

ABSTRACT

YUKA AGUSTIN CHALISTYA, Communication Capabilities Comparison Mathematical High School Students (SMA) that metaphorical Teaching Learning by Model, Reciprocal Teaching, and Conventional (Quasi Experiment Research on SMA 112 Jakarta). Essay. Jakarta: Mathematics Education, Faculty of Mathematics and Natural Sciences, State University of Jakarta, in 2016.

This study aims to determine whether there is any difference in the ability of mathematical communication between students who learn to use metaphorical model of teaching, reciprocal teaching, and conventional. This research was conducted in SMAN 112 Jakarta in class X MIA second semester of the academic year 2015/2016 with the subject Flat Plane Geometry.

The method used is quasi experiment (quasi-experiment). Sampling using two-stage random sampling. The first stage is purposive sampling, choosing four classes taught by the same teacher. The second stage is a cluster random sampling, choosing three classes of four classes that were normally distributed, homogeneous, and has an average similarity randomly as the experimental class I, II, and grade control. The research instrument used was the ultimate test of mathematical communication skills on the subject of as much as 3 Flat Plane Geometry items description. The instrument has been through the test content validity, construct, and empirically before use. Reliability testing is also carried out using Cronbach alpha formula.

Based on research data calculations, the experimental class I (metaphorical model of teaching), the experimental class II (model reciprocal teaching), and grade control (conventional learning models) each come from normally distributed population. Homogeneity test showed that the three classes have the same variance. Hypothesis testing is done by using the average equality test with the same variance at significance level $\alpha = 0.05$. The calculations show that $F_{hitung} > F_{tabel}$, yaitu nilai $F_{hitung} = 3.39215$ and $F_{tabel} = 3.08458$, so H_0 is rejected. The results of the study states that there are differences in mathematical communication ability between students who learn to use metaphorical model of teaching, reciprocal teaching, and conventional. Further tests use an average similarity Scheffe test carried out and further test results suggest that the ability of students studying mathematical communication using metaphorical model of teaching is higher than students who learned using the reciprocal model of teaching and learning models conventional

Keywords: *Metaphorical Teaching, Reciprocal Teaching, Conventional, Mathematical Communications Capability, Test Schefffe.*