## The Difference of Student's Mathematical Communication Ability Taught by Cooperative Learning Model Think–Talk–Write Type with Numbered Head Together Type at SMP Negeri 1 Lubuk Pakam

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## **ABSTRACT**

The research method was quasi experiment. The purpose of this research was to know whether any difference in student's mathematical communication ability in cooperative learning Think–Talk–Write (TTW) type with Numbered Head Together (NHT) type.

The population of this research was all students at SMP Negeri 1 Lubuk Pakam. The sample was two classes which each consist of 36 students, VII A as experimental class I which taught by cooperative learning model type TTW and VII B as experimental class II which taught by cooperative learning model type NHT. The sample was taken by cluster random sampling. Collecting data technique of this research was mathematical comunication ability test that was given in the end of learning either in experimental class I or experimental class II. The type of this test was essay test.

Before doing hypothesis test, it would be done normality and homogeneity test beforehand. From the result of those tests, sample was taken from normal distributed and homogeneous variance. From the data analysis of each of experimental class were obtained that the average of posttest score in TTW classroom is higher than in NHT classroom. It was also obtained that score of mathematical communication indicators in TTW classroom is higher than in NHT classroom. From the data analysis of posttest score by using t-test with significance level  $\alpha = 0.05$ , then it was obtained that  $t_{calculated} = 4.687$  and  $t_{table} = 1.667$ . It means that  $t_{calculated} > t_{table}$  then H<sub>0</sub> is rejected and H<sub>a</sub> is accepted.

So, it can be concluded that there is difference of student's mathematical communication ability who taught by cooperative learning model type TTW with NHT at SMP Negeri 1 Lubuk Pakam. Based on research that has been done, mathematics teachers are suggested to use cooperative learning model type TTW or NHT as learning model alternative in improving student's mathematical communication ability.