ABSTRACT

Erlina Nazara, IDN 4183111078 (2022). The Effect of Problem-Based Learning (PBL) Using Video-Based Learning (VBL) on the Student's Mathematical Problem-Solving Ability in SMK Negeri 14 Medan.

The low mathematical problem solving ability of class X students of SMK Negeri 14 Medan and the lack of application of learning models according to the latest trends are the background of this research. This study aims to determine the effect and effect size of Problem-Based Learning (PBL) using Video-Based Learning (VBL) on the mathematical problem solving ability of students at SMK Negeri 14 Medan in a two-variable linear equation system. This research is a quasi-experimental study with a pretest-posttest control group design, where class X TEI is the experimental class, and class X TITL 1 as the control class. Data collection techniques in the form of pretest and posttest results were given to the two research classes. Furthermore, the t-test was carried out to test the hypothesis after first passing the prerequisite tests, namely the normality test and homogeneity test. The results obtained indicate that learning with the PBL model using VBL has an effect on students' mathematical problem solving abilities. Students who are taught with the PBL model using VBL have higher problem solving abilities than those taught with the direct learning model. The effect size of the treatment indicate that there is a high and consistent influence of the application of the PBL model using VBL on the mathematical problem solving abilities of students at SMK Negeri 14 Medan.

Keywords: Problem-Based Learning, Video-Based Learning, problem solving ability.