

ABSTRACT

Iraldy Laendra Fasa. (2018). *Improvement of Mathematical Representation Ability and Self-Reliance of High School Students through Learning-Based Problem-Based Learning Model of Geogebra Software.*

This study aims to: (1) know the improvement of the ability of mathematical representation of students who get the learning model Problem Based Learning Geogebra-Assisted Software is higher than students who acquired expository learning model; (2) knowing there is student learning independence that obtains learning model of Learning Based Learning Software Geogebra is better than students who get expository learning model; (3) to know there is a positive correlation between the ability of mathematical representation and student learning independence that obtained the learning model of Learning Based Learning Software Geogebra. The method used in this research is an quasi experimental method with a pretest-postes control group research design. The population in this study is all students of class X SMA 18 Garut. For the sample of research consists of 2 classes. Obtained class X MIPA 3 as an experimental class that obtained the learning model of Geogebra-assisted Problem Based Learning Software and class X MIPA 1 as a control class that gets expository learning model. The instrument used in this research is a description of the test of mathematical representation ability and the scale of learning independence. The data collected is then processed using IBM SPSS 20.0 for windows software. The result of the research shows that: (1) the improvement of mathematical representation ability of the students who acquired the learning model of Learning Based Learning with Geogebra Software is higher than the students who get the expository learning model; (2) improvement of learning independence of students who obtained learning model of Problem Based Learning Geogebra-Assisted Software better than students who obtained expository learning model; (3) there is no correlation between the ability of mathematical representation and student learning independence that obtained the learning model of Geogebra-Based Problem Based Learning Software.

Keywords: Problem Based Learning Software Assisted Geogebra, ability of mathematical representation, learning independence