ABSTRAK

Adi Chandra Sihombing: Pengaruh penerapan model pembelajaran project based learning (PjBL) terhadap hasil belajar system pemindahan daya pada siswa kelas XI program keahlian teknik kendaraan ringan SMK N 4 Medan. Skripsi. Fakultas Teknik Universitas Negeri Medan 2023.

Pembelajaran yang berfokus pada guru mengakibatkan siswa menadi kurang aktif dalam pembelajaran. Siswa cenderung menjadi pasif sehingga kurang aktif ketika proses pembelajaran. Kondisi ini dapat membantu siswa untuk lebih aktif lagi menerima pembelajaran dan menumbuhkan semangat mereka dalam belajar. Dengan demikian diharapkan siswa dapat mencapai nilai ketuntasan belajar yang optimal yang dapat dilihat dari hasil belajar siswa**. Tujuan penelitian** ini untuk mengetahui pengaruh penerapan model pembelajaran *Project based learning* (PjBL) terhadap hasil belajar siswa pada materi teknik kendaraan ringan siswa kelas XI SMK N 4 Medan. Metode penelitian ini yaitu quasi experiment. Populasi dalam penelitian ini adalah seluruh siswa kelas XI SMK N 4 Medan. Pengambilan sampel dilakukan dengan teknik sampling jenuh yang terdiri dari dua kelas, yaitu XI TKR 1 Sebagai kelas eksperimen dan kelas XI TKR 2 Sebagai kelas control. **Metode penelitian** dilakukan secara eksperimen semu atau quasy exprimen. Penelitian ini akan menggunakan perlakuan terhadap sampel penelitian berupa model pembelajaran project based learning (pjbl). Pada kelas eksperimen pembelajaran konvesional atau kelas kontrol tes hasil belajar dalam bentuk pilihan berganda yang terdiri dari 15 soal yang telah divalidasi oleh ahli validator. Sebelum dilakukan perlakuan yang berbeda dilakukan pretest yaitu nilai rat-rata pretest kelas eksperimen 46,00 dan kelas control 44,00. Pada pengujian normalitas dan homogenitas data pretest kedua kelas berdistribusi normal dan homogen. Hasil uji T Pretest diperoleh $-t_{tabel} < t_{hitung} < t_{tabel}$ (-2,002 < 1,01< 2,002), maka H0 diterima, artinya kemampuan awal siswa kelas eksperimen dan kelas control sama.

Hasil penelitian ini di peroleh setelah selesai dilakukan pembelajaran pada kedua kelas maka dilakukan postes dengan Hasil yang di proleh adalah nilai rata rata kelas eksperimen 80,67 dan control 76,00. Pada uji normalitas dan homogenitas didapatkan data berdistribusi normal dan homogen. Hasil uji t postes diperoleh $t_{hitung} > t_{tabel}$ ((2,16> 1,671). Pada nilai Ha diterima, dan nilai N-Gain untuk melihat peningkatan hasil belajar siswa didapat pada kelas eksperimen 64,05% dan kelas control 56,09%, dimana ada perbedaan hasil belajar siswa antara kelas eksperimen dan kelas control yang berarti ada pengaruh penerapan model pembelajaran *project based learning* (PjBL) terhadap hasil belajar system pemindahan daya pada siswa kelas XI program keahlian teknik kendaraan ringan SMK N 4 Medan yaitu nilai siswa menjadi meningkat dibandingkan sebelum dilakukan pembelajaran *Project Based Learning.*

Kata Kunci : *Project Based Learning*, Hasil Belajar, Sistem Pemindahan Daya SMK N Medan.

ABSTRACT

Adi Chandra Sihombing, The influence of the application of the project based learning (PjBL) learning model on the learning outcomes of power transfer systems in class XI students of the light vehicle engineering skills program at SMK N 4 Medan

Teacher-focused learning results in students becoming less active in learning. Students tend to be passive so they are less active during the learning process. This condition can help students to be more active in receiving learning and foster their enthusiasm for learning. Thus, it is expected that students can achieve optimal learning completeness scores which can be seen from student learning outcomes. The purpose of this study was to determine the effect of the application of the Project-based learning (PjBL) learning model on student learning outcomes in light vehicle engineering material for class XI students of SMK N 4 Medan. This research method is quasi experiment. The population in this study were all students of class XI SMK N 4 Medan. Sampling was done by saturated sampling technique consisting of two classes, namely XI TKR 1 as the experimental class and XI TKR 2 class as the control class. The type of research conducted is a pseudo experiment or quasy exprimen. This study will use treatment of research samples in the form of a project-based learning model (pjbl). In the conventional learning experimental class or control class, the learning outcomes test is in the form of multiple choice consisting of 15 questions that have been validated by expert validators. Before different treatments are carried out, the pretest is the average value of the experimental class pretest 46.00 and the control class 44.00. In testing the normality and homogeneity of pretest data, both classes were normally distributed and homogeneous. The results of the Pretest T test obtained -table < tcount < ttable (-2.002 < 1.01 < 2.002), then H0 is accepted, meaning that the initial ability of experimental and control class students is the same.

The findings of the results of this study were obtained after the completion of learning in both classes, a post-test was conducted with the results obtained were the average value of the experimental class 80.67 and control 76.00. In the normality and homogeneity tests, the data were found to be normally distributed and homogeneous. The results of the post-test t test obtained tcount> ttable ((2.16> 1.671). Then Ha is accepted, and the N-Gain value to see the increase in student learning outcomes is obtained in the experimental class 64.05% and the control class 56.09%, where there is a difference in student learning outcomes between the experimental class and the control class which means there is an effect of applying the project-based learning model (PjBL) on the learning outcomes of the power transfer system in class XI students of the light vehicle engineering expertise programme of SMK N 4 Medan.

Keywords: *Project Based Learning, Learning Outcomes, Power Transfer System at SMK N Medan.*