

ABSTRAK

Habib Alwi: Optimalisasi Hasil Belajar Siswa Kelas XI TKRO SMKS Musda Perbaungan Melalui Pengembangan Video Interaktif Canva AI pada Materi Sistem Suspensi. Skripsi. Fakultas Teknik, Universitas Negeri Medan. 2025.

Dalam pembelajaran Konsentrasi Keahlian Otomotif (KKO), siswa kerap mengalami kesulitan dalam memahami konsep sistem suspensi kendaraan, yang berdampak pada rendahnya hasil belajar dan motivasi belajar yang kurang optimal. Hal ini diperparah oleh pendekatan pembelajaran yang masih bersifat satu arah serta keterbatasan sarana ajar yang digunakan di kelas. Menanggapi permasalahan ini, penelitian ini bertujuan mengembangkan media pembelajaran interaktif berbasis Canva AI yang dirancang dengan pendekatan *Problem Based Learning* (PBL), sehingga siswa dapat belajar melalui pemecahan masalah nyata yang relevan dengan dunia otomotif. Penelitian ini dilakukan di SMKS Musda Perbaungan dengan melibatkan siswa kelas XI TKRO 1 sebagai subjek. Metode yang digunakan adalah *Research and Development* (R&D), mengacu pada model ADDIE yang mencakup lima tahap: analisis, desain, pengembangan, implementasi, dan evaluasi. Hasil pengembangan media dinilai oleh para ahli dan menunjukkan tingkat kelayakan yang sangat baik, dengan rata-rata skor dari ahli media sebesar 0,95, ahli desain pembelajaran sebesar 0,95, dan ahli materi sebesar 0,96 semuanya termasuk dalam kategori "valid". Pengujian dilakukan melalui tiga tahap: uji coba individu dengan skor rata-rata 68,33, uji coba kelompok kecil 67,78, dan uji coba kelompok besar 67,63 seluruhnya menunjukkan bahwa media termasuk dalam kategori layak. Secara keseluruhan, skor kelayakan rata-rata adalah 34,43. Dari segi efektivitas, terdapat peningkatan signifikan dalam hasil belajar siswa, dari rata-rata Pretest 26,96 menjadi 92,27 pada Posttest. Nilai N-Gain sebesar 0,89 tergolong dalam kategori peningkatan tinggi, dan efektivitas pembelajaran mencapai 89,21%, yang menunjukkan bahwa media ini sangat efektif. Berdasarkan hasil penelitian, media pembelajaran interaktif berbasis Canva AI dengan pendekatan PBL terbukti valid dan efektif dalam meningkatkan pemahaman dan hasil belajar siswa pada materi sistem suspensi.

Kata kunci: *Problem Based Learning*, Sistem Suspensi, Media Interaktif.

ABSTRACT

Habib Alwi: *Optimizing the Learning Outcomes Students of Class XI TKRO of the SMKS Musda Perbaungan Through the Development of Interactive Canva AI Videos on Suspension System Material*. Thesis. Faculty of Engineering, State University of Medan. 2025.

In the Automotive Expertise Program (KKO), students often face difficulties in understanding the concept of vehicle suspension systems, which leads to low academic performance and lack of motivation. This condition is worsened by the use of one-way teaching methods and limited instructional media available in the classroom. To address these issues, this study aims to develop interactive learning media based on Canva AI, designed with a Problem Based Learning (PBL) approach, enabling students to learn through real-world problem-solving relevant to the automotive field. The study was conducted at SMKS Musda Perbaungan, involving grade XI TKRO 1 students as the research subjects. The method used was Research and Development (R&D), referring to the ADDIE development model which includes five stages: analysis, design, development, implementation, and evaluation. The developed media was validated by experts, showing excellent feasibility with average scores of 0.95 from media experts, 0.95 from instructional design experts, and 0.96 from subject matter experts all categorized as "valid." The trials were carried out in three phases: individual trials with an average score of 68.33, small group trials with 67.78, and large group trials with 67.63, all of which indicated that the media was feasible. The overall average feasibility score was 34.43. In terms of effectiveness, there was a significant improvement in student learning outcomes, with the average pre-test score rising from 26.96 to 92.27 in the post-test. The N-Gain score of 0.89 is considered high, and the learning effectiveness reached 89.21%, indicating that the media is highly effective. Based on the results, interactive learning media based on Canva AI using the PBL approach is proven to be valid and effective in improving students' understanding and learning outcomes on the topic of suspension systems.

Keywords: Problem Based Learning, Suspension System, Interactive Media.

