DESAIN DAN IMPLEMENTASI APLIKASI *AUGMENTED REALITY* (AR) BERBASIS *SMARTPHONE* PADA PEMBELAJARAN TRANSMISI MANUAL KENDARAAN BERMOTOR

TESIS

Diajukan untuk Memenuhi Sebagian dari Syarat untuk Mendapatkan Gelar Magister Pendidikan Teknologi dan Kejuruan

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SEKOLAH PASCASARJANA
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ABSTRAK

Penggunaan media pembelajaran *augmented reality* berbasis *smartphone* dinilai perlu untuk meningkatkan pemahaman siswa pada mata pelajaran produktif Sekolah Menengah Kejuruan (SMK). Penelitian ini bertujuan untuk merancang dan mengimplementasikan media pembelajaran *augmented reality* (AR) berbasis *smartphone* untuk meningkatkan pemahaman siswa pada materi memelihara transmisi manual, serta melihat bagaimana respon siswa dan guru terhadap media pembelajaran *augmented reality* pada mata pelajaran transmisi manual. Penelitian ini merupakan penelitian ekperimen dengan desain ADDIE, data bersumber dari siswa dan guru yang ada di SMK Negeri 1 Bangkinang dengan melakukan uji coba langsung, instrumen pengumpulan data dengan tes dan wawancara, data hasil penelitian menunjukkan media pembelajaran *augmented reality* pada mata pelajaran transmisi manual yang dikembangkan secara signifikan dapat meningkatkan pemahaman siswa pada mata pelajaran tersebut, sebagian besar siswa dan guru menunjukkan sikap positif terhadap pembelajaran menggunakan media *augmented reality* berbasis *smartphone*. Berdasarkan temuan penelitian, maka media pembelajaran *augmented reality* berbasis *smartphone* dapat dijadikan alternatif media pembelajaran yang dapat diterapkan di sekolah menengah kejuruan untuk meningkatkan kualitas pendidikan.

Kata Kunci: Media pembelajaran, *augmented reality*, pemahaman, transmisi manual

ABSTRACT

The use of smartphone-based augmented reality learning media is deemed necessary to increase students understanding of productive subjects in Vocational High Schools (SMK). This research aims to design and implement smartphone-based augmented reality (AR) learning media to improve students understanding of manual transmission maintenance material, and want to know how students and teachers respond to augmented reality learning media on manual transmission subjects. This research is an experimental research was used ADDIE method, data's sourced from students and teachers in Vocational High School (SMK) 1 of Bangkinang by conducting direct trials. The data's was collected by examinations and interviews. The results of this research indicate that augmented reality learning media on manual transmission subjects developed can be improve students understanding of these subjects significantly. Then, most of students and teachers also showed a positive attitude towards learning using the smartphone-based augmented reality media. Based on the result of this research, smartphone-based augmented reality learning media can be used as an alternative to learning media that can be applied to Vocational High Schools (SMK) to improve the quality of education.

Keywords: Learning media, augmented reality, understanding, manual transmission

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