

ABSTRAK

Muhammad Rizaldi: Implementasi Project Based Learning (PjBL) Dalam Pengembangan Media Pembelajaran Pemeriksaan dan Perbaikan Sistem Kopling Pada Kelas XI Menggunakan Google Sites di SMK N 1 Percut Sei Tuan. Skripsi, Fakultas Teknik, Universitas Negeri Medan, 2025.

Dalam mata pelajaran Konsentrasi Keahlian Otomotif (KKO), peserta didik mengalami sejumlah hambatan, antara lain motivasi belajar yang rendah, pemahaman materi yang kurang optimal, serta pencapaian hasil belajar yang belum sesuai harapan. Hal ini disebabkan oleh penggunaan metode pembelajaran tradisional yang masih berfokus pada peran pendidik, serta keterbatasan media pembelajaran yang digunakan, seperti hanya mengandalkan papan tulis dan proyektor LCD. Guna mengatasi permasalahan tersebut, penelitian ini bertujuan untuk merancang dan mengembangkan media pembelajaran interaktif berbasis Google Sites dengan menerapkan pendekatan Project Based Learning (PjBL) yang diharapkan layak dan efektif digunakan. Kegiatan penelitian dilakukan di SMKN 1 Percut Sei Tuan dengan melibatkan siswa kelas XI TKRO 1 sebagai subjek penelitian. Penelitian ini menggunakan metode Research and Development (R&D) dengan pendekatan model pengembangan ADDIE, yang terdiri dari lima tahap, yaitu Analisis, Desain, Pengembangan, Implementasi, dan Evaluasi. Berdasarkan hasil penelitian, media pembelajaran yang dikembangkan dinyatakan memenuhi standar kelayakan. Hasil penilaian yang dilakukan oleh ahli media, ahli desain pembelajaran, dan ahli materi menunjukkan skor rata-rata masing-masing sebesar 0,89; 0,98; dan 0,98, yang semuanya masuk dalam kategori “valid”. Sementara itu, uji coba perseorangan menghasilkan rata-rata skor 59,66; uji coba kelompok kecil sebesar 59,44; dan uji coba kelompok besar mencapai 59,66 — seluruh hasil tersebut juga termasuk dalam kategori “valid”. Secara keseluruhan, rata-rata nilai kelayakan yang diperoleh adalah 30,21. Dari sisi efektivitas, terjadi peningkatan yang signifikan pada hasil belajar peserta didik, di mana nilai rata-rata prates sebesar 39,22 meningkat menjadi 88,99 pada pascates, dengan selisih kenaikan sebesar 49,77. Nilai N-Gain yang diperoleh sebesar 0,82 termasuk dalam kategori peningkatan tinggi, sedangkan tingkat efektivitas mencapai 82,29%, yang tergolong dalam kategori “efektif”. Berdasarkan hasil temuan, media pembelajaran interaktif berbasis Google Sites dengan pendekatan Project Based Learning (PjBL) dinyatakan sangat layak dan efektif dalam meningkatkan capaian hasil belajar peserta didik pada mata pelajaran Konsentrasi Keahlian Otomotif (KKO) di kelas XI TKRO SMKN 1 Percut Sei Tuan.

Kata kunci: Media Pembelajaran Interaktif, Laman Web, Project Based Learning (PjBL), Mata Pelajaran Teknik Kendaraan Ringan (TKR), SMKN 1 Percut Sei Tuan.

ABSTRACT

Muhammad Rizaldi: The Implementation of Project Based Learning (PjBL) in the Development of Learning Media for Clutch System Inspection and Repair in Grade XI Using Google Sites at SMK N 1 Percut Sei Tuan. Thesis, Faculty of Engineering, State University of Medan, 2025.

In the subject of Automotive Expertise Concentration (KKO), students face several challenges, including low learning motivation, limited understanding of the material, and learning outcomes that fall short of expectations. These issues are attributed to the continued use of traditional teacher-centered instructional methods and the limited learning media employed, such as relying solely on whiteboards and LCD projectors. To address these issues, this study aims to design and develop interactive web-based learning media by applying the Project Based Learning (PjBL) approach, which is expected to be both feasible and effective. The research was conducted at SMKN 1 Percut Sei Tuan, involving Grade XI TKRO 1 students as the research subjects. This study employed the Research and Development (R&D) method using the ADDIE development model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. Based on the research findings, the developed learning media was declared to meet the feasibility standards. The assessments conducted by the media expert, instructional design expert, and subject matter expert resulted in average scores of 0.89, 0.98, and 0.98, respectively — all of which fall into the "valid" category. Meanwhile, the individual trial yielded an average score of 59.66; the small group trial scored 59.44; and the large group trial reached 59.66 — all of which are also categorized as "valid." Overall, the average feasibility score obtained was 30.21. In terms of effectiveness, there was a significant improvement in students' learning outcomes, with the average pre-test score increasing from 39.22 to 88.99 in the post-test, resulting in a gain of 49.77 points. The N-Gain score of 0.82 falls into the "high" improvement category, while the effectiveness rate reached 82.29%, which is classified as "effective." Based on the findings, the interactive web-based learning media using the Project Based Learning (PjBL) approach is considered highly feasible and effective in improving student learning outcomes in the Automotive Expertise Concentration (KKO) subject for Grade XI TKRO at SMKN 1 Percut Sei Tuan.

Keywords: Interactive Learning Media, Google Sites, Project Based Learning (PjBL), Light Vehicle Engineering Subject (TKR), SMKN 1 Percut Sei Tuan.