

THE INCREASING OF PROBLEM SOLVING MATHEMATICAL ABILITY OF STUDENTS' THROUGH REALISTIC MATHEMATICS EDUCATION APPROACH IN VIII GRADE AT SMP ISLAM AL-ULUM TERPADU OF MEDAN ACADEMIC YEAR 2012/2013

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ABSTRACT

The purpose of this research to know increasing problem solving ability of students that taught realistic mathematical education approach is better than the mathematical problem-solving ability of students taught expository approach in VIII grade at SMP Islam Al-Ulum Terpadu Medan Academic Year 2012/2013. This type of research is quasi-experimental research on first (odd) semester of VIII grade SMP Islam Al-Ulum Terpadu Medan academic year 2012/2013. The population in this research is all students of VIII grade SMP Islam Al-Ulum Terpadu School of Medan consisting of 118 students. Sample was taken by using random sampling; it means that each class had the same chance to be sampled. The sample in this study consisted of two classes. The experiment class in VIII-A was taught by applies Realistic Mathematics Education (RME) approach and the control class in VIII-B was taught by applies Expository approach. Research instrument in collecting data in this study were a test and an observation sheet.

The kinds of test is essay test, contains four questions for pre-test and four questions for post-test that related to the problem solving about Linear equation two variables system. The instrument that arranged have legalized by expert validator namely lecturer and mathematic teachers. Before hypothesis that will be test must be done normality test and homogeneity test. For normality test used Liliefors normality test and for homogeneity test is used F-test. From test can get the sample is distributes normal and homogeneous. Data analysis technique that used T-test formula.

The average of pre test in experiment class is 26.0714 and the average of pre test in control class is 26.0714. The average of posttest in experiment class is 85.1785 and the average of post test in control class is 72.5. Analysis result of gain for problem solving using t testing with significant level $\alpha=0.05$ for the hypothesis is $t_{\text{calculate}} = 3.9861$ and $t_{\text{table}} = 2.0048$ so that $-2.0048 < t_{\text{calculate}} < 2.0048$, Because of that, the criteria $t_{-\alpha/2} < t_{\text{cal}} < t_{\alpha/2}$ is rejected. It means H_0 is rejected. So can be concluded, The increasing problem solving ability that taught by using RME greater than solving math problems that students taught with Expository approach in linear equation two variables system at VIII SMP Islam Al-Ulum Terpadu Medan Academic Year 2012/2013.