ABSTRAK

Fikri Ramadhana: Pengembangan Media Pembelajaran Multimedia Interaktif Berbasis Aplikasi Sistem Android pada Mata Pelajaran Pemeliharaan Chasis Kendaraan Ringan Materi Sistem Rem Kelas XI TKRO SMKS Setia Budi Binjai. Skripsi Fakultas Teknik Universitas Negeri Medan. 2025.

Siswa kelas XI TKRO pada mata pelajaran Pemeliharaan Chassis Kendaraan Ringan materi Sistem Rem menghadapi masalah seperti kurang fokus, motivasi rendah, dan hasil belajar yang belum maksimal, akibat metode pembelajaran konvensional dan penggunaan PPT terbatas, serta penggunaan smartphone siswa yang belum dimanfaatkan optimal dalam proses pembelajaran.Selain itu, media pembelajaran multimedia interaktif berbasis aplikasi Android belum tersedia. Penelitian ini bertujuan mengembangan media pembelajaran multimedia interaktif berbasis aplikasi sistem android yang layak dan efektif. Penelitian ini dilakukan di SMKS Setia Budi Binjai dengan melibatkan siswa kelas XI TKRO sebagai subjek penelitian. Penelitian ini menggunakan metode penelitian *reseach and development* (R&D) dengan model pengembangan ADDIE yang terdiri dari 5 tahapan yaitu analisis,desain,pengembangan,implementasi dan evaluasi.

Hasil penelitian menunjukan bahwa media pembelajaran multimedia interaktif yang dikembangkan sangat layak digunakan. Hasil penelitian ahli media diperoleh 95,71% (sangat layak) ,oleh ahli desain 94% (sangat layak), dan oleh ahli materi 92% (sangat layak). Uji coba siswa one to one 96,3% (sangat praktis) , uji coba kelompok kecil 96,3% (sangat praktis) dan uji coba kelompok besar 97,5% (sangat praktis). Uji efektivitas media pembelajaran multimedia interaktif pada materi sistem rem dapat diketahui dengan membandingkan hasil belajar siswa. Sampel penelitian ini adalah 40 siswa dan nilai rata rata hasil belajar siswa meningkat dari 55,925 pada pretest menjadi 93,25 pada posttest,dengan peningkatan sebesar 37,325 . Nilai N-Gain sebesar 0,84 menunjukan kategori tinggi dan efektivitas mencapai 84,68 (Efektif). Berdasarkan hasil penelitian ini dinyatakan bahwa media pembelajaran multimedia interaktif berbasis aplikasi sistem android ini dinyatakan sangat layak dan efektif untuk meningkatkan hasil belajar siswa pada mata pelajaran PCKR di kelas XI TKRO SMKS Setia Budi Binjai.

Kata Kunci : Media pembelajaran, Interaktif, Multimedia, Aplikasi, Android

ABSTRACT

Fikri Ramadhana: Development of Interactive Multimedia Learning Media Based on Android System Applications in the Subject of Light Vehicle Chassis Maintenance, Brake System Material, Class XI TKRO, SMKS Setia Budi Binjai. Thesis, Faculty of Engineering, State University of Medan. 2025.

Students of classed XI TKRO in the subject of Light Vehicle Chassis Maintenance with Brake System material face problems such as lack of focus, low motivation, and less than optimal learning outcomes, due to conventional learning methods and limited use of PPT, as well as the use of students' smartphones that have not been optimally utilized in the learning process. In addition, interactive multimedia learning media based on Android applications are not yet available. This study aims to develop interactive multimedia learning media based on Android system applications that are feasible and effective. This research was conducted at SMKS Setia Budi Binjai by involving students of class XI TKRO as research subjects. This study uses a research and development (R&D) research method with the ADDIE development model consisting of 5 stages, namely design, analysis, development, implementation and evaluation.

The results of the study showed that the interactive multimedia learning media developed was very feasible to use. The results of the media expert study obtained 95.71% (very feasible), by design experts 94% (very feasible), and by material experts 92% (very feasible). One to one student trials 96.3% (very practical), small group trials 96.3% (very practical) and large group trials 97.5% (very practical). The effectiveness test of interactive multimedia learning media on brake system material can be known by comparing student learning outcomes. The sample of this study was 40 students and the average value of student learning outcomes increased from 55.925 in the pretest to 93.25 in the posttest, with an increase of 37.325. The N-Gain value of 0.84 indicates a high category and effectiveness reaches 84.68 (Effective). Based on the results of this study, it is stated that the interactive multimedia learning media based on the Android system application is stated to be very suitable and effective for improving student learning outcomes in the PCKR subject in class XI TKRO SMKS Setia Budi Binjai.

Keywords: Learning media, Interactive, Multimedia, Applications, Android