

Ayu Fitria Dinda Rany. 2023. *Pengembangan Media Pembelajaran Materi Perakitan Komputer Berbasis Virtual Reality*. Skripsi, Program Studi Pendidikan Informatika, Fakultas Ilmu Pendidikan, Universitas Trunojoyo Madura.
Pembimbing: Laili Cahyani, S. Kom., M. Kom.

ABSTRAK

Perakitan komputer adalah salah satu materi yang diajarkan di Kelas X SMK IPIEMS Surabaya jurusan Multimedia. Peserta didik merasa kesulitan dengan kegiatan belajar mengajar pada saat pembelajaran ini, karena terbatasnya kegiatan praktik secara langsung yang berpengaruh pada tujuan pembelajaran. Sehingga, dibutuhkan media untuk mendukung atau menunjang kegiatan belajar mengajar yang optimal. Pembelajaran yang memanfaatkan media teknologi *virtual reality* yang menjadi sebuah media pendukung atau penunjang yang mampu membawa pengguna ke dalam dunia *virtual* yang *reality* (langsung). Media pembelajaran yang menggunakan teknologi ini tentu dapat mengatasi kelemahan media konvensional seperti buku, poster, dan alat peraga yang membuat siswa mudah bosan dan kurang termotivasi dalam pembelajaran. Sehingga media pembelajaran berbasis *Virtual Reality* sangatlah tepat untuk mengatasi permasalahan ini. Jenis penelitian yang digunakan dalam penelitian ini menggunakan penelitian pengembangan atau *Research and Development* (R&D). Metode yang digunakan dalam pengembangan ini adalah ADDIE. Langkah-langkah dalam pengembangan media pembelajaran dengan model ADDIE harus melalui beberapa tahap, yaitu: (1)*Analysis*, (2)*Design*, (3)*Development*, (4)*Implementation*, dan (5)*Evaluation*. Produk media pembelajaran ini sudah melakukan validasi oleh ahli media yang memperoleh nilai 94,7%, dengan kualifikasi “sangat tinggi”, dan ahli materi sebesar 94,5% dengan kualifikasi “sangat tinggi”, kemudian produk tersebut di uji cobakan melalui 3 tahap yaitu uji coba perorangan dengan hasil yang diperoleh 95,33%, dengan kualifikasi “sangat tinggi”, uji coba kelompok kecil dengan hasil 94,33%, dengan kualifikasi “sangat tinggi”, dan uji coba kelompok besar dengan hasil 84,9% dengan kualifikasi “tinggi”. Serangkaian tahapan uji coba yang telah dilakukan peneliti menunjukkan bahwa media pembelajaran materi perakitan komputer berbasis *virtual reality* yang peneliti kembangkan memiliki tingkat efektivitas, efisiensi, dan daya tarik yang sangat tinggi sehingga layak untuk digunakan dalam kegiatan belajar mengajar.

Kata Kunci: ADDIE, perakitan komputer, media pembelajaran, *virtual reality*.

Ayu Fitria Dinda Rany. 2023. *Development of Virtual Reality-Based Computer Assembling Material Learning Media*. Thesis, Informatics Education Study Program, Faculty of Education, Trunojoyo University Madura. Advisor: Laili Cahyani, S. Kom., M. Kom.

ABSTRACT

Computer assembly is one of the materials taught in Class X of SMK IPIEMS Surabaya majoring in Multimedia. Students find it difficult with teaching and learning activities during this lesson, because of the limited practical activities that directly affect the learning objectives. Thus, media is needed to support or support optimal teaching and learning activities. Learning that utilizes virtual reality technology media which becomes a supporting or supporting media that is able to bring users or users into a virtual world that is reality (directly). Learning media that use this technology can certainly overcome the weaknesses of conventional media such as books, posters and teaching aids which make students easily bored and less motivated in learning. So that learning media based on Virtual Reality is very appropriate to overcome this problem. The type of research used in this research uses research and development or Research and Development (R&D). The method used in this development is ADDIE. The steps in developing learning media with the ADDIE model must go through several stages, namely: (1) Analysis, (2) Design, (3) Development, (4) Implementation, and (5) Evaluation. This learning media product has been validated by media experts who obtained a score of 94.7%, with the qualification "very high", and material experts at 94.5% with the qualification "very high", then the product was tested through 3 stages, namely individual trial with a result obtained of 95.33%, with the qualification of "very high", small group trial with a result of 94.33%, with the qualification of "very high", and large group trial with a result of 84.9% with the qualification "tall". A series of trial stages that have been carried out by the researcher show that the virtual reality-based computer assembly material learning media that the researcher has developed has a very high level of effectiveness, efficiency, and attractiveness so that it is suitable for use in teaching and learning activities.

Keywords: *ADDIE, computer assembly, learning media, virtual reality.*

DAFTAR ISI

HALAMAN PERSETUJUAN.....	Error! Bookmark not defined.
HALAMAN PENGESAHAN.....	Error! Bookmark not defined.
HALAMAN PERNYATAAN KEASLIAN TULISAN..	Error! Bookmark not defined.
ABSTRAK	iv
<i>ABSTRACT</i>	iv
KATA PENGANTAR.....	Error! Bookmark not defined.i
DAFTAR ISI	v
DAFTAR TABEL.....	x
DAFTAR GAMBAR.....	viii
DAFTAR LAMPIRAN	ix
BAB I PENDAHULUAN	13
A. Latar Belakang	13
B. Rumusan Masalah.....	Error! Bookmark not defined.
C. Tujuan Penelitian Pengembangan	Error! Bookmark not defined.
D. Spesifikasi Produk yang Diharapkan	Error! Bookmark not defined.
E. Batasan Penelitian Pengembangan.....	Error! Bookmark not defined.
F. Pentingnya Penelitian Pengembangan	Error! Bookmark not defined.
G. Definisi Istilah.....	Error! Bookmark not defined.
BAB II KAJIAN PUSTAKA	Error! Bookmark not defined.
A. Landasan Teori	Error! Bookmark not defined.
B. Penelitian Yang Relevan	Error! Bookmark not defined.
C. Kerangka Berpikir.....	Error! Bookmark not defined.
BAB III METODE PENELITIAN PENGEMBANGAN	Error! Bookmark not defined.
A. Model Penelitian Pengembangan.....	Error! Bookmark not defined.
B. Prosedur Penelitian Pengembangan	Error! Bookmark not defined.
C. Subjek Uji Coba.....	Error! Bookmark not defined.
D. Teknik Pengumpulan Data	Error! Bookmark not defined.
E. Instrumen Penelitian Pengembangan	Error! Bookmark not defined.
F. Teknik Analisis Data	Error! Bookmark not defined.
BAB IV HASIL DAN PEMBAHASAN.....	Error! Bookmark not defined.
A. Hasil dan Analisis Data	Error! Bookmark not defined.
B. Pembahasan.....	Error! Bookmark not defined.

BAB V PENUTUP	104
A. Simpulan	104
B. Saran	105
DAFTAR PUSTAKA	Error! Bookmark not defined.

DAFTAR TABEL

Tabel 2. 1	Langkah-langkah Model ADDIE.....	Error! Bookmark not defined.
Tabel 2. 2	Macam - Macam Versi Android.....	Error! Bookmark not defined.
Tabel 3. 1	Analisis Kebutuhan Pengembangan Media	Error! Bookmark not defined.
Tabel 3. 2	Analisis Kebutuhan Implementasi Media.....	Error! Bookmark not defined.
Tabel 3. 3	Sketsa Media Pembelajaran.....	Error! Bookmark not defined.
Tabel 3. 4	Kisi-Kisi Angket Ahli Materi	Error! Bookmark not defined.
Tabel 3. 5	Kisi-Kisi Angket Ahli Media.....	Error! Bookmark not defined.
Tabel 3. 6	Kisi-Kisi Angket Uji Coba Peserta Didik.....	Error! Bookmark not defined.
Tabel 3. 7	Konversi Tingkat Pencapaian dengan Skala 5..	Error! Bookmark not defined.
Tabel 4. 2	Hasil Angket Validasi Ahli Media	Error! Bookmark not defined.
Tabel 4. 3	Revisi Ahli Media.....	Error! Bookmark not defined.
Tabel 4. 4	Hasil Angket Validasi Ahli Materi.....	Error! Bookmark not defined.
Tabel 4. 5	Hasil Angket Uji Coba Perorangan.....	Error! Bookmark not defined.
Tabel 4. 6	Hasil Angket Uji Coba Kelompok Kecil	Error! Bookmark not defined.
Tabel 4. 7	Hasil Angket Uji Coba Kelompok Besar.....	Error! Bookmark not defined.
Tabel 4. 8	Tabel Penilaian	Error! Bookmark not defined.

DAFTAR GAMBAR

Gambar 2. 1	Langkah-Langkah Metode Penelitian Pengembangan..	Error! Bookmark not defined.
Gambar 2. 2	Bentuk Motherboard	Error! Bookmark not defined.
Gambar 2. 3	CPU	Error! Bookmark not defined.
Gambar 2. 4	RAM	Error! Bookmark not defined.
Gambar 2. 5	Harddisk.....	Error! Bookmark not defined.
Gambar 2. 6	PSU.....	Error! Bookmark not defined.
Gambar 2. 7	Kerangka Berpikir	Error! Bookmark not defined.
Gambar 3. 1	Tahapan Pengembangan Model ADDIE	Error! Bookmark not defined.
Gambar 3. 2	Flowchart Media Pembelajaran	Error! Bookmark not defined.
Gambar 4. 1	Loading Aplikasi.....	Error! Bookmark not defined.
Gambar 4. 2	Menu Utama	Error! Bookmark not defined.
Gambar 4. 3	Menu Belajar Perakitan Komputer	Error! Bookmark not defined.
Gambar 4. 4	Tampilan Kompetensi Inti	Error! Bookmark not defined.
Gambar 4. 5	Tampilan Kompetensi Dasar.....	Error! Bookmark not defined.
Gambar 4. 6	Menu Pengenalan Komponen.....	Error! Bookmark not defined.
Gambar 4. 7	Menu Perakitan Komputer.....	Error! Bookmark not defined.
Gambar 4. 8	Tampilan Alat dan Bahan.....	Error! Bookmark not defined.
Gambar 4. 9	Tampilan Simulasi Perakitan Komputer	Error! Bookmark not defined.
Gambar 4. 10	Tampilan Papan Tulis	Error! Bookmark not defined.
Gambar 4. 11	Menu Profil Pengembang	Error! Bookmark not defined.
Gambar 4. 12	Menu Petunjuk Penggunaan	Error! Bookmark not defined.

DAFTAR LAMPIRAN

- Lampiran 1.** Surat Izin Penelitian dan Pengambilan Data Skripsi . **Error! Bookmark not defined.**
- Lampiran 2.** Surat Keterangan Telah Melakukan Penelitian..... **Error! Bookmark not defined.**
- Lampiran 3.** Hasil Wawancara dengan Guru Mata Pelajaran..... **Error! Bookmark not defined.**
- Lampiran 4.** Hasil Data Kuesioner kepada Siswa**Error! Bookmark not defined.**
- Lampiran 5.** Lembar Keterangan menjadi Validator Ahli Media ... **Error! Bookmark not defined.**
- Lampiran 6.** Angket Validasi Ahli Media.....**Error! Bookmark not defined.**
- Lampiran 7.** Rekapitulasi Hasil Validasi Ahli Media**Error! Bookmark not defined.**
- Lampiran 8.** Lembar Keterangan menjadi Validator Ahli Materi... **Error! Bookmark not defined.**
- Lampiran 9.** Angket Hasil Validasi Ahli Materi**Error! Bookmark not defined.**
- Lampiran 10.** Rekapitulasi Hasil Validasi Ahli Materi.....**Error! Bookmark not defined.**
- Lampiran 11.** Angket Hasil Uji Coba Perorangan.....**Error! Bookmark not defined.**
- Lampiran 12.** Rekapitulasi Hasil Angket Uji Coba Perorangan..... **Error! Bookmark not defined.**
- Lampiran 13.** Angket Hasil Uji Coba Kelompok Kecil ...**Error! Bookmark not defined.**
- Lampiran 14.** Rekapitulasi Hasil Uji Coba Kelompok Kecil **Error! Bookmark not defined.**
- Lampiran 15** Angket Hasil Uji Coba Kelompok Besar....**Error! Bookmark not defined.**
- Lampiran 16** Rekapitulasi Hasil Uji Coba Kelompok Besar **Error! Bookmark not defined.**
- Lampiran 17.** Nama Validator dan Siswa.....**Error! Bookmark not defined.**
- Lampiran 18.** Surat Uji Kelayakan.....**Error! Bookmark not defined.**
- Lampiran 19.** Dokumentasi**Error! Bookmark not defined.**
- Lampiran 20.** Biodata Peneliti.....**Error! Bookmark not defined.**

