

THE EFFECT OF PROBLEM BASED LEARNING USING GEOGEBRA TO  
IMPROVE STUDENTS' PROBLEM SOLVING ABILITY  
GRADE VIII SMP NEGERI 2 BERASTAGI  
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Lasma Ronauli Pasaribu (ID. 4143312031)

ABSTRACT

The aim of this study is to determine and examine whether the problem-based learning model with assisted GeoGebra effect the problem solving ability in class VIII SMP Negeri 2 Berastagi. This study was quasi experimental research with two group pretest-posttest design. The population of this research was all of student's of class VIII SMP Negeri 2 Berastagi academic 2017/2018. Each of class consist of 40 students. The sample of this research were taken by using class random sampling technique consisted of two classes. Class VIII-4 was experimental class taught by problem based learning model with assisted GeoGebra, class VIII-8 was control class taught by conventional learning. The instruments of the research were valid essay test of problem solving ability. The data were analized by using t-test at significance  $\alpha=5\%$ . The result of the research show that the average score of pretest in experiment class VIII-4 and control class VIII-8 are 38.5625 and 37.125. After doing treatment in both class obtained average score of posttest are 80.1875 and 74.875. From the hypothesis testing  $t_{calculated} (2.04) > t_{table} (1.99)$  means  $H_0$  rejected and  $H_a$  accepted. It shows that there is effect of problem-based learning model with assisted GeoGebra to the ability of mathematical problem-solving grade VIII SMP Negeri 2 Berastagi.

*Keyword:* problem solving ability, PBL

