

ABSTRACT

Herdi Perdana Sembiring, NIM 5192131004. *The Influence of the Self Directed Learning Method Using a Community Science and Technology Approach to Improve Student Learning Outcomes in Basic Subjects Electrical Engineering Subjects Class X Electrical Power Installation Engineering at SMK Negeri 5 Medan, Thesis for Electrical Engineering Education Study Program, Faculty of Engineering, Medan State University 2024.*

One of the important components that determines the learning process is teachers and learning models or methods that make it easy for students to study learning material, so that learning becomes more interesting and can improve learning outcomes. This research aims to improve the learning outcomes of the basics of electrical engineering for class.

This research was conducted at SMK Negeri 5 Medan which is located at Jl. Timor No. 36, Gaharu, Medan city. The population in this study was all class X TITL and the sample in this study was class X TITL-1 and class Where class X TITL-1 is the experimental class and class X TITL-3 is the control class. This type of research is quasi-experimental with quantitative methods. Implemented in the odd semester of the 2023/2024 academic year. This form of research design is a post test only control design consisting of 30 multiple choice questions which have first been tested for validation and reliability.

From the analysis of data calculations, the experimental class learning results were obtained, namely the average post-test score = 73.23 with a foreign exchange standard of 12.25. Meanwhile, the control class had an average post-test score = 66.87 with a foreign exchange standard of 17.32. The results of data analysis with the level of acceptance at a significance level of 5% show that, where the value obtained is $t_{count} > t_{table}$, namely $1.692 > 1.672$. From the calculations, it was concluded that the learning outcomes of the basics of electrical engineering for students who were taught using the Self Directed Learning learning method with a Community science and technology approach were better than the learning outcomes of students who were taught using the Project Based Learning (PjBL) learning model for class X Electrical Power Installation Engineering (TITL) SMK Negeri 5 Medan.

Keywords: *Self Directed Learning (SDL) learning method, learning outcomes*

ABSTRAK

Herdi Perdana Sembiring, NIM 5192131004. Pengaruh Metode Pembelajaran Self Directed Learning Dengan Pendekatan Sains Teknologi Masyarakat Untuk Meningkatkan Hasil Belajar Peserta Didik Pada Mata Pelajaran Dasar – Dasar Teknik Ketenagalistrikan Kelas X Teknik Instalasi Tenaga Listrik Di SMK Negeri 5 Medan, Skripsi Program Studi Pendidikan Teknik Elektro, Fakultas Teknik, Universitas Negeri Medan 2024

Salah satu komponen penting yang menentukan untuk terjadinya proses belajar adalah guru dan model atau metode pembelajaran yang memberikan kemudahan bagi peserta didik untuk mempelajari materi pembelajaran, sehingga pembelajaran menjadi lebih menarik dan dapat meningkatkan hasil belajar. Penelitian ini bertujuan untuk meningkatkan hasil belajar dasar-dasar teknik ketenagalistrikan siswa kelas X Teknik Instalasi Tenaga Listrik dengan menggunakan metode pembelajaran *self directed learning* dengan pendekatan sains teknologi Masyarakat.

Penelitian ini dilakukan di SMK Negeri 5 Medan yang beralamat di Jl. Timor No. 36, Gaharu kota Medan. Populasi dalam penelitian ini seluruh kelas X TITL dan sampel penelitian ini kelas X TITL-1 dan kelas X TITL-3 dengan metode pengambilan sampel yakni random sampling. Dimana kelas X TITL-1 sebagai kelas eksperimen dan kelas X TITL-3 sebagai kelas kontrol. Jenis penelitian ini adalah quasi eksperimen dengan metode kuantitatif. Dilaksanakan pada semester ganjil tahun ajaran 2023/2024. Bentuk desain penelitian ini pos test only desain control yang terdiri dari 30 soal pilihan ganda yang terlebih dahulu sudah di uji validasi dan reliabilitas.

Dari analisis perhitungan data, diperoleh hasil belajar kelas eksperimen yaitu nilai rata-rata pos test = 73,23 dengan standar deviasi 12,25, sedangkan kelas kontrol nilai rata-rata pos test = 66,87 dengan standar deviasi 17,32. Hasil analisis data dengan Tingkat penerimaan pada taraf signifikansi 5% menunjukkan bahwa, Dimana diperoleh nilai $t_{hitung} > t_{tabel}$, yaitu $1,692 > 1,672$. Dari perhitungan diperoleh kesimpulan bahwa hasil belajar dasar-dasar teknik ketenagalistrikan siswa yang diajarkan dengan menggunakan metode pembelajaran Self Directed Learning dengan pendekatan sains teknologi Masyarakat lebih baik dari hasil belajar siswa yang diajarkan dengan model pembelajaran Project Based Learning (PjBL) kelas X Teknik Instalasi Tenaga Listrik (TITL) SMK Negeri 5 Medan.

Kata kunci : Metode pembelajaran Self Directed Learning (SDL), Hasil belajar