

**THE EFFECT OF PROBLEM BASED LEARNING MODEL ON
STUDENT'S ACHIEVEMENT AT LIGHT TOPIC IN 8th GRADE SMP
NEGERI 1 TEBING TINGGI A.Y 2012/2013**

Avolen Berly Indah Siahaan (ID Num: 409322011)

ABSTRACT

The purpose of this study was to know the effect of Problem Based Learning Model on student's achievement at Light topic in 8th grade SMP Negeri 1 Tebing Tinggi academic year 2012/2013.

This research is a quasi experiment. Population in this research are whole students in class VIII SMP Negeri 1 Tebing Tinggi semester II AY 2012/2013 which totally 9 classes. By using cluster random sampling, sample selected from the population as much two classes. One class is experiment class which be taught by using PBL Model and another one is control class which be taught by using Direct Instruction Model. The instrument was used to get data is a test which contains of 10 questions and had been validated by some experts in Physics.

Based on the result of research obtained the mean pretest of experiment class is 36.64 and the mean pretest of control class is 36.72. This shows that the initial ability of the both of classes is homogenous. Then the both of classes were given a different treatment, the experiment class used Problem Based Learning Model and control class used Direct Instruction Model. After the learning had finished, the both of classes were given posttest then the mean posttest of experiment class is 82.68 and the mean posttest of control class is 49.62. The result of test-t obtained that $t_{\text{count}} = 7.67$ and $t_{\text{table}} = 1.70$. because $t_{\text{count}} > t_{\text{table}}$, so H_0 rejected and H_a accepted. It can be concluded that there is an effect of student's achievement by using Problem Based Learning model with Direct Instruction Model at Light topic in 8th grade SMP Negeri 1 Tebing Tinggi.