

# IMPROVING UNDERSTANDING SOME DIFFICULTIES IN MATHEMATICS FOR JUNIOR HIGH SCHOOL THROUGH TRAINING ON TEACHING LEARNING USING THE GEOGEBRA

by Karyati, Musthofa, Nikenasih Binatari

## ABSTRACT

Mathematics as one of the basic science, both of its application and its reasoning aspect, have an important role in the effort of mastery of science and technology. In developing science and technology, mathematics plays an important role for improving the quality of Indonesian human resources. Mathematics is an important subject in junior high school that is included in National Exam (UN) subjects. The year 2016 is the worst year for the achievement of the national exam score. Kulon Progo has mathematics material absorption less than the average mathematics material absorption of DIY Province. Therefore, based on this condition, It needs to be addressed more seriously. Allegedly, the ability of mathematics material of junior high school students is still low, so the mathematics teachers need to create learning innovation so that students can easily understand the concept of mathematics material. Based on the situational analysis, it is necessary to have concrete steps from Mathematics and Mathematics Education experts, as a Master's partner, to find a solution to the mathematics teacher problems. One of the efforts to be performed by the Team is to provide deepening of geometry material, introducing Geogebra software as a tool.

This program was followed by all junior high school teachers who are members of 'MGMP Matematika SMP' Kulon Progo. The number of participants is approximately 65 people. This program is held for three days, i.e. every Thursday. These are, August 10, August 28 and September 7, 2017. Attendance rate reached 95%. As a result of this activity, 70% of teachers can absorb the material well. This is demonstrated by their ability to practice Geogebra in various tools well. Some of them are still having difficulties, given their motivation, ability and age. Based on the evaluation, the participants are too many, so the ability to receive the material is too varied. Based on this condition, another method is needed to make the teachers able to make the media / learning materials of learning Geogebra well.

Kata Kunci : *geogebra, learning media, teaching materials, mathematics, geometry*