

## **ABSTRACT**

**ALFIAN TRI ANANDA.** *The effort to improve student mathematical communication skills through scientific approach with Think-Talk-Write (TTW) learning model on Pythagoras learning materials 8<sup>th</sup> Grade Junior High School 115 Jakarta Thesis.* Jakarta: Mathematics Education Major, Faculty of Mathematics and Natural Sciences, State University of Jakarta, 2017

*This research is purposed to improve the abilities of student's mathematical communication through scientific approach with Think-Talk-Write Cooperative Learning Model on 8<sup>th</sup> Grade Junior High School 115 Jakarta. Mathematical Communication Skills is the abilities to communicate mathematics orally and articularly and the way to share the ideas and also to clarify the comprehensions, so that through those things it will transforms to be reflection objects, discussion materials, and also amandment.*

*This research is the Class-Action Research that conducted within 3 cycles with each cycles consist of 2 appointment. Each cycle is consist of planning, implementation, analysis, and reflection.*

*This research takes about 2 months from October to November 2016 in 8<sup>th</sup> Grade of 115 State Junior High School, Jakarta period of 2016/2017. In each cycle, the students receive the test to measure their mathematical communications skill. The data collection instrument of this research is using observation sheet, thest sheet, the interview guidance and documentation tools. To conduct data collections, researcher using observations, tests, interviews, and documentations methods*

*The output of this research shows that mathematics learning through scientific approach of Think-Talk-Write (TTW) learning model can improve student's mathematical communication skills. Its proved by the average of their final test values that can be seen of each cycle. The average values of their mathematical communication skill's final test in 8<sup>th</sup> Grade on the First Cycle is 56.48, and for the Cycle II, it increase to 68.29, and for the third cycle there is a significant improvement on their final test and the average values of their mathematical communication skill test is 87.23*

**Keywords :** *Mathematical Communication Skills, Scientific Approach, Think-Talk-Write (TTW) Learning Model*