

**The Implementation of Collaborative Learning with Experiment Method to  
Increase Student's Achievement in Solubility and Solubility Product**

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**ABSTRACT**

This research is used to know the implementation of collaborative learning with experiment method and as comparison using direct instructional method in solubility and solubility product topic. The population of this research is all of students of grade XI MAN 2 Model Medan in science program at academic year 2013/2014. The sample in this research are XI IPA 5 and XI IPA 6 that taken by randomly choosing from population where every class consisted of 34 student. The instrument that is used to measure student's achievement is multiple choices question with five options. There are 20 valid questions with reliability at 0.88. This data is obtained from calculation using r product moment. The experiment class is implementing collaborative learning with experiment method while control class is applying direct instructional method. The result of pretest show that data is normal distributed and homogeneous. The student's achievement is known from the difference between pretest and posttest as normalized gain. The average gain of experiment class is 0.5066 while in control class 0.8066. The statistic analysis show significant difference at  $\alpha = 0.05$  obtain that  $t_{\text{count}} 14.79 > t_{\text{table}} 1.6593$  which means that student's achievement which taught using collaborative learning with experiment method is significantly higher than student's achievement which taught using direct instructional method. The cognitive aspect that improves by implementation collaborative learning with experiment method in solubility and solubility product topic is C3 0.82 (high category).