ABSTRACT

Upi Lidinillah. Application of Problem Based Learning Model for Improving Mathematical Communication Skills and Self-Efficacy of Junior High School Students.

The ability of mathematical communication is needed by students for understanding mathematics. However, students' mathematical communication skills are still low. The causes are students not being able to present the problem into the mathematical model with precise and low self-esteem of students. One of the alternative learning that can improve the ability of mathematical communication and student self-efficacy is the model of Problem Based Learning (PBL). The purpose of this research is to know the mathematical communication ability of students who get learning with PBL model better than students who get learning with expository model, to know self-efficacy of students who get learning with PBL model better than students who get learning with expository model and know there is a correlation between students' self-efficacy and the mathematical ability of the experimental class communication. The method used is the experimental method. The population in this study is all students of class VIII SMPN 1 Cikampek. The sample in this research is the students of class VIII-10 as the experimental class and the students of class VIII-11 as the control class. The instruments used in the research are test type description of mathematical communication skill and attitude scale using Likert Scale model. The attitude scale consists of statements about self-efficacy. The test was tested in IX-9 class. Based on the analysis of the test results, all test questions are feasible for research use, but there are some statements that are changed so that the statement becomes valid. Data analysis was done by using t-test through SPSS 23.0 for Windows program by using Independent Sample T-Tes. Based on the data analysis, the results of the study concluded: the improvement of students' mathematical communication skills of PBL classes are significantly better than the expository class. Increased self-efficacy of PBL class students and control classes is not significantly different or equal and there is no correlation between self-efficacy and communication skills mathematical students.

Keywords: Mathematical Communication, Self-Efficacy, Problem Based Learning (PBL)