

ABSTRAK

PENGEMBANGAN MEDIA PEMBELAJARAN BERBASIS *AUGMENTED REALITY* PADA MATERI SISTEM KOMPUTER DALAM MENINGKATKAN HASIL BELAJAR SISWA SMK

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Berdasarkan hasil observasi awal dan wawancara dengan guru, pemahaman siswa SMK terhadap materi Sistem Komputer, khususnya konsep *input–proses–output*, masih rendah berdasarkan hasil observasi dan wawancara dengan guru yang menunjukkan kesulitan memahami konsep abstrak tanpa visualisasi yang memadai. Media pembelajaran yang digunakan belum mampu menampilkan representasi interaktif sehingga pembelajaran kurang optimal. Penelitian ini bertujuan mengembangkan media pembelajaran berbasis *Augmented Reality* serta mengetahui validitas, kepraktisan, dan efektivitasnya dalam meningkatkan hasil belajar siswa. Metode yang digunakan adalah *Research and Development* dengan model 4D meliputi tahap *define, design, develop, dan disseminate*. Data dikumpulkan melalui validasi ahli, angket kepraktisan, dan tes *pretest–posttest*, kemudian dianalisis menggunakan *Aiken's V*, persentase kepraktisan, *N-Gain*, dan uji *Independent Samples t-test*. Hasil penelitian menunjukkan media sangat valid (0,91667), sangat praktis dari pendidik (92,50%) dan peserta didik (92,83%), nilai rata-rata *pretest* kelas eksperimen sebesar 53,90 meningkat menjadi 88,12 pada *posttest*, serta efektif dengan *N-Gain* kelas eksperimen 0,7533 lebih tinggi dibanding kelas kontrol 0,2343, uji *t* menunjukkan signifikansi 0,000 ($p < 0,05$). Media yang dikembangkan dinyatakan layak, praktis, efektif dalam meningkatkan hasil belajar.

Kata kunci: *Augmented Reality*, Media Pembelajaran, Hasil Belajar, Sistem Komputer.

ABSTRACT

DEVELOPMENT OF AUGMENTED REALITY-BASED LEARNING MEDIA FOR COMPUTER SYSTEMS TO IMPROVE VOCATIONAL HIGH SCHOOL STUDENT LEARNING OUTCOMES

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Based on the results of initial observations and interviews with teachers, vocational high school students' understanding of Computer Systems material, especially the concept of input-process-output, is still low based on the results of observations and interviews with teachers who showed difficulty in understanding abstract concepts without adequate visualization. The learning media used have not been able to display interactive representations so that learning is less than optimal. This study aims to develop Augmented Reality-based learning media and determine its validity, practicality, and effectiveness in improving student learning outcomes. The method used is Research and Development with a 4D model including the define, design, develop, and disseminate stages. Data were collected through expert validation, practicality questionnaires, and pretest-posttest tests, then analyzed using Aiken's V, practicality percentage, N-Gain, and Independent Samples t-test. The results showed that the media was highly valid (0.91667), highly practical for both educators (92.50%) and students (92.83%), with an average pretest score of 53.90 in the experimental class, increasing to 88.12 in the posttest. It was also effective, with an N-Gain of 0.7533 for the experimental class, higher than 0.2343 for the control class. The t-test showed a significance of 0.000 ($p < 0.05$). The developed media was deemed feasible, practical, and effective in improving learning outcomes.

Keywords: *Augmented Reality, Learning Media, Learning Outcome, Computer System.*