PENGEMBANGAN MEDIA *AUGMENTED REALITY* 3D BERBASIS VIDEO ANIMASI UNTUK MENINGKATKAN PEMAHAMAN KONSEP SAINS SISWA KELAS IV DI SEKOLAH DASAR

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ABSTRAK

Studi ini dilatarbelakangi oleh rendahnya pemahaman konsep sains siswa di Sekolah Dasar, serta pemanfaatan media pembelajaran pada kegiatan pembelajaran yang belum optimal. Penelitian pengembangan ini memiliki empat tujuan, yaitu: (1) menghasilkan Media *augmented reality* 3D berbasis video animasi, (2) menganalisis validitas isi media *augmented reality* 3D berbasis video animasi, (3) menganalisis Kepraktisan *augmented reality* 3D berbasis video animasi dan (4) menganalisis efektivitas *augmented reality* 3D berbasis video animasi terhadap pemahaman konsep sains siswa kelas IV di Sekolah Dasar. Studi pengembangan ini menggunakan model ADDIE, yang tersusun atas lima tahapan, yaitu: (1) analisis, (2) perancangan, (3) pengembangan, (4) implementasi, dan (5) evaluasi. Studi ini mengambil subjek *augmented reality* 3D berbasis video animasi, sedangkan objek penelitian pengembangan adalah validitas isi media, isi materi, respon pengguna, dan efektivitas media. Metode pengumpulan data yaitu wawancara, observasi, dan *rating scale*. Instrumen yang dipergunakan untuk mengumpulkan data yaitu pedoman observasi, lembar *rating scale*, pedoman wawancara. Hasil penelitian menunjukan bahwa: (1) *augmented reality* 3D berbasis video animasi yang telah dihasilkan memperoleh indeks validitas sebesar 4,75 dengan kualifikasi sangat valid, (2) materi pada isi media *augmented reality* 3D berbasis video animasi yang telah dihasilkan memperoleh indeks validitas sebesar 4,27 dengan kualifikasi sangat valid, (3) tingkat pencapaian respon praktisi/guru terhadap media *augmented reality* 3D berbasis video animasi adalah sebesar 4,8 dengan kualifikasi sangat praktis, (4) tingkat pencapaian respon siswa terhadap media *augmented reality* 3D berbasis video animasi adalah sebesar 4,88 dengan kualifikasi sangat praktis, dan (5) nilai signifikansi (2-*tailed*) pada uji-t berkorelasi memperoleh skor sebesar sebesar 0,000 < 0,05, sehingga media *augmented reality* 3D berbasis video animasi efektif guna meningkatkan pemahaman konsep sains siswa kelas IV di Sekolah Dasar.

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Kata Kunci: Pengembangan, Media, Media *Augmented Reality* 3D Berbasis Video Animasi, Pemahaman Konsep Sains.

ABSTRACT

This study was motivated by the low understanding of students' science concepts in elementary schools, as well as the use of learning media in learning activities that was not yet optimal. This development research has four objectives, namely: (1) produce 3D augmented reality media based on animated videos, (2) analyze the content validity of 3D augmented reality media based on animated videos, (3) analyze the practicality of 3D augmented reality based on animated videos and (4) analyze the effectiveness of 3D augmented reality based on animated videos on the understanding of science concepts in fourth grade elementary school students. This development study uses the ADDIE model, which is composed of five stages, namely: (1) analysis, (2) design, (3) development, (4) implementation, and (5) evaluation. This study takes the subject of 3D augmented reality based on animated videos, while the object of development research is the validity of media content, material content, user response, and media effectiveness. Data collection methods are interviews, observation, and rating scale. The instruments used to collect data were observation guidelines, rating scale sheets, interview guidelines. The results of the research show that: (1) the 3D augmented reality based on animated videos that has been produced has obtained a validity index of 4.75 with very valid qualifications, (2) the material in the content of the 3D augmented reality media based on animated videos that has been produced has obtained a validity index of 4 .27 with very valid qualifications, (3) the level of achievement of practitioner/teacher responses to 3D augmented reality media based on animated videos is 4.8 with very practical qualifications, (4) the level of achievement of student responses to 3D augmented reality media based on animated videos is of 4.88 with very practical qualifications, and (5) the significance value (2-tailed) in the correlated t-test obtained a score of 0.000 < 0.05, so that 3D augmented reality media based on animated videos is effective in increasing students' understanding of science concepts class IV in elementary school.

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***Keywords**: Development, Media, 3D Augmented Reality Media Based on Animation Video, Understanding Science Concepts.*