

ANALYSIS OF STUDENTS' REPRESENTATION ABILITY IN SOLVING STRUCTURED ESSAY TEST AND FREE ESSAY TEST IN ELECTRICITY MATERY

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ABSTRACT

One of the reason of occurance students difficulty in solving physics problem is because physics demands the students in mastery different representations simultaneously. Assembling of representation in physics learning process is usually used in evaluation form. In evaluation process, the test used to measure students' representation ability is structured essay test and free essay test. The purpose of this research is to know the form of essay test that can show students' representatation ability. Research method used in this research is *descriptive* method. These subjects research consist of 30 students which are divided into two groups that consist of 15 students of each. Taking data is done by using two forms of test, the first group did structured essay testmeanwhile the second group did free essay test in electricity matery. According to the data analysis, the research result shows that the students have higher representation in the structured essay test than free essay test in the electricity matery. According to the result of the representation ability test in structured essay test, the precentage of verbal representation average is 54.28%, picture representation 51.55%, mathematics representation 29.44%, and graphic representation 23.33%. Besides that, the form of representation that frequently used by students in solving the problem in the matery of electricity is verbal, whereas graphic representation is slightly used. According to the questionnaire and interview said that the structured essay test can help students in solving the problem. Therefore, it is concluded that structured essay test can be used to know students' representation ability.

Key words: representation ability, structured essay test, free essay test, electricity.

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