THE EFFECTIVENESS OF CONTEXTUAL TEACHING AND LEARNING (CTL) AND MULTIMEDIA TO INCREASE STUDENTS ACHIEVEMENT AND STUDENTS ACTIVITY ON TEACHING HYDROCARBON

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ABSTRACT

The purpose of this research was to explore the differences between students' chemistry achievement using CTL with multimedia and students' chemistry achievement using direct instruction. The population of the research was students grade X of SMA Negeri 1 laguboti. The sample is selected by using purposive sampling to choose two classes for every school as experiment class and control class. Experiment class taught by CTL with multimedia while control class taught by direct instructional. The variable of this research were dependent variable, and text book, time allocation, test instrument as control variable. Test instrument was validated before used to validator and students then tested by correlation moment product formula therefore from 30 items taken 18 items were valid. And then, 18 items chosen as instruments test of research. The reliability of test is 0.714.

The results showed that this model is very significant to increase the ability of students in learning chemistry, especially on the Hydrocarbon as the select topic for this research. The statistical data analysis of research showed that mean of pretest in experiment class is 21.97 (± 5.66) and posttest is 88.6 (± 4.30). In control class, the mean of pretest is 23.73 (± 7.24) and posttest is 73.8 (± 5.30). Based on the hypothesis test of gain values at significant level $\alpha = 0.05$ showed that is $t_{count} > t_{table}$ (3.79 > 1.671) therefore Ho refused and Ha received. Thus, students' chemistry achievement taught by CTL with multimedia is higher than students' chemistry achievement taught by direct instruction.