

ABSTRACT

Debora Elizabeth, The Differences of uses Media Electronic Workbench Software (EWB) with Media Conventional to Study Result Student In Subjects Electrical Basics. (An Experimental Study on the grade X Power Installation Program of SMK Negeri 5 East Jakarta). Supervisor Drs. Irzan Zakir, M.Pd and Aris Sunawar, S.Pd, MT.

This study aimed to determine the result whether the learning outcomes of students who are taught using media Electronic Workbench software higher than students taught using media conventional in class X Power Installation Program of SMK N 5 Jakarta.

This research was carried out at SMK N 5 East Jakarta in January-June, 2014 (the second semester of 2013/2014 school year). Research methods that used is the experimental method. The samples was 60 students of class X Program Technical Expertise Power Installation is divided into two groups. The data that collected was aimed to see the comparison results of the learning outcomes based on the theory test.

The theory test instrument has been tested by testing the validity using content validity (content validity) and reliability test using the KR-20. Instrument as a whole has been tested. Calculation results obtained form the coefficient of reliability 0.914. r_{table} at the level of significance $\alpha = 0.05$ is 0.444%. Because $r_{\text{count}} > r_{\text{table}}$, the null hypothesis (H_0) is rejected. Means that research instrument is very reliable. Test requirements test is done before the data based on hypotheses tested, which are test for normality and homogeneity tests. Normality tests is using Liliefors test. The L_{table} value at $\alpha = 0.05\%$ with $n = 30$ for both methods. Test results on the method using media software Electronic Workbench obtained the highest value of $L_{\text{count}} = 0.138$ and L_{table} value = 0.161 for $L_{\text{count}} < L_{\text{table}}$ the null hypothesis (H_0) is accepted, then the data came from a normal population. Test results on the method using media conventional obtained the highest value $L_{\text{count}} = 0.152$ and $L_{\text{table}} = 0.161$ for $L_0 < L_{\text{table}}$ the null hypothesis (H_0) is accepted, it means that the data came from a normal population. The homogeneity test with the Barlett test, obtained $F_{\text{count}} = 0.052$ while the $F_{\text{table}} = 3.84$ at significance level $\alpha = 0.05\%$ and $n = 60$ for both samples, because of $F_{\text{count}} < F_{\text{table}}$ means H_0 is accepted. It can be inferred data comes from a population with homogeneous variances. The hypothesis was tested by t-test obtained $t_{\text{count}} = 9.091$ and $t_{\text{table}} = 2.00$ at significance level $\alpha = 0.05\%$ and $n = 60$ for both samples. Because $t_{\text{count}} \geq t_{\text{table}}$ then H_0 is rejected so it can be concluded that there are differences in the results of study subjects basics of electricity between students taught using Electronic Workbench software media with students who are taught conventional use traditional media.

Keywords: Study result, Electronic Workbench software and Electrical Basics