ABSTRACT

Silvia Nur Azizah. (2022). ***The Effect of Discovery Learning Model Assisted by GeoGebra on the Ability to Understand Mathematical Concepts and Self-Regulated Learning of High School Students.***

The ability to understand mathematical concepts and self-regulated learning is an important thing that must be possessed by students. One alternative learning model that can help develop student's understanding of mathematical concepts and self-regulated learning is the discovery learning model assisted by GeoGebra. This research aims to: (1) to find out whether the increase in the ability to understand mathematical concepts of students who received the discovery learning model assisted by GeoGebra was higher than the students who received the conventional learning model; (2) knowing whether the achievement of self-regulated learning of students who received the discovery learning model assisted by GeoGebra was better than students who received the conventional learning model; (3) knowing the correlation between the ability to understand mathematical concepts and self-regulated learning of students who obtained the discovery learning model assisted by GeoGebra. The method used in this study is a quasi-experimental method with a pretest-posttest control group design. The subjects in the study were class XI students of SMA Negeri 1 Patokbeusi for the academic year 2021/2022. While the object of this research is the ability to understand mathematical concepts and self-regulated learning. For the research sample two classes were taken namely class XI IPA 4 as an experimental class by treating the discovery learning model assisted by GeoGebra and class XI IPA 3 as a control class with conventional model treatment in this case the discovery learning model. The research instrument used was in the form of a test description of the ability to understand mathematical concepts and a self-regulated learning questionnaire scale. The collected data was processed using SPSS Statistics 17.0 software for windows. Based on the results of the study, it was obtained: (1) The increase in the ability to understand mathematical concepts of students who received the discovery learning model assisted by GeoGebra was higher than students who received the conventional learning model; (2) Self-regulated learning of students who received the discovery learning model assisted by GeoGebra was better than students who received conventional learning models; (3) There is a correlation between the ability to understand mathematical concepts and self-regulated learning that obtains the discovery learning model assisted by GeoGebra.

Keywords*: GeoGebra, Ability to Understand Mathematical Concepts, Discovery Learning Model, Self-Regulated Learning.*