ABSTRACT

VANIA NUR HAYATI, "Comparison of Mathematical Communication Skills of Students Taught Using Contextual Teaching and Learning Approach (CTL) and Open Ended Approach at SMP Negeri 258 Jakarta". Essay. Jakarta: Mathematics Education Program, Faculty of Mathematics and Natural Sciences, State University of Jakarta, 2017.

This research aimed to obtain information about the use of the effective teaching approaches to develop students' mathematical communication skills by comparing the mathematical communication skills students taught by using Contextual Teaching and Learning approach and the students taught by Open Ended approach. This research was conducted on the seventh grade students at SMP Negeri 258 Jakarta in the second semester of 2016/2017 academic year. This research was conducted in May until June 2017 with Triangle as the subject of learning.

The method that used in this research is quasi experimental method. The sampling procedure used two stage sampling technique. In the first stage, selected group as a sample by using purposive sampling, then selected two classes using cluster random sampling. The two selected experimental classes are from normally distributed populations, have homogeneous variance, and have an average similarity. The instrument used is the test of mathematical communication ability as many as six questions. The instrument has been tested by the validity of the content, the validity of the construct, the validity of empirical and has been declared valid. Calculation of reliability is done by using Alpha Cronbach formula and obtained reliability coefficient is 0.647261 that included in the category of high reliability.

Based on the research data, the experimental class I (Contextual Teaching and Learning approach) and the experimental class II (Open Ended approach) are normally distributed and have the same variance. Hypothesis testing is done by using a statistical t-test at significance level $\alpha = 0.05$. Based on the calculation, obtained $t_{hit} = 2.025462$, dk = 69, and $t_{tabel} = 1.66723$. Because of $t_{hit} > t_{tabel}$, then the hypothesis null (H_0) is rejected. Thus, we can conclude that there are differences between students' mathematical communication skills are taught by using Contextual Teaching and Learning approach and the students taught by using Open Ended approach. Furthermore, students 'mathematical communication skills taught by using Contextual Teaching and Learning approach are higher than students' mathematical communication skills taught by using Open Ended approach.

Keywords: *Contextual Teaching and Learning Approach, Open Ended Approach, Mathematical Communication skills*