

ABSTRAK

Syaptudin, NIM :5202111004, “Pengembangan Media Pembelajaran Interaktif Berbasis *Augmented Reality* Dengan Aplikasi Assmblr Studio Pada Mata Pelajaran Konstruksi Jalan dan Jembatan Di Kelas XI SMKN 1 Percut Sei Tuan”. Skripsi. Jurusan Pendidikan Teknik Bangunan. Program Studi Pendidikan Teknik Bangunan. Fakultas Teknik – Universitas Negeri Medan. 2025.

Di era pembelajaran modern yang menuntut fleksibilitas, siswa perlu mengembangkan kemampuan belajar mandiri mengingat waktu tatap muka di kelas yang terbatas. Untuk mendukung kemandirian belajar tersebut, kehadiran media pembelajaran yang inovatif menjadi suatu kebutuhan yang tidak terelakkan. Penelitian ini bertujuan (1) Mengetahui langkah-langkah pengembangan media pembelajaran berbasis *Augmented Reality* untuk mata pelajaran konstruksi jalan dan jembatan yang diterapkan di kelas XI 1 DPIB SMK N 1 Percut Sei Tuan. (2) Mengukur efektivitas dan kelayakan media pembelajaran berbasis *Augmented Reality* ini dalam mendukung proses belajar mandiri siswa kelas XI 1 DPIB SMK N 1 Percut Sei Tuan. Penelitian dilakukan di SMK Negeri 1 Percut Sei Tuan dengan fokus pada siswa kelas XI 1 jurusan Konstruksi Jalan dan Jembatan. Metode penelitian yang digunakan adalah *Research and Development* (R&D) dengan model ADDIE: *analyze* (analisis), *design* (perancangan), *development* (pengembangan), *implementation* (implementasi), dan *evaluation* (evaluasi). Instrumen yang digunakan adalah angket untuk mengukur validitas media dari perspektif ahli media, ahli materi, dan pengguna (siswa/siswi). Data yang diperoleh dianalisis menggunakan statistik deskriptif. Hasil penelitian menunjukkan bahwa Media Pembelajaran *Augmented Reality* yang dikembangkan mencakup materi tentang bagian-bagian jalan dan bahan perkerasan jalan. Berdasarkan hasil pengujian, kelayakan media oleh ahli materi memperoleh skor 4,2 (kategori "layak"), sedangkan hasil penilaian oleh ahli media menghasilkan skor 4,7 (kategori "sangat layak"). Hasil uji coba produk oleh pengguna menunjukkan skor 4,32 (kategori "sangat layak"). Media Pembelajaran berbasis *Augmented Reality* ini "layak" digunakan sebagai media belajar bagi siswa kelas XI 1 DPIB di SMK N 1 Percut Sei Tuan.

Kata Kunci : Pengembangan Media Pembelajaran, *Augmented reality*, Konstruksi jalan dan jembatan.

ABSTRACT

Syaptudin, NIM: 5202111004, "Development of Interactive Learning Media Based on Augmented Reality Using Assmblr Studio Application on Road and Bridge Construction Subjects in Grade XI SMKN 1 Percut Sei Tuan". Thesis. Department of Building Engineering Education. Study Program of Building Engineering Education. Faculty of Engineering – State University of Medan. 2025.

In an era of modern learning that demands flexibility, students need to develop independent learning skills considering the limited face-to-face time in class. To support independent learning, the presence of innovative learning media has become an unavoidable necessity. This study aims: (1) To identify the steps of developing Augmented Reality-based learning media for the subject of road and bridge construction applied in class XI 1 DPIB SMK N 1 Percut Sei Tuan. (2) To measure the effectiveness and feasibility of this Augmented Reality-based learning media in supporting the independent learning process of students in class XI 1 DPIB SMK N 1 Percut Sei Tuan. The research was conducted at SMK Negeri 1 Percut Sei Tuan, focusing on grade XI 1 students majoring in Road and Bridge Construction. The research method used was Research and Development (R&D) with the ADDIE model: analyze, design, development, implementation, and evaluation stages. The instruments used were questionnaires to measure the media's validity from the perspectives of media experts, material experts, and users (students). The data obtained were analyzed using descriptive statistics. The results showed that the Augmented Reality Learning Media developed includes material about road parts and pavement materials. Based on the test results, the feasibility of the media by material experts scored 4.2 (categorized as "feasible"), while the media experts' evaluation scored 4.7 (categorized as "very feasible"). Product trials by users showed a score of 4.32 (categorized as "very feasible"). Thus, the Augmented Reality-based Learning Media is considered "feasible" to be used as a learning medium for class XI 1 DPIB students at SMK N 1 Percut Sei Tuan.

Keywords: Development of Learning Media, Augmented Reality, Road and Bridge Construction.