

**THE EFFECTIVENESS OF PROJECT BASED LEARNING MODEL
BASED ON LESSON STUDY TOWARD STUDENT'S
ACHIEVEMENT IN ACID-BASE TOPIC
AT SMA N 1 BERASTAGI**

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ABSTRACT

This research has the purpose to know the student's achievement in Acid-Base topic by implementing Project Based Learning model integrated with Lesson Study, to know the student's cognitive aspect improvement in learning Acid-Base Topic with Project Based Learning model with Lesson Study compared with conventional model and to know the student's perception that will be taught by project based learning model based on lesson study. The population of this research are all Senior High School students grade XI in Berastagi, which the samples are 2 classes Xith grade chosen by purposive sampling. 1st as experiment class was taught by Project Based Learning Model based on Lesson Study while 2nd class as control class was taught by Conventional model. The instrument test had been standardized by expert validator and empiric validity process. The result of test standardization is 20 multiple choice questions with reliability 0.865. The research resulted that the data is normal distributed and samples are homogenous. The result data showed that student's achievement taught by Project based learning with lesson study gave higher significance different compared with student's achievement taught by conventional model. The statement supported by the result of hypothesis testing is $t_{count} (5.78) > t_{table} (1.67)$. Cognitive aspect which highest improved is C3 (application) with high score 0.86. The learning process based on lesson study obtained highest score is students that working together in "U" form seat (83%). Students feel easier to understand on acid-base topic with learning process based on lesson study (94.29%).

Keywords : *Acid-Base, Lesson Study, Project Based Learning, Student's Achievement*