

ABSTRACT

The Mathematical Representation Ability of Grade XI Students of SMA Negeri 1 Batuan Resolving Problems in Derivative Material in Terms of Cognitive Style: 2019. Eka Wulandari

Keywords: mathematical representation, problem solving, cognitive style

This study aims to describe the mathematical representation ability of class XI students of SMA Negeri 1 Batuan in solving problems in functional matter derived from the cognitive style of Field Dependent (FD) and Field Independent (FI).

This research is an exploratory research with a qualitative descriptive approach. The subjects of this study consisted of 2 class XI students of SMA Negeri 1 Batuan, each of which had a Field Dependent (FD) and Field Independent (FI) cognitive style. The research begins by determining the research subject using the Group Embedded Figure Test (GEFT) instrument and an initial ability test, after which the research subject is obtained, it is continued by giving the Problem Solving Test (TPM) and interviews. Checking the validity of the findings using time triangulation.

The results showed that in the Read and Think step, Field Dependent (FD) and Field Independent (FI) students used verbal representations in explaining what was known and asked without writing it on the answer sheet. In the Explore and Plan step, FD students use visual representations by making pictures to make it easier to solve and FI students use visual and verbal representations to help solve the problem. In the Select a Strategy step, FD and FI students use symbolic representations by taking m , n , and t and then writing the information in the form of a trapezoidal area equation. In the Find an Answer step, FD and FI students use verbal representations to explain their reasons and use symbolic representations for the equation of the derivative of the area of the trapezoid. In the Reflect and Extend step, FD and FI students use verbal and symbolic representations, namely by reading the complete result of the solution and checking the equation results of the derivative of the area of the trapezoid.