

**PENGEMBANGAN MEDIA PEMBELAJARAN PENGGUNAAN ALAT
UKUR LISTRIK ANALOG BERBASIS ANDROID
DI SEKOLAH MENENGAH KEJURUAN**

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ABSTRAK

Penelitian ini bertujuan untuk: (1) mengetahui unjuk kerja media pembelajaran penggunaan alat ukur listrik analog berbasis android di Sekolah Menengah Kejuruan (SMK); (2) mengetahui tingkat kelayakan media pembelajaran penggunaan alat ukur listrik analog berbasis android di SMK; dan (3) mengetahui efektivitas penggunaan media pembelajaran penggunaan alat ukur listrik analog berbasis android di SMK.

Penelitian ini menggunakan model *Research and Development (R&D)* untuk pembelajaran berbasis android dengan model pengembangan gabungan antara ADDIE dan *waterfall*. Subyek penelitian adalah siswa kelas X Teknik Audio Video (TAV) A SMK Negeri 1 Pundong dengan total 33 dari 36 siswa. Data penilaian diperoleh melalui observasi, wawancara, angket, dan tes. Hasil uji validitas instrumen tes ditinjau dari korelasi *pearson product moment* dengan signifikansi 0,05 sebesar 0,361 dengan 19 soal dikategorikan valid. Uji reliabilitas instrumen tes ditinjau dari nilai Alpha Cronbach sebesar 0,813. Data dianalisis dengan deskriptif, uji t dependen atau *paired sample t test*, dan uji *gain*.

Penelitian ini menghasilkan kesimpulan sebagai berikut: (1) unjuk kerja produk aplikasi media pembelajaran berbasis android untuk pengenalan penggunaan alat ukur listrik analog termasuk dalam kategori “Sangat Baik”; (2) tingkat kelayakan media pembelajaran ditinjau dari penilaian ahli materi adalah “Sangat Layak” dengan nilai indeks Aiken dikategorikan “Tinggi”; ditinjau dari penilaian ahli media adalah “Layak” dengan nilai indeks Aiken dikategorikan “Sedang”, dan ditinjau dari penilaian respons siswa adalah “Layak”; dan (3) efektivitas media pembelajaran penggunaan alat ukur listrik analog berbasis android di Sekolah Menengah Kejuruan adalah “Sedang” ditinjau dari uji t dependen dengan perolehan nilai signifikansi $0.00 < 0.05$ dan nilai rerata hasil uji *gain* sebesar 0,57.

Kata kunci: Penggunaan Alat Ukur Listrik Analog, pembelajaran Jigsaw

**DEVELOPMENT LEARNING MEDIA FOR UTILIZATION ELECTRICAL
ANALOGUE MEASUREMENT BASED ON ANDROID
IN VOCATIONAL SECONDARY SCHOOL**

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ABSTRACT

This study aims determine: (1) find out the performance of learning media on the use of android-based analog electricity measuring devices in Vocational Secondary Schools (SMK); (2) find out the level of appropriateness of learning media using android-based analog electricity measuring devices at SMK; and (3) find out the effectiveness of the use of instructional media on the use of android-based analog electric measuring devices at SMK.

This research was used the Research and Development (R&D) model for android-based learning with a combined development model of ADDIE and waterfall. The research subjects were students of class X Audio Video Engineering (TAV) A SMK Negeri 1 Pundong with a total of 33 from 36 students. Assessment data obtained through observation, interviews, questionnaires, and tests. The results of the test of the validity of the test instruments were viewed from the Pearson product moment correlation with a significance of 0.05 of 0.361 with 19 questions categorized as valid. The reliability test of the test instrument was reviewed from the Alpha Cronbach value of 0.813. Data were analyzed with descriptive, dependent t test or paired sample t test, and gain test.

This study produces the following conclusions: (1) the performance of Android-based learning media application products for the introduction of the use of analog electrical measuring devices included in the category of "Very Good"; (2) the feasibility level of instructional media in terms of expert material assessment is "Very Eligible" with the Aiken index score categorized as "High"; in terms of the assessment of media experts is "Eligible" with the Aiken index score categorized "Medium", and in terms of assessment of student responses is "Eligible"; and (3) the effectiveness of instructional media on the use of android-based analog electric measuring devices in Vocational Secondary Schools is "Medium" in terms of the dependent t test with the acquisition of a significance value of $0.00 < 0.05$ and the mean value of the results of the test gain of 0.57.

Keywords: Use of Analog Electric Measuring Devices, Jigsaw learning