

PENGEMBANGAN MULTIMEDIA INTERAKTIF BERBASIS *ANDROID* PADA MATERI ALAT-ALAT LABORATORIUM KIMIA SMA

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ABSTRAK

Penelitian ini bertujuan mengembangkan dan mendeskripsikan spesifikasi multimedia interaktif berbasis *android* pada materi alat-alat laboratorium kimia SMA. Jenis penelitian ini adalah penelitian dan pengembangan (R&D) mengikuti metode pengembangan multimedia Luther, yang meliputi tahap *concept*, *design*, *material collecting*, *assembly*, *testing*, dan *distribution*. Instrumen yang digunakan pada penelitian ini meliputi studi dokumentasi, pedoman wawancara, lembar penilaian validasi, dan lembar uji keterbacaan. Penelitian ini melibatkan analisis deskriptif kualitatif dan analisis modus rasional dalam analisis hasil penelitian. Spesifikasi multimedia interaktif adalah berbentuk aplikasi yang dapat di instal pada *smartphone android*, menyajikan secara lengkap mengenai nama, keterangan, fungsi, foto, dan cara penggunaan alat-alat laboratorium kimia, serta difasilitasi oleh video cara penggunaan alat laboratorium kimia. Produk multimedia interaktif yang dikembangkan memperoleh rata-rata penilaian dengan kategori sangat baik dari ahli dan praktisi sebagai validator. Validasi oleh ahli isi dan konstruksi menghasilkan skor rata-rata penilaian sebesar 80,73%, aspek media dengan persentase penilaian sebesar 89,47%, aspek bahasa dengan persentase penilaian sebesar 91,67%, dan aspek pembelajaran oleh praktisi dengan persentase penilaian sebesar 94%. Berdasarkan hal tersebut multimedia interaktif berbasis *android* pada materi alat-alat laboratorium kimia SMA memenuhi kriteria valid. Hasil uji keterbacaan oleh siswa terhadap produk multimedia interaktif menunjukkan persentase rata-rata sebesar 86,15 % berada dalam kategori sangat baik. Dengan demikian produk multimedia interaktif berbasis *android* pada materi alat-alat laboratorium kimia SMA memiliki validitas yang valid dan keterbacaan yang sangat baik.

Kata-kata Kunci: multimedia interaktif, *smartphone* berbasis *android*, alat-alat laboratorium kimia SMA, video cara penggunaan alat laboratorium kimia

**DEVELOPMENT OF INTERACTIVE ANDROID-BASED MULTIMEDIA
FOR HIGH SCHOOL CHEMISTRY LABORATORY EQUIPMENT**

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ABSTRACT

This research aims to develop and describe the specifications of interactive multimedia based on Android for high school chemistry laboratory equipment. This research is a research and development (R&D) study following Luther's multimedia development method, which includes concept, design, material collecting, assembly, testing, and distribution stages. The instruments used in this research include documentation study, interview guidelines, validation assessment sheets, and readability test sheets. The research involves qualitative descriptive analysis and rational mode analysis in analyzing the research results. The interactive multimedia specifications are presented in the form of an application that can be installed on an Android smartphone, providing comprehensive information about the names, descriptions, functions, photos, and usage instructions of chemistry laboratory equipment, along with facilitated instructional videos. The developed interactive multimedia product obtained an average assessment rating with an excellent category from experts and practitioners as validators. The validation by content and construction experts resulted in an average assessment score of 80.73%, with the media aspect obtaining a rating percentage of 89.47%, the language aspect with a rating percentage of 91.67%, and the learning aspect by practitioners with a rating percentage of 94%. Based on this, the interactive multimedia based on Android for high school chemistry laboratory equipment meets the validity criteria. The readability test conducted by students on the interactive multimedia product showed an average percentage of 86.15%, falling within the excellent category. Thus, the Android-based interactive multimedia product for high school chemistry laboratory equipment demonstrates valid validity and excellent readability.

Keywords: *interactive multimedia, android-based smartphone, high school chemistry laboratory equipment, video on the use of laboratory equipment.*