## ABSTRACT

## Safirda Hasanah, IDN 4201131006 (2024). Implementation of Project-Based Learning Model on Acid-Base Material to Improve Learning Outcomes and Activities Students SMAN 2 Percut Sei Tuan.

This thesis aims to determine whether there are differences in learning outcomes and student activities when applying the Project Based Learning model and the conventional model in acid-base material. Then, this research aims to determine the relationship between student activities and student learning outcomes by applying the Project-Based Learning model. This research was conducted at SMAN 2 Percut Sei Tuan on Jl. Pendidikan, Bandar Klippa, Percut Sei Tuan, Deli Serdang Regency, North Sumatra 20371. Two classes were selected from four XI SMAN 2 Percut Sei Tuan classes as samples: one experimental group class (uses the Project-Based Learning model) and one control group class (uses lecture and discussion learning). In this research, data analysis was carried out using data normality tests, data homogeneity tests, hypothesis tests, and correlation tests. The hypothesis test results on learning outcomes and activities obtained an Independent Sample T-test significance value of 0.00. These results show a significance value of less than 0.05 (value  $sig < \alpha$  (0.05)). Thus, it can be concluded that there are differences in the learning outcomes and activities of students who are taught using the Project-Based Learning model and the conventional Learning model on acid-base material, so Ha is accepted, and H0 is rejected. The correlation test results between learning outcomes and student activities in acid-base material found a value of Sig. (2-tailed) is 0.000 < 0.005, so there is a relationship between the related variables: learning outcomes and learning activities

Keywords: Learning Outcomes, Student Learning Activities, Project-Based Learning Model

