

**THE COMPARISON OF STUDENTS' MATHEMATICAL REASONING
ABILITY BETWEEN COOPERATIVE MODEL TPS (THINK-PAIR
SHARE) WITH STAD (STUDENT TEAM ACHIEVEMENT
DIVISION) ON SUBJECT QUADRATIC EQUATION
AT GRADE VIII SMPN 11 BINJAI
ACADEMIC YEAR 2015/2016**

Windy Erlisa (ID. 4123312022)

ABSTRACT

The type of this research is experiment. The objective of this research was to know the comparison of mathematical reasoning ability which taught by TPS is higher than STAD. Population of this research was 207 students of grade eight in SMP Negeri 11 Binjai. Applying cluster-random-sampling, VIII 1 was taken as Experiment Class I and taught by using TPS, meanwhile VIII 4 as Experiment Class II and taught by using STAD. Each of class consist of 25 students. Technique of analyzing data is consisted of normality, homogeneity, and hypothesis test. Based on normality and homogeneity test, the data was taken from normal distribution and homogeneous population. Hypothesis test is done by using analysis of co-variance and coefficient of determination index. The result of ANCOVA show that $T_{statistics} = -3.089$ and $T_{(0.05;48)} = 1.676$. Consequently $-t_{statistics} < t_{table}$, then H_0 is rejected. It means there is significant effect of learning model toward students' problem solving ability. The coefficient of determination index in TPS class is 0.5160 or 51.60 % meanwhile in STAD class is 0.4240 or 42.40%. It means students' mathematical reasoning ability of mathematics which taught by TPS is higher than STAD. Furthermore, the comparison of both effect is equal to 9.2%. The result of this research contributes to suggest the using of TPS model to increase students' mathematical reasoning ability of mathematics.