

Devi Irawati. 2025. *Pengembangan Media Pembelajaran Animasi 3D Berbasis Android Pada Materi Pengkabelan Fiber Optik Kelas X SMK Darul Mustofa*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Trunojoyo Madura. Pembimbing: Evy Maya Stefany, S.Pd., M.Pd.

ABSTRAK

Mata pelajaran Dasar-Dasar Teknik Jaringan Komputer dan Telekomunikasi memiliki karakteristik yang kompleks dan teknis, sehingga sering kali membuat siswa mengalami kesulitan dalam memahami materi. Kesulitan tersebut mencakup pemahaman konsep jaringan, penggunaan istilah teknis, konfigurasi perangkat, hingga penerapan perhitungan dalam aspek teknis jaringan. Hal ini disebabkan oleh materi yang menuntut kemampuan berpikir logis, analitis, serta pemahaman teknologi. Oleh karena itu, diperlukan inovasi pengembangan dalam pembelajaran. Penelitian ini bertujuan mengembangkan media pembelajaran animasi 3D berbasis android pada materi Pengkabelan Fiber Optik kelas X SMK Darul Mustofa. Penelitian ini menggunakan model penelitian *ADDIE* terdiri dari tahapan *Analysis*, *Design*, *Development*, *Implementation*, dan *Evaluation*. Instrumen pengambilan data menggunakan lembar angket 2 validator ahli materi, 2 validator ahli media, dan angket respon siswa. Penelitian ini menghasilkan media pembelajaran animasi 3D berbasis android memperoleh persentase validasi ahli materi 91% dan validasi ahli media 86% dengan kriteria sangat layak. Hasil uji respon siswa memperoleh persentase pada uji perorangan 97%, uji kelompok kecil 93%, dan uji kelompok besar 95% dengan kriteria sangat praktis. Berdasarkan hasil penelitian pengembangan media pembelajaran animasi 3D berbasis android dinyatakan sangat layak digunakan pada materi Pengkabelan Fiber Optik kelas X SMK Darul Mustofa.

Kata Kunci: *ADDIE*, *Android*, *Pengkabelan Fiber Optik*, *Media Pembelajaran*, *Animasi 3D*.

Devi Irawati. 2025. *Development of Android-Based 3D Animation Learning Media on Fiber Optic Cabling Material for Class X of SMK Darul Mustofa*. Thesis, Informatics Education Study Program, Faculty of Teacher Training and Education, Trunojoyo University Madura. Supervisor: Evy Maya Stefany, S.Pd., M.Pd.

ABSTRACT

The subject of Basics of Computer Network Engineering and Telecommunications has complex and technical characteristics, so that it often makes students have difficulty in understanding the material. These difficulties include understanding network concepts, using technical terms, device configuration, to applying calculations in technical aspects of the network. This is due to the material that requires logical, analytical thinking skills, and understanding of technology. Therefore, innovation in learning development is needed. This study aims to develop 3D animation learning media based on Android on the Fiber Optic Cabling material for class X of SMK Darul Mustofa. This study uses the ADDIE research model consisting of the stages of Analysis, Design, Development, Implementation, and Evaluation. The data collection instrument uses a questionnaire sheet of 2 material expert validators, 2 media expert validators, and a student response questionnaire. This study produces 3D animation learning media based on Android that obtains a percentage of material expert validation of 91% and media expert validation of 86% with very feasible criteria. The results of the student response test obtained a percentage of 97% in the individual test, 93% in the small group test, and 95% in the large group test with very practical criteria. Based on the results of the research on the development of 3D animation learning media based on Android, it was stated that it was very suitable for use in the Fiber Optic Cabling material for class X of SMK Darul Mustofa.

Keywords: *ADDIE, Android, Fiber Optic Cabling, Learning Media, 3D Animation.*