

ABSTRACT

THE INFLUENCE OF HANDS ON ACTIVITY REPRESENTATION SKILL TOWARDS THE VIBRATION AND WAVE CONCEPT MASTERY AMONG JUNIOR HIGH SCHOOL STUDENTS

By

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The mastery of any kind representation formats in physics is expected to have an influence in the learning quality. There are many various representation formats such as hands on activity representation, mathematics, verbal, graphic, and free body diagram. Unfortunately, the reality that is often faced nowadays is that most students learn those various representation formats by learning them into many parts that don't correlate each other or they are separated so that causing students' low concept mastery in physics. The use of students' hands on activity representation was able to interpret any kind of representation formats above in the different representation forms so that the students could easily master the concepts in physics. This research has a purpose to identify (1) the influence of hands on activity representation skill towards the vibration and wave concept mastery among junior high school students; (2) the improvement of vibration and wave concept mastery among junior high school students by using hands on activity representation skill. The research was conducted in VIII₃ class at SMPN 1

Bandar Lampung contained 24 students on the even semester, 2012/2013 with vibration and wave subjects. Based on the research, data gathered in hands on activity representation skill and concept mastery and after that they have been analyzed by using SPSS 17.0 program. The analysis results showed that the data distributed normally and linearly. The research hypotheses testing used correlation method, simple regression linear and paired t-test sample. The results of the research showed that : (1) there was a positively and linearly significant influence towards concept mastery amounted to 45, 70 % which was a determination coefficient value. It was gained from correlation coefficient value amounted to 0,676 in strong category and regressive equation $\hat{Y} = 31,405 + 0,628X$ where coefficient values a and b were significant coefficients. (2) There is an significantly average improvement in junior high school students' concept mastery caused by the influence of hands on activity representation skill amounted to 36,37 with N-gain average concept mastery amounted to 0, 64 in moderate category.

Keywords : hands on activity representation skill and mastery of concept