

ABSTRAK

Ibnu Hary Wahyudi, **Merancang Pengembangan Media Pembelajaran *Trainer Basic Digital***. Skripsi, Jakarta, Program Studi Pendidikan Teknik Elektronika, Jurusan Teknik Elektro, Fakultas Teknik, Universitas Negeri Jakarta, 2019. Dosen Pembimbing Dr. Ir. Rusmono, M.Pd. dan Drs. Jusuf Bintoro, MT.

Penelitian yang dikembangkan bertujuan untuk mengembangkan media pembelajaran *trainer* dan modul bahan praktikum sebagai media pembelajaran kelas X Teknik Audio Video pada matapelajaran pemrograman, mikroprosesor, dan mikrokontroller khusus pembahasan dasar-dasar teknik digital di SMK Negeri 7 Bekasi.

Penelitian yang dikembangkan menggunakan metode pengembangan *Research and Development (R&D)* yang diadaptasi dengan model pengembangan *ASSURE (Analyze learner, State standards and objectives, Select strategies technology, media and materials, Utilize technology, media and materials, Requite learner participation, Evaluate and rivise)*, namun penelitian dibatasi hanya sampai tahap *Requite learner participation*. Tahap pengembangan meliputi: 1) Analisis Pembelajaran, 2) Merumuskan Standard dan Tujuan, 3) Memilih Strategi, Teknologi, Media, dan Materi, 4) Menggunakan Teknologi, Media dan Bahan Ajar, 5) Mengharuskan Partisipasi Peserta didik. Media *trainer basic digital* divalidasi dan dinyatakan kelayakannya dengan menggunakan kuesioner/angket oleh 1 ahli materi, 1 ahli media, dan 35 respon peserta didik kelas X Teknik Audio Video di SMK Negeri 7 Bekasi.

Hasil pengembangan media pembelajaran *trainer basic digital*, yang terdiri dari 9 blok : 1) Blok Power Supply, 2) Blok 10 Bit Data Input, 3) Blok 10 Bit Data Output, 4) Blok Gerbang Logika, 5) Blok Flip-Flop, 6) Blok Clock Generator, 7) Blok Encoder, 8) Blok Decoder dan Sevensegmen, 9) Blok Operasi Logika IC TTL dan terdapat 1 Box Kabel. Sedangkan modul praktikum berisi *jobsheet* yang mendukung kegiatan praktikum.

Hasil penelitian menunjukkan presentase kelayakan media diperoleh sebesar 87% dari ahli media, 86% dari ahli materi, dan 84% hasil ujicoba penggunaan *trainer* dari peserta didik. Dari ketiga perolehan tersebut, media pembelajaran *trainer basic digital* masuk dalam kategori sangat layak untuk digunakan sebagai media pembelajaran pada mata pelajaran pemrograman, mikroprosesor, dan mikrokontroller di Jurusan Teknik Audio Video SMK Negeri 7 Bekasi.

Kata Kunci : Trainer Basic Digital, Modul Praktikum Basic Digital

ABSTRACT

Ibnu Hary Wahyudi, *Designing Development of Learning Media for Trainer Basic Digital. Minithesis, Jakarta, Electronic Engineering Education Study Program, Electrical Engineering Department, Faculty of Engineering, Jakarta State University*, 2019. Supervisor Dr. Ir. Rusmono, M.Pd. and Drs. Jusuf Bintoro, MT.

The research developed aims to develop learning media trainer and practicum material modules as learning media for class X Audio Video Engineering on programming, microprocessor, and microcontroller subjects specifically discussing the basics of digital engineering at SMK Negeri 7 Bekasi.

Research developed using Research and Development (R & D) methods adapted to ASSURE development models (Analyze learner, State standards and objectives, Strategic Select technology, media and materials, Utilize technology, media and materials, Require learner participation, Evaluate and revise) , but research is limited only to the stage of Require learner participation. The development phase includes: 1) Learning Analysis, 2) Formulating Standards and Objectives, 3) Choosing Strategies, Technology, Media, and Materials, 4) Using Technology, Media and Teaching Materials, 5) Requiring Student Participation. Media trainers for programming, microprocessors, and microcontrollers were validated and their feasibility was stated by using questionnaires/questionnaires by 1 material expert, 1 media expert, and 35 responses in class X Audio Video Engineering at SMK Negeri 7 Bekasi.

The results of the development of learning media are Programming Trainer, Microprocessor, and Microcontroller, which consists of 9 blocks: 1) Block Power Supply, 2) Block 10 Bit Data Input, 3) Block 10 Bit Data Output, 4) Block Logic Gate, 5) Flip Block -Flop, 6) Block Generator Block, 7) Block Encoder, 8) Block Decoder and Sevensegmen, 9) Block Operation Logic IC TTL and there is 1 Cable Box. While the practicum module contains a job sheet that supports practical activities.

The results showed that the percentage of media feasibility was obtained by 87% of media experts, 86% of material experts, and 84% of the results of the trial use of trainers from students. Of the three acquisitions, learning media for trainers, programmers, microprocessors, and microcontrollers fall into the very feasible category to be used as learning media on programming subjects, microprocessors, and microcontrollers in the Department of Audio Video Engineering, SMK Negeri 7 Bekasi.

Keywords: *Basic Digital Trainer, Jobsheet Basic Digital*