is a difference in learning influence using the Cooperative Script method and Cooperative Articulation method towards increasing students ' mathematical learning outcomes.

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