

ABSTRACT

Anis Fauzia: *The Effect of the Relating, Experiencing, Applying, Cooperating, Transferring (REACT) Model Assisted by the Cabri 3D Application on Students' Mathematical Concept Comprehension Ability. Mathematics Education Study Program, Faculty of Teacher Training and Education, Universitas Malikussaleh, 2026.*

Students' mathematical concept comprehension remains a problem in mathematics learning. This condition is thought to be influenced by the use of inappropriate learning models and limited learning media in visualizing abstract concepts. This study aims to analyze the effect of the application of the Relating, Experiencing, Applying, Cooperating, and Transferring (REACT) model assisted by the Cabri 3D application on students' mathematical concept comprehension. This study used a quasi-experimental method with a nonequivalent control group design. The study population consisted of all eighth-grade students of SMP Negeri 2 Dewantara, while the sample was determined through a purposive sampling technique. Class VIII-A was designated as the experimental class and class VIII-B as the control class. Research data were obtained through an initial test (pretest), a final test (posttest), and observation sheets of teacher and student activities. Data analysis was carried out using the Shapiro–Wilk normality test, Levene's homogeneity test, and hypothesis testing using the Independent Samples t-Test. The results of the normality test showed that the data from the control class ($p = 0,072$) and the experimental class ($p = 0,076$) were normally distributed. Furthermore, the homogeneity test obtained a significance value of 0,081, indicating that both groups had homogeneous variances. Hypothesis testing using the Independent Samples t-Test yielded a significance value of $0,001 < 0,05$. These results indicate that the implementation of the REACT model assisted by the Cabri 3D application has an impact on students' mathematical concept understanding.

Keywords: REACT, Cabri 3D, mathematical concept understanding, flat-sided geometric shapes.