

ABSTRACT

Delsika P. S. (2016). The Effect of REACT Strategy for Junior High School Students' Ability of Mathematical Representation, Reasoning, and Mathematical Disposition.

This research is about the effect of REACT strategy for junior high school students' ability of mathematical representation, reasoning, and mathematical disposition. The purpose of this research is to examine the achievements and increased ability of mathematical representation, reasoning, and mathematical disposition students acquire learning with REACT strategy and usual learning; to examine the association among the ability of mathematical representation, reasoning, and mathematical disposition; to examine the views of students towards learning with REACT strategy and difficulties experienced by students. This research used a quasi-experimental pattern with nonequivalent control group design. Subjects of this research were students of VIII A and VIII B in junior high school in Bandung. The instruments used, namely (1) test, such as item of representation and mathematical reasoning abilities, (2) non test, in the form of a mathematical disposition scale, the scale of students' views on learning, and observation sheet. The trial results showed the reliability coefficient of mathematical representation and reasoning abilities were respectively 0.56 and 0.64, the reliability coefficient of mathematical disposition and scale of students' views on learning were 0.886 and 0.907. Analysis of quantitative data in this research used IBM SPSS Statistics 23, and the conclusion: learning with REACT strategy was able to increase the mathematical representation and reasoning abilities of students; the achievement of mathematical representation and reasoning abilities of students who received learning with REACT strategy was higher than students who received the usual learning; mathematical disposition of students who received learning with REACT strategy was not better than students who received the usual learning; there were association between mathematical representation and reasoning ability, between mathematical representation ability and mathematical disposition, and between mathematical reasoning ability and mathematical disposition; students' views on learning with REACT strategy is good; the mistake experienced by students in solving problems of mathematical representation and reasoning abilities that acquire learning with REACT strategy were lower than students who received usual learning.

Keywords: REACT strategy, mathematical representation ability, mathematical reasoning ability, mathematical disposition.

ABSTRAK

Delsika P. S. (2016). Pengaruh Strategi REACT terhadap Kemampuan Representasi, Penalaran, dan Disposisi Matematis Siswa SMP.

Penelitian ini mengenai pengaruh strategi REACT terhadap kemampuan representasi, penalaran, dan disposisi matematis siswa SMP. Tujuan pada penelitian ini adalah untuk menelaah pencapaian dan peningkatan kemampuan representasi, penalaran, dan disposisi matematis siswa yang memperoleh pembelajaran dengan strategi REACT dan pembelajaran biasa, menelaah adanya asosiasi antara kemampuan representasi, penalaran dan disposisi matematis, menelaah pandangan siswa terhadap pembelajaran dengan strategi REACT dan kesulitan yang dialami siswa. Penelitian ini menggunakan pola kuasi eksperimen dengan *nonequivalent control grup design*. Subjek penelitian ini adalah siswa kelas VIII A dan VIII B di satu SMP di Bandung. Instrumen yang digunakan, yaitu (1) tes, berupa soal kemampuan representasi dan penalaran matematis, (2) nontes, berupa skala disposisi matematis, skala pandangan siswa terhadap pembelajaran, dan lembar observasi. Hasil uji coba instrumen menunjukkan koefisien reliabilitas tes kemampuan representasi dan penalaran matematis berturut-turut adalah 0,56 dan 0,64, koefisien reliabilitas skala disposisi matematis dan skala pandangan siswa terhadap pembelajaran berturut-turut adalah 0,886 dan 0,907. Analisis data kuantitatif pada penelitian ini menggunakan *IBM SPSS Statistics 23*, sehingga diperoleh kesimpulan: pembelajaran dengan strategi REACT mampu meningkatkan kemampuan representasi dan penalaran matematis siswa; pencapaian kemampuan representasi dan penalaran matematis siswa yang memperoleh pembelajaran dengan strategi REACT lebih tinggi daripada siswa yang memperoleh pembelajaran biasa; disposisi matematis siswa yang memperoleh pembelajaran dengan strategi REACT tidak lebih baik daripada siswa yang memperoleh pembelajaran biasa; terdapat asosiasi antara kemampuan representasi dan penalaran matematis, antara kemampuan representasi dan disposisi matematis, dan antara kemampuan penalaran dan disposisi matematis; siswa berpandangan baik terhadap pembelajaran dengan strategi REACT; serta kesalahan yang dialami siswa dalam menyelesaikan soal-soal kemampuan representasi dan penalaran matematis yang memperoleh pembelajaran dengan strategi REACT lebih rendah daripada siswa yang memperoleh pembelajaran biasa.

Kata kunci: Strategi REACT, kemampuan representasi, kemampuan penalaran, disposisi matematis.