

**THE EFFECTIVENESS OF USING VIRTUAL SIMULATION MEDIA
WITH MACROMEDIA FLASH COMBINE WITH EXPERIMENTAL
METHOD TO IMPROVE STUDENTS' LEARNING OUTCOMES
IN DYNAMICS ELECTRIC'S SUBJECT FOR THE
FIRST GRADE OF SMA N 1 PERBAUNGAN
A.Y. 2012/2013**

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ABSTRACT

The purpose of this research was to find out the activity of students and the effectiveness of using virtual simulation media with macromedia flash combine with experimental method to improve students' learning outcomes in dynamics electric's subject for the first grade of SMA N 1 Perbaungan A.Y. 2012/2013.

The research method was quasi experimental. The population were all students at X class consist of 8 classes SMA N1 Perbaungan. The sample of this research conduct two classes and consist of 79 students, here class X2 as experiment class and class X3 as control class and define by random cluster sampling.

The results that were obtained: post-test mean value of the experimental class was 79.23 and 67.50 was the mean value for control class. Standard deviation for two classes were 10.04 and 11.27. Normality test result from the both samples was normal and homogenous, the testing criterion was accept H_0 if $-1.67 < t' < 1.67$ and refuse H_0 in other condition. Here, H_0 was refused because t' is 4.88 and H_a was accepted. And the other side, the gain of experimental class (0.7) is higher than control class (0.4) with the activity of students was 67.27. So that there was the effectiveness of using virtual simulation media with macromedia flash combine with experimental method to improve students' learning outcomes in dynamics electric's subject for the first grade of SMA N 1 Perbaungan.