

ABSTRAK

Annisa Rizki Agusti, NIM 5213151002 (2025). Pengembangan Media Pembelajaran Berbasis Android Dengan Pendekatan *Mobile Seamless Learning* Pada Mata Pelajaran Teknik Komputer dan Jaringan di Kelas XI SMK Negeri 1 Percut Sei Tuan.

Penelitian ini bertujuan mengembangkan media pembelajaran berbasis Android untuk meningkatkan hasil belajar siswa pada materi Keamanan Jaringan kelas XI di SMK Negeri 1 Percut Sei Tuan. Latar belakang penelitian berangkat dari rendahnya keterlibatan siswa dalam pembelajaran konvensional serta keterbatasan media yang mampu mendukung pembelajaran mandiri dan interaktif. Produk dikembangkan untuk memberikan pengalaman belajar yang lebih fleksibel, visual, dan efektif melalui pendekatan *Mobile Seamless Learning*. Penelitian ini menggunakan metode *Research and Development* dengan model MANTAP yang dipadukan dengan pendekatan teknis *Rapid Application Development (RAD)*. Proses validasi melibatkan dua ahli materi dan dua ahli media, sedangkan uji akseptansi melibatkan 33 pengguna. Efektivitas media diuji melalui desain kuasi-eksperimen *pretest-posttest control group* dengan jumlah sampel 64 siswa. Instrumen tes terdiri atas 20 soal valid dan reliabel. Analisis data dilakukan secara deskriptif dan inferensial melalui uji normalitas, uji homogenitas, dan *Independent Sample T-Test*. Hasil penelitian menunjukkan bahwa media pembelajaran yang dikembangkan berada dalam kategori sangat layak, dengan skor validasi ahli materi 4.5 dan validasi ahli media 4.6. Uji akseptansi pengguna menghasilkan skor 4.6, menunjukkan penerimaan yang sangat baik. Pada uji efektivitas, kelas eksperimen mengalami peningkatan nilai dari total pre-test 1565 menjadi 2680, dengan rata-rata post-test 83.75, lebih tinggi dibanding kelas kontrol yaitu 79.21. Uji t menunjukkan nilai signifikansi $0.034 < 0.05$, sehingga pembelajaran menggunakan media Android dinyatakan lebih efektif dibanding metode konvensional.

Kata kunci: *Android, Kodular, Media Pembelajaran, Mobile Seamless Learning, RAD.*



ABSTRACT

Annisa Rizki Agusti, NIM 5213151002 (2025). *Development of Android-Based Learning Media Using a Mobile Seamless Learning Approach in Computer and Network Engineering Subjects in Grade XI at SMK Negeri 1 Percut Sei Tuan.*

This study aims to develop an Android-based learning media to improve students' learning outcomes in the Network Security subject for Grade XI at SMK Negeri 1 Percut Sei Tuan. The development was motivated by the limited instructional media available to support interactive and independent learning, as well as low student engagement during conventional teaching. The product was designed to offer a flexible, visual, and seamless learning experience aligned with the principles of Mobile Seamless Learning. This research employed the Research and Development (R&D) approach using the MANTAP model, combined with the Rapid Application Development (RAD) methodology for the technical development process. Product validation involved two material experts and two media experts, while the user acceptance test involved 33 respondents. The effectiveness of the media was examined through a quasi-experimental design using a pretest-posttest control group with a total of 64 students. The test instrument consisted of 20 validated and reliable multiple-choice items. Data were analyzed descriptively and inferentially using normality testing, homogeneity testing, and the Independent Sample t-Test. The findings indicate that the developed media is highly feasible, with an average score of 4.5 from material experts and 4.6 from media experts. The user acceptance test also resulted in an average score of 4.6, indicating very positive responses. In terms of effectiveness, the experimental class showed a substantial improvement, with total scores increasing from 1565 (pre-test) to 2680 (post-test), and a mean post-test score of 83.75, compared to 79.21 in the control class. The Independent Sample t-Test produced a significance value of 0.034 (< 0.05), confirming that the Android-based learning media significantly enhances students' learning outcomes compared to conventional learning methods.

Keywords: *Android, Kodular, Learning Media, Mobile Seamless Learning, RAD.*

