

## ABSTRAK

**Niki Arih Ersada Br Sembiring, NIM. 4203131074 (2024). Perbedaan Hasil Belajar Dan Keterampilan Proses Sains Siswa Yang Dibelajarkan Dengan Model *Project Based Learning* Dan *Discovery Learning* Pada Materi Asam Basa.**

Tujuan penelitian ini yaitu untuk mengetahui perbedaan hasil belajar dan keterampilan proses sains siswa yang dibelajarkan dengan model *Project Based Learning* dan *Discovery Learning* pada materi asam basa, serta korelasi antara keterampilan proses sains siswa dan hasil belajar siswa. Penelitian ini merupakan penelitian kuantitatif. Sampel dalam penelitian ini diambil secara *random sampling* sebanyak 2 kelas yaitu XI MIPA 1 sebagai kelas eksperimen I dan XI MIPA 3 sebagai kelas eksperimen II, dimana masing-masing kelas diambil 29 orang siswa berdasarkan kesamaan hasil *pretest*. Instrumen yang digunakan yaitu instrumen tes berupa soal pilihan berganda dan esai serta instrumen non tes berupa lembar observasi. Pengujian hipotesis dilakukan dengan menggunakan program komputer SPSS *Statistic version 24 for Windows* menggunakan *Independent Sample T-Test* dan *Bivariate Pearson Correlation*. Untuk hipotesis I diperoleh nilai sig. (2-tailed)  $0,008 < \alpha (0,05)$  sehingga  $H_a$  diterima, yang berarti terdapat perbedaan hasil belajar siswa yang dibelajarkan dengan model *Project Based Learning* dan *Discovery Learning* pada materi asam basa. Untuk hipotesis II diperoleh nilai sig. (2-tailed)  $0,010$  dan  $0,011 < \alpha (0,05)$  sehingga  $H_a$  diterima, yang berarti terdapat perbedaan keterampilan proses sains siswa yang dibelajarkan dengan model *Project Based Learning* dan *Discovery Learning* pada materi asam basa. Untuk hipotesis III dan IV diperoleh nilai sig. (2-tailed) sebesar  $0,002$  dan  $0,001 < \alpha (0,05)$  sehingga  $H_a$  diterima, yang berarti terdapat korelasi antara keterampilan proses sains siswa dan hasil belajar siswa yang dibelajarkan dengan model *Project Based Learning* dan *Discovery Learning* pada materi asam basa.

**Kata Kunci:** *Project Based Learning*, *Discovery Learning*, Hasil Belajar, Keterampilan Proses Sains, Asam Basa.

## ABSTRACT

**Niki Arih Ersada Br Sembiring, NIM. 4203131074 (2024). Differences in Learning Outcomes and Science Process Skills of Students Taught Using Project Based Learning and Discovery Learning Models on Acid-Base Material.**

The aim of this research is to determine the differences in learning outcomes and science process skills of students taught using the Project Based Learning and Discovery Learning models on acid-base material, as well as the correlation between students' science process skills and student learning outcomes. This research is quantitative research. The sample in this study was taken by random sampling from 2 classes, namely XI MIPA 1 as experimental class I and XI MIPA 3 as experimental class II, where 29 students were taken from each class based on the similarity of pretest results. The instruments used are test instruments in the form of multiple choice questions and essays and non-test instruments in the form of observation sheets. Hypothesis testing was carried out using the SPSS Statistics version 24 for Windows computer program using Independent Sample T-Test and Bivariate Pearson Correlation. For hypothesis I, the sig value is obtained. (2-tailed)  $0.008 < \alpha$  (0.05) so  $H_a$  is accepted, which means there are differences in student learning outcomes taught using the Project Based Learning and Discovery Learning models on acid-base material. For hypothesis II, the sig value is obtained. (2-tailed)  $0.010$  and  $0.011 < \alpha$  (0.05) so  $H_a$  is accepted, which means there are differences in students' science process skills taught using the Project Based Learning and Discovery Learning models on acid-base material. For hypotheses III and IV, sig values were obtained. (2-tailed) of  $0.002$  and  $0.001 < \alpha$  (0.05) so that  $H_a$  is accepted, which means there is a correlation between students' science process skills and student learning outcomes taught using the Project Based Learning and Discovery Learning models on acid-base material.

**Keywords:** Project Based Learning, Discovery Learning, Learning Outcomes, Science Process Skills, Acids and Bases.