ABSTRAK

Putri Kristiana Sirait, NIM. 4203321024 (2024). Pengaruh Model *Problem Based Learning* (PBL) Terhadap Hasil Belajar Siswa pada Materi Usaha dan Energi Kelas X SMA Negeri 1 Percut Sei Tuan.

Penelitian ini bertujuan untuk mengetahui pengaruh model *problem based learning* (PBL) terhadap hasil belajar siswa pada materi usaha dan energi kelas X di SMA Negeri 1 Percut Sei Tuan. Jenis penelitian ini adalah *quasi experiment*. Populasi dalam penelitian adalah seluruh siswa kelas X SMA Negeri 1 Pecut Sei Tuan. Pengambilan sampel dilakukan dengan teknik *cluster random sampling* yang terdiri dari dua kelas, yaitu kelas X-8 sebagai kelas eksperimen dan kelas X-9 sebagai kelas kontrol. Instrumen yang digunakan adalah tes hasil belajar dalam bentuk pilihan berganda yang terdiri dari 15 soal yang telah divalidasi oleh validator. Sebelum diberikan perlakuan yang berbeda dilakukan pretes, yaitu nilai rata-rata pretes kelas eksperimen 29,773 dan nilai rata-rata pretes kelas kontrol 29,185. Pada pengujian normalitas dan homogenitas data pretes kedua kelas berdistribusi normal dan homogen. Hasil uji t pretes diperoleh $t_{hitung} < t_{tabel} = 0{,}228 < 1{,}996$ maka H_0 diterima, artinya kemampuan awal siswa kelas eksperimen dan kelas kontrol sama. Setelah selesai dilakukan pembelajaran pada kedua kelas maka dilakukan postes dengan hasil rata-rata kelas eksperimen 83,7 dan nilai rata-rata kelas kontrol 76,23. Pada pengujian normalitas dan homogen data postes diperoleh bahwa data kedua kelas berdistribusi normal dan homogen. Hasil uji t postes diperoleh bahwa $t_{hitung} > t_{tabel} = 4{,}53 > 1{,}668$ maka H_a diterima, dimana ada perbedaan hasil belajar antara kelas eksperimen dengan kelas kontrol yang berarti ada pengaruh model *problem based learning* (PBL) terhadap hasil belajar siswa pada materi usaha dan energi kelas X di SMA Negeri 1 Percut Sei Tuan.

Kata kunci : *Model Problem Based Learning, Hasil Belajar, usaha dan Energi*

ABSTRACT

Putri Kristiana Sirait, NIM (4203321024) (2024). The effect of Problem Based Learning (PBL) Model on Student Learning Outcomes in the Material of Work ad Energy of Class X of SMA Negeri 1 Percut Sei Tuan.

This study aims to determine the effect of Problem Based Learning (PBL) Model on student learning outcomes in the Material of Work and Energy of class X at SMA Negeri 1 Percut Sei Tuan. This type of research is a quasi experiment. The population in the study were all students of class X of SMA Negeri 1 Percut Sei Tuan. The sample was taken by using cluster random sampling technique which consisted of two classes, namely class X-8 as the experimental class and class X-9 as the control class. The instrument used was a test of learning outcomes in the form of multiple choices consisting of 15 questions that have been validated by the validator. Before being given different treatments, the pretest was carried out, namely the pretest average value of the experimental class was 29,773 and the pretest average value of the control class was 29, 185. In testing the normality and homogeneity of the pretest data, the two classes were normally distributed and homogeneous. The results of the pretest t test obtained $t_{count} < t_{table} = 0,228 < 1,996$ *then* H_0 *was accepted, meaning that the students initial abilities in the experimental clss and the control class were the same. After completing the learning process in both classes, a post-test was carried out with the experimental class average score of 83,7 and the control class average score of 76,23. In testing the normality and homogeneity of post-test data, it was found that the data of the two classes were normally distributed and homogeneous. The results of the posttest t test showed that* $t_{count} > t_{table} = 4,53 > 1,668$ *then* H_a *was accepted, where there is a difference in learning outcomes between the experimental class and the control class, which means that there is an effect of the problem based learning (PBL) model on student learning outcomes in the material of work and energy of class X of SMA Negeri 1 Percut Sei Tuan.*

Keywords : *problem based learning model, learning outcomes, work and energy*