ABSTRACT

***IMELDA JULISTIYANTO WAHYUNINGTIAS**. The comparison of Students' Mathematical Communication's Ability who taught by Discursive Approach and Scientific Approach. Thesis. Jakarta: Mathematics Education, Faculty of Mathematical and Natural Science, State University of Jakarta, 2017.*

Students' mathematical communication's ability is relatively low. Therefore, it needs approaches that can develop the mathematical communication's ability, include discursive approach and scientific approach. The aim of this experiment is to know the comparison of students' mathematical communication's ability who taught by discursive approach and scientific approach. This experiment was conducted on 8^{th} grade in 5 State Junior High School in the first semester of the academic 2016/2017 with Pythagorean Theorem subjects.

The method of this experiment is quasi experiment. Sampling techniques of this experiment used two stage sampling which consists of purposive sampling and cluster random sampling. Cased on that techniques, two class chosen by who taught with the same teacher to be the experiment samples. The experiment classes was normal distribution population, homogeny, and has the same equal. There were 36 students in experiment class I (discursive approach) and 35 students in experiment class II (scientific approach). The experimental instrument is mathematical communication's ability's test with six essays. The tests was valid with content validation, construct validation, and empiric validation with the professional validator. Reliability count used by Cornbach's Alpha and the result of reliability correlation is 0,479 with enough category.

Normality test used Liliefors test. The result of normality test of experiment class I is L_{count} = 0,0694 and L_{tabel} = 0,1454. The result of normality test of experiment class I is L_{count} = 0,0837 dan L_{tabel} = 0,1478. The conclusion of the experiment is the students' mathematical communication's ability is based on normal population. Homogeneity test used Fisher test with the result of the homogeneity test is F_{count} = 1,00175 is between F_{tabel} = 0,5082 and 1,9744 so it conclude that the result of two classes were homogeny. Therefore, hypothesis test used t-test. Based on the count, t_{count} = 1,83186 and t_{tabel} = 1,667 so $t_{count} > t_{tabel}$, Then reject H_0 or in the other hand it can conclude that students' mathematical communication's ability who taught by discursive approach is higher than scientific approach.

Keywords : Students' Mathematical Communication's Ability, Discursive Approach, Scientific Approach