

ABSTRAK

Wendi Eko Manik: *Perbedaan Hasil Belajar Sistem Engine Kendaraan Ringan Menggunakan Model Problem Based Learning (PBL) Dan Discovery Learning (DL) Bagi Siswa Kelas XI TKR Di SMK NEGERI 5 MEDAN*. Skripsi. Fakultas Teknik. Universitas Negeri Medan. 2025.

Penelitian ini bertujuan mendeskripsikan hasil belajar siswa pada mata pelajaran penerapan Sistem Pelumasan Elemen Sistem *Engine* Kendaraan Ringan dengan menggunakan model pembelajaran Problem Based Learning pada kelas XI TKR di SMK Negeri 5 Medan. Lalu mendeskripsikan hasil belajar siswa pada mata pelajaran penerapan Sistem Pelumasan Elemen Sistem Mesin Kendaraan Ringan dengan menggunakan model pembelajaran berbasis penemuan pada kelas XI TKR di SMK Negeri 5 Medan. Kemudian menjelaskan perbedaan hasil belajar siswa pada mata pelajaran Sistem Pelumasan Elemen Sistem Mesin Kendaraan Ringan menggunakan Model Pembelajaran berbasis masalah dengan model Pembelajaran berbasis penemuan pada siswa kelas XI TKR SMK Negeri 5 Medan. Penelitian ini dilaksanakan di SMK Negeri 5 Medan. Waktu penelitian pada semester genap tahun ajaran 2024/2025. Jenis penelitian ini ialah penelitian kuantitatif dengan pendekatan eksperimen. Populasi dalam penelitian ini adalah kelas XI TKR yang berjumlah 64 siswa, sedangkan sampel dalam penelitian ini terdiri dari 2 kelas yaitu kelas XI TKR 5 yang berjumlah 32 siswa dan kelas XI TKR 3 berjumlah 32 siswa. Teknik pengambilan sampel adalah total sampel. Hasil belajar siswa pada kelas XI TKR 3 sebelum diberikan perlakuan rata-rata pra-tes 57,25 dan setelah diberikan perlakuan dengan menggunakan model pembelajaran berbasis masalah diperoleh rata-rata pasca-tes 86 sedangkan hasil belajar siswa pada kelas XI TKR 3 sebelum diberikan perlakuan rata-rata pra-tes 47 dan setelah diberikan model pembelajaran berbasis penemuan diperoleh rata-rata pasca-tes 78,31. Hasil perhitungan uji t diperoleh nilai t_{hitung} sebesar 3,17 dan t_{tabel} sebesar 1,99 pada taraf $\alpha = 0.05$ sehingga diperoleh ($3,17 > 1,99$), sehingga H_0 ditolak dan H_a diterima, ini menunjukkan bahwa hasil belajar yang pembelajarannya menggunakan model berbasis masalah lebih tinggi dibandingkan hasil belajar siswa yang pembelajarannya menggunakan model berbasis penemuan.

Kata Kunci: *Problem Based Learning, Discovery Learning, Hasil Belajar, Engine Kendaraan Ringan.*

ABSTRACT

Wendi Eko Manik: *Differences in Learning Outcomes of Light Vehicle Engine Systems Using Problem-Based Learning (PBL) and Discovery Learning (DL) Models for Grade XI TKR Students at SMK NEGERI 5 MEDAN. Thesis. Faculty of Engineering. University of Medan. 2025.*

This study aims to describe student learning outcomes in the subject of Light Vehicle Engine System Lubrication Application using the Problem-Based Learning model in class XI TKR at SMK Negeri 5 Medan. It also aims to describe student learning outcomes in the subject of Light Vehicle Engine System Lubrication Application using the discovery-based learning model in class XI TKR at SMK Negeri 5 Medan. It then explains the differences in student learning outcomes in the subject of Light Vehicle Engine System Lubrication Elements using the problem-based learning model and the discovery-based learning model for students in class XI TKR at SMK Negeri 5 Medan. This research was conducted at SMK Negeri 5 Medan. The research period was in the even semester of the 2024/2025 academic year. This research was quantitative research with an experimental approach. The population in this study was class XI TKR, consisting of 64 students, while the sample in this study consisted of 2 classes, namely class XI TKR 5, consisting of 32 students, and class XI TKR 3, consisting of 32 students. The sampling technique was total sampling. The learning outcomes of students in class XI TKR 3 before the treatment were pre-test average of 57.25, and after the treatment using the problem-based learning model, the post-test average was 86. Meanwhile, the learning outcomes of students in class XI TKR 3 before the treatment were pre-test average of 47, and after the treatment using the discovery-based learning model, the post-test average was 78.31. The t-test calculation resulted in a t-value of 3.17 and a t-table value of 1.99 at a level of $\alpha = 0.05$, so that $(3.17 > 1.99)$, thus H_0 was rejected and H_a was accepted. This shows that the learning outcomes of students who used the problem-based learning model were higher than those of students who used the discovery-based learning model.

Keywords: *Problem-Based Learning, Discovery Learning, Learning Outcomes, Light Vehicle Engine.*