

## ABSTRAK

**DINA SINAGA.** Pengaruh Model Problem based Learning dan Keterampilan Berpikir Kritis Terhadap Keterampilan Proses Sains siswa. Program Pascasarjana Universitas Negeri Medan, 2021.

Penelitian ini bertujuan untuk menganalisis: Keterampilan proses sains siswa yang diajarkan dengan model pembelajaran *problem based learning* lebih baik dibandingkan dengan siswa yang menggunakan pembelajaran konvensional, keterampilan proses sains siswa yang memiliki keterampilan berpikir kritis di atas rata-rata lebih baik dari siswa yang memiliki keterampilan berpikir kritis dibawah rata-rata, dan ada interaksi antara model pembelajaran *problem based learning* dengan keterampilan berpikir kritis siswa dalam meningkatkan keterampilan proses sains siswa. Penelitian yang dilakukan secara quasi eksperimen dengan desain two group pretes-postes. Populasi penelitian adalah siswa SMA N 8 Medan. Pengambilan sampel dilakukan dengan cara *cluster random sampling* mengambil dua kelas dari empat kelas yaitu kelas X-2 sebagai kelas eksperimen dan kelas X-4 sebagai kelas kontrol. Instrument yang digunakan adalah tes essay untuk keterampilan proses sains dan tes keterampilan berpikir kritis. Data yang dihasilkan dianalisis dengan menggunakan ANAVA dua jalur. Hasil penelitian menunjukkan bahwa: keterampilan proses sains siswa yang diajarkan dengan model pembelajaran *problem based learning* lebih baik dibandingkan dengan siswa yang menggunakan pembelajaran konvensional, keterampilan proses sains siswa yang memiliki keterampilan berpikir kritis di atas rata-rata lebih baik dari siswa yang memiliki keterampilan berpikir kritis dibawah rata-rata dan ada interaksi antara model pembelajaran *problem based learning* dengan keterampilan berpikir kritis siswa dalam meningkatkan keterampilan proses sains siswa.

Kata Kunci: *problem based learning*, Keterampilan Berpikir Kritis, dan Keterampilan Proses Sains



## ABSTRACT

DINA SINAGA. The Influence of Problem Based Learning Model and Critical Thinking Skills on Students' Science Process Skills. Medan State University Postgraduate Program, 2021.

This study aims to analyze: The science process skills of students who are taught using the problem based learning model are better than students who use conventional learning, the science process skills of students who have critical thinking skills above average are better than students who have thinking skills. critically below average, and there is an interaction between the problem based learning model and students' critical thinking skills in improving students' science process skills. The research was conducted in a quasi-experimental way with a two-group pretest-posttest design. The research population was students of SMA N 8 Medan. Sampling was done by means of cluster random sampling taking two classes from four classes, namely class X-2 as the experimental class and class X-4 as the control class. The instrument used is an essay test for science process skills and a test for critical thinking skills. The resulting data were analyzed using two-way ANOVA. The results showed that: the science process skills of students who were taught using the problem based learning model were better than students who used conventional learning, the science process skills of students who had critical thinking skills above average were better than students who had critical thinking skills. below average and there is an interaction between the problem based learning model and students' critical thinking skills in improving students' science process skills.

Keywords: problem based learning, Critical Thinking Skills, and Science Process Skills

