ABSTRAK

Yandika Purba, NIM 5192431006. *Penerapan Model Pembelajaran Problem Based Learning dengan pendekatan Discovery Inquiry Terhadap Hasil Belajar Fisika Siswa Kelas X Teknik Instalasi Tenaga Listrik (TITL) Di SMK Negeri 5 Medan*. **Fakultas Teknik Universitas Negeri Medan. 2023.**

Salah satu komponen penting yang menentukan untuk terjadinya proses belajar adalah guru dan model pembelajaran yang memberi 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 Fisika siswa kelas X Teknik Instalasi Tenaga Listrik dengan menggunakan model pembelajaran *problem based learning* dengan pendekatan *discovery inquiry*.

Penelitian ini dilakukan di SMK Negeri 5 Medan yang beralamat di Jl. Timur No. 36, Gaharu Kota Medan. Populasi dalam penelitian ini seluruh kelas X TITL dan sampel penelitian ini kelas X TITL-1 dan X TITL-2 dengan metode pengambilan sampel yakni random sampling. Dimana kelas X TITL-1 sebagai kelas eksperimen dan kelas X TITL-2 sebagai kelas kontrol. Jenis penelitian ini adalah quasi eksperimen dengan metode kuantitatif. Dilaksanakan pada semester genap tahun ajaran 2022/2023. Bentuk desain penelitian ini pre test – pos test only desain control yang terdiri dari 20 soal pilihan berganda yang terlebih dahulu sudah di uji validitas dan reliabilitas.

Dari analisis perhitungan data, diperoleh hasil belajar kelas ekeperimen yaitu nilai rata – rata $pre - test = 61,67$ dengan standar deviasi 10,85. Sedangkan nilai rata – rata $pos - test = 82$ dengan standar deviasi 8,36 dan dalam hasil uji hipotesis menunjukkan bahwa $t_{hitung} = 4,583$ dan bila dikonsultasikan dengan nilai tabel "t" pada taraf signifikan 0,05 dengan $dk = 30 + 30 - 3 = 58$ yang bernilai $t_{tabel} = 2,002$. Dengan membandingkan r_{hitung} dan r_{tabel} maka diperoleh ($4,583 \geq 2,002$), sehingga hipotesis diterima. Kesimpulannya adalah "ada pengaruh setelah diterapkannya Model Pembelajaran *Problem Based Learning* dengan pendekatan *Discovery Inquiry* terhadap hasil belajar Fisika siswa kelas X TITL SMK Negeri 5 Medan.

Kata Kunci : Model Pembelajaran *Problem Based Learning* dengan pendekatan *Discovery Inquiry*, Hasil Belajar

ABSTRACT

Yandika Purba, NIM 5192431006. *Application of the Problem Based Learning Learning Model with the Discovery Inquiry Approach to the Learning Outcomes of Class X Students in Electrical Engineering Engineering (TITL) at SMK Negeri 5 Medan. Faculty of Engineering,* **Medan State University. 2023.**

One important component that determines the occurrence of the learning process is the teacher and learning model that makes it easy for students to learn learning material, so that learning becomes more interesting and can improve learning outcomes. This study aims to improve the physics learning outcomes of class X Electrical Installation Engineering students by using a problem-based learning model with a discovery inquiry approach.

This research was conducted at SMK Negeri 5 Medan which is located at Jl. East No. 36, Agarwood, Medan City. The population in this study were all class X TITL and the sample in this study was class X TITL-1 and X TITL-2 using the random sampling method. Where class X TITL-1 as the experimental class and class X TITL-2 as the control class. This type of research is quasi-experimental with quantitative methods. It will be held in the even semester of the 2022/2023 school year. The form of this research design is pre test – post test only control design which consists of 20 multiple choice questions which have previously been tested for validity and reliability.

From the analysis of data calculations, the experimental class learning outcomes were obtained, namely the average pre-test value = 61.67 with a standard deviation of 10.85. While the average post-test value = 82 with a standard deviation of 8.36 and the results of the hypothesis test show that tcount = 4.583 and when consulted with the "t" table value at a significant level of 0.05 with dk = 30 + 30 - 3 = 58 which has a ttable value = 2.002. By comparing rcount and rtable it is obtained $(4.583 \geq 2.002)$, so the hypothesis is accepted. The conclusion is "there is an effect after the implementation of the Problem Based Learning Learning Model with the Discovery Inquiry approach to the physics learning outcomes of class X TITL SMK Negeri 5 Medan.

Keywords: Problem Based Learning Learning Model with Discovery Inquiry approach, Learning Outcomes