

Analysis of Cognitive Dissonance of Class VIII Junior High School Students in View of Problem Solving Ability and Mathematical Critical Thinking

by Elly Arliani, Afifah Sausan Rahmawati

ABSTRACT

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The purpose of this study was to describe the effect of reciprocal teaching learning model and discovery learning model on cognitive dissonance, problem solving ability and mathematical critical thinking of students and describe the relationship of students' cognitive dissonance to problem solving ability and mathematical critical thinking of junior high school students in grade VIII. This research is a quasi experiment with a population of all students in grade VIII of public junior high schools in Tegal Regency in the odd semester of the 2023/2024 academic year. Of the eight classes, two classes were randomly selected, namely class VIII.6 and class VIII.7. Of the two classes selected, then a draw was made so that class VIII.6 was obtained as an experimental class, namely the class that received mathematics learning with reciprocal teaching learning model and class VIII.7 as a control class that received mathematics learning with discovery learning model. The instruments used to collect data are test questions on problem solving ability, mathematical critical thinking and student cognitive dissonance questionnaire. Multivariate Analysis of Variance (MANOVA) statistical test was used to see the effect of reciprocal teaching on problem solving ability, critical thinking and cognitive dissonance of students. Meanwhile, to see which learning method is superior in terms of the average of each variable, the Independent Sample T-test statistical test was used. The results of the study at the 5% significance level showed that the reciprocal teaching learning model had an effect on problem solving ability, critical thinking and cognitive dissonance, but included in the low category. More specifically, the results also did not show that the class that used the reciprocal teaching learning model was superior to the class that used the discovery learning model in terms of the average problem solving ability, critical thinking and cognitive dissonance of students. In addition, the results also showed a positive relationship between cognitive dissonance and problem solving ability and critical thinking.

Kata Kunci: *Reciprocal Teaching, Problem Solving Ability, Mathematical Critical Thinking Ability, Cognitive Dissonance.*