

ABSTRACT

Widya Safitri. NIM 5192151002. Pengembangan Media Pembelajaran Berbasis *Android* pada Mata Pelajaran Dasar-Dasar Teknik Jaringan Komputer dan Telekomunikasi di Kelas X TJKT SMKS IT Marinah Al-Hidayah. Skripsi. Fakultas Teknik, Universitas Negeri Medan, 2026.

This study aimed to: (1) develop an Android-based learning media for the Basic Computer Network and Telecommunications Engineering (DDTJKT) subject for Grade X TJKT students at SMKS IT Marinah Al-Hidayah; (2) determine the feasibility of the developed learning media based on evaluations by media experts, subject matter experts, and user acceptability; and (3) determine the effectiveness of the learning media in improving students' learning outcomes. This research employed the Research and Development (R&D) method using the ADDIE development model, which consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. The product developed was an Android-based learning application created using Android Studio, featuring learning materials, instructional videos, interactive quizzes, and evaluation activities. The research subjects consisted of 25 Grade X TJKT students at SMKS IT Marinah Al-Hidayah. Data were collected through observations, interviews, questionnaires, and learning achievement tests in the form of pretests and posttests. Descriptive analysis was used to determine the feasibility of the learning media, while its effectiveness was analyzed using the N-Gain test. The results showed that the Android-based learning media achieved an average score of 4.11 from media experts, categorized as Highly Feasible, an average score of 4.80 from subject matter experts, categorized as Highly Feasible, and an average user acceptability score of 4.69, categorized as Very High Acceptability. Furthermore, the effectiveness test indicated a significant improvement in students' learning outcomes, as reflected by the increase in the average pretest score from 59.80 to an average posttest score of 91.40. The N-Gain analysis yielded an average score of 0.799 (or 79.86%), which falls into the high category. Therefore, the Android-based learning media was proven to be both feasible and effective as a learning medium for the Basic Computer Network and Telecommunications Engineering subject for Grade X TJKT students at SMKS IT Marinah Al-Hidayah.

Keywords: *Android-based learning media, Android Studio, ADDIE, Basic Computer Network and Telecommunications Engineering, learning outcomes.*

ABSTRAK

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Penelitian ini bertujuan untuk: (1) mengembangkan media pembelajaran berbasis Android pada mata pelajaran Dasar-Dasar Teknik Jaringan Komputer dan Telekomunikasi (DDTJKT) di kelas X TJKT SMKS IT Marinah Al-Hidayah; (2) mengetahui tingkat kelayakan media berdasarkan penilaian ahli media, ahli materi, dan akseptabilitas pengguna; serta (3) mengetahui efektivitas media pembelajaran terhadap hasil belajar peserta didik. Penelitian ini menggunakan metode Research and Development (R&D) dengan model pengembangan ADDIE yang meliputi tahap Analysis, Design, Development, Implementation, dan Evaluation. Produk yang dikembangkan berupa media pembelajaran berbasis Android menggunakan Android Studio yang memuat materi pembelajaran, video, kuis interaktif, dan evaluasi. Subjek penelitian berjumlah 25 peserta didik kelas X TJKT SMKS IT Marinah Al-Hidayah. Teknik pengumpulan data dilakukan melalui observasi, wawancara, angket, dan tes hasil belajar berupa pretest dan posttest. Analisis data dilakukan secara deskriptif untuk mengetahui tingkat kelayakan media, sedangkan efektivitas media dianalisis menggunakan uji N-Gain. Hasil penelitian menunjukkan bahwa media pembelajaran berbasis Android yang dikembangkan memperoleh nilai rata-rata validasi ahli media sebesar 4,11 dengan kategori Sangat Layak, validasi ahli materi sebesar 4,80 dengan kategori Sangat Layak, serta hasil akseptabilitas pengguna sebesar 4,69 dengan kategori Akseptansi Sangat Tinggi. Hasil uji efektivitas menunjukkan adanya peningkatan hasil belajar peserta didik, yang ditunjukkan oleh peningkatan nilai rata-rata pretest dari 59,80 menjadi 91,40 pada posttest. Berdasarkan hasil uji N-Gain, diperoleh nilai rata-rata sebesar 0,799 atau 79,86% dengan kategori tinggi, sehingga media pembelajaran berbasis Android dinyatakan efektif dalam meningkatkan hasil belajar peserta didik pada mata pelajaran Dasar-Dasar Teknik Jaringan Komputer dan Telekomunikasi di kelas X TJKT SMKS IT Marinah Al-Hidayah.

Kata Kunci: media pembelajaran, Android, Android Studio, ADDIE, DDTJKT, hasil belajar.