

## **ABSTRACT**

### **THE DEVELOPMENT OF INSTRUCTIONAL MATERIALS BASED INTERACTIVE MULTIMEDIA ON BASIC COMPETENCE USING OSCILLOSCOPE MEASUREMENT TOOL IN VOCATIONAL SCHOOL BANDAR LAMPUNG**

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The purpose of this study were (1) to describe the condition and potential of learning that has been done by the teacher on the basic competence using an oscilloscope measurement tool, (2) to produce interactive multimedia products for learning the basic competence using an oscilloscope measuring tool, (3) to analyze the effectiveness of learning using interactive multimedia, (4) to analyze the efficiency of learning using interactive multimedia, (5) to analyze the attractiveness of learning using interactive multimedia.

The study was research and development. Subject of the test used *purposive sampling* of students at the 11<sup>th</sup> grade of audio-video engineering on Vocational School Bandar Lampung. Data were collected with performance test and questionnaire. Field testing used the quasi-experimental of *one group pretest-posttest design*. Data analysis used *paired t-test* and quantitative descriptive.

The conclusions of the study were: (1) the potential of school facilities and infrastructure can be utilized to develop interactive multimedia, (2) produce interactive multimedia of basic competence using an oscilloscope measuring tool, (3) the interactive multimedia was effective to use as learning media *N-gain* values for aspects of psychomotor was 0.41, (4) efficient interactive multimedia as a medium of learning to value efficiency ratio of 1.22, (5) Interactive multimedia was very attractive for use as media of learning with an average score of 3.34.

**Keywords:** learning, interactive multimedia, oscilloscope measuring tool, effective, efficient, attractiveness.