

ABSTRACT

Hesti Sariani, (2020). "Mathematical Problem Solving Ability in Discovery Learning Assisted with Geogebra and Cabri Applications".

This study aims to determine how the students' mathematical problem-solving abilities using the application-assisted discovery learning model and what errors were made by students in solving problem-solving problems using Newman error analysis. This study uses a mix method, namely quasi-experimental research and case studies. The population is all class XII students of SMK Bina Putera Nusantara, Tasikmalaya City, 2020/2021 academic year. Sampling using purposive sampling technique. This research requires 3 classes which are in one skill competency. Based on these reasons, the Clinical and Community Pharmacy class 1 was called experimental class 1 which used learning with the application of the discovery learning model assisted by the Geogebra application, class XII Clinical Pharmacy and Community 2 which used learning with the application of the discovery learning model assisted by the Cabri application and class XII Clinical Pharmacy and Community 3 which is used as a control class that uses discovery learning without the help of applications. The instrument consists of a test in the form of questions about the students' mathematical problem solving abilities. The results showed that (1) the mathematical problem solving abilities of students using the discovery learning model assisted by the Geogebra application were better than those assisted by the Cabri application and without the assistance of the application; The mathematical problem solving ability of students who use the discovery learning model assisted by the Cabri application is better than those without the assistance of the application; (2) students who carried out the discovery learning model assisted by the Geogebra application consisting of S1, S4 and S7 made a misunderstanding. Students who carried out the discovery learning model assisted by the Cabri application consisting of S2, S5 and S8 made reading errors and skill errors. Students who carry out discovery learning models without the help of applications consisting of S3, S6 and S9 make reading errors, skill errors and inference errors.

Keywords: Mathematical Problem Solving, Newman's Error, Discovery Learning, Cabri, Geogebra