

ABSTRAK

Nadia Rizkita M, NIM 4213341023 (2025). Pengaruh Model Problem Based Learning (PBL) Terhadap Kemampuan Literasi Sains Siswa Pada Materi Perubahan Lingkungan di Kelas X SMA Negeri 13 Medan.

Tujuan Penelitian ini untuk mengetahui pengaruh model Problem Based Learning (PBL) terhadap kemampuan literasi sains siswa kelas X SMA Negeri 13 Medan pada submateri Perubahan Lingkungan. Jenis penelitian ini adalah kuasi experiment dengan design pretest-posttest. Populasi dalam penelitian ini adalah seluruh kelas X SMA Negeri 13 Medan tahun ajaran 2024/2025. Sampel penelitian dipilih secara purposive sampling yang terdiri dari satu kelas eksperimen dan satu kelas kontrol. Metode dari penelitian ini dengan menggunakan penelitian kuantitatif. Teknik pengumpulan data dilakukan dengan menggunakan observasi pra-penelitian, wawancara dengan guru Biologi kelas X, melakukan tes tertulis dalam bentuk soal pilihan berganda kepada siswa dan dokumentasi saat penelitian. Data dianalisis dengan menggunakan uji hipotesis uji Independent Sample Test dengan taraf $\alpha = 0,05$. Berdasarkan hasil uji t diperoleh nilai sehingga dapat diambil Kesimpulan bahwa H_0 ditolak dan H_a diterima. Dan hasil kemampuan literasi sains termasuk dalam kriteria tinggi dengan nilai rata rata hasil posttest 81,83. Data ini mengindikasikan bahwa penerapan model *Problem Based Learning* berpengaruh terhadap kemampuan literasi sains siswa kelas X SMA Negeri 13 Medan submateri perubahan lingkungan.

Kata Kunci : Problem based learning, Literasi sains, Perubahan lingkungan



ABSTRACT

Nadia Rizkita M, NIM 4213341023 (2025). The Effect of Problem Based Learning (PBL) Model on Students' Scientific Literacy Skills on Environmental Change Material in Class X of SMA Negeri 13 Medan.

The purpose of this study was to determine the effect of the Problem Based Learning (PBL) model on the scientific literacy skills of class X students of SMA Negeri 13 Medan on the Environmental Change sub-material. This type of research is a quasi-experimental with a pretest-posttest design. The population in this study was all class X students of SMA Negeri 13 Medan in the 2024/2025 academic year. The research sample was selected by purposive sampling consisting of one experimental class and one control class. The method of this study used quantitative research. Data collection techniques were carried out using pre-research observations, interviews with class X Biology teachers, conducting written tests in the form of multiplechoice questions to students and documentation during the study. Data were analyzed using the Independent Sample Test hypothesis test with a level of $\alpha = 0.05$. Based on the results of the t test, the value obtained so that it can be concluded that H_0 is rejected and H_a is accepted. And the results of scientific literacy abilities are included in the high criteria with an average posttest score of 81.83. These data indicate that the application of the Problem Based Learning model has an effect on the scientific literacy skills of class X students of SMA Negeri 13 Medan in the sub-material of environmental change.

Keywords : *Problem-based learning, scientific literacy, environmental change*

