

**THE DIFFERENCE OF STUDENTS' MATHEMATICAL REPRESENTATION ABILITY BY USING PROBLEM BASED LEARNING MODEL AND COOPERATIVE LEARNING MODEL STUDENT TEAM ACHIEVEMENT DIVISION (STAD) TYPE IN SMA NEGERI 1 TEBING TINGGI**

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**ABSTRACT**

This research is quasi-experiment. The purpose of this research is to know whether students' mathematical representation ability by using problem based learning model is different with cooperative learning model STAD type in SMA Negeri 1 Tebing Tinggi

The population of this research is students of SMA N 1 Tebing Tinggi whereas the sample consists of 2 classes, namely, X MIA 4 as experimental class A consists of 31 students and X MIA 5 as experimental class B consists of 31 students. Experimental class A used Problem Based Learning and experimental class B used Cooperative Learning STAD type. Collecting data technique of this research is mathematical representation test given in the end of learning either in experimental class A or experimental class B. The type of this test is essay test.

Before testing the hypothesis, the normality and the homogeneity test should be done. The result of those tests, sample was taken from normal distributed and homogeneous population. The data analysis of experimental class by using t-test with significance level  $\alpha = 0.05$ , it was obtained that  $t_{\text{calculation}} > t_{\text{table}}$  then  $H_0$  is rejected and  $H_a$  is accepted.

It can be concluded that students' mathematical representation ability by using problem based learning model is different with cooperative learning model STAD type in SMA Negeri 1 Tebing Tinggi.

From the research that has been done, researcher suggested that Problem based learning can be as consideration to teachers in enhancing senior high school students' mathematical representation ability. Teacher intends to use problem based learning needed preparation and used time effectively in its implementation. The result and instrument of this research can be used as consideration to implement problem based learning in a different class grades and subjects for the future researchers.