PENGEMBANGAN MODUL MEKANIKA TEKNIK KELAS X PROGRAM KEAHLIAN TEKNOLOGI KONSTRUKSI DAN PROPERTI SMK NEGERI 3 YOGYAKARTA

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ABSTRAK

Penelitian ini bertujuan untuk: (1) mengembangkan modul pembelajaran Mekanika Teknik untuk Program Keahlian Teknik Konstruksi dan Properti di SMK Negeri 3 Yogyakarta, (2) mengetahui hasil dan tingkat kelayakan yang diperoleh dari pengujian validasi modul sebagai sumber belajar Mekanika Teknik oleh ahli materi, ahli media, dan guru mata pelajaran.

Metode yang digunakan dalam penelitian adalah *Research and Development* (R&D) yang mengacu model penelitian dan pengembangan Sugiyono (2010). Penelitian ini meliputi sepuluh tahap, yaitu: (1) mencari potensi dan masalah, (2) pengumpulan data, (3) desain produk, (4) validasi desain, (5) revisi desain, (6) uji coba produk, (7) revisi produk, (8) uji coba pemakaian, (9) revisi produk, (10) produksi produk. Metode pengumpulan data yang digunakan adalah observasi dan kuisioner. Instrumen yang digunakan berupa angket dengan skala 4 (empat). Angket tersebut digunakan dalam proses validasi ahli dan penilaian kelayakan pengguna (guru mata pelajaran Mekanika Teknik). Teknik analisis data yang digunakan pada penelitian ini adalah analisis secara deskriptif kuantitatif.

Berdasarkan hasil penelitian diperoleh bahwa: (1) Modul pembelajaran Mekanika Teknik telah dihasilkan untuk kelas X Program Keahlian Teknik Konstruksi dan Properti di SMK Negeri 3 Yogyakarta dengan menggunakan sepuluh langkah pengembangan yang mengacu pada model pengembangan Sugiyono (2010), (2) Tingkat kelayakan modul pembelajaran Mekanika Teknik pada Program Keahliah Teknik Konstruksi dan Properti SMK Negeri 3 Yogyakarta ditentukan melalui tiga kegiatan penilaian produk yaitu: (a) hasil penilaian yang dilakukan oleh ahli materi memperoleh tingkat kelayakan sebesar 87,5% dalam kategori sangat layak, (b) hasil penilaian oleh ahli media memperoleh tingkat kelayakan sebesar 90% dalam kategori sangat layak, dan (c) hasil penilaian oleh dua orang guru mata pelajaran Mekanika Teknik, masing-masing memperoleh tingkat kelayakan sebesar 76,4% dan 78,6% dalam kategori sangat layak.

Kata kunci: *media pembelajaran, modul, mekanika teknik.*

DEVELOPMENT OF ENGINEERING MECHANICS MODULE FOR CLASS X OF CONSTRUCTION TECHNOLOGY AND PROPERTY PROGRAM IN SMK NEGERI 3 YOGYAKARTA

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ABSTRACT

The purpose of this research to: (1) Develop the Mechanical Mechanics learning module for the Construction and Property Engineering Skills Program at SMK Negeri 3 Yogyakarta. (2) To know the results and the level of feasibility obtained from testing the module validation as a source of learning in Mechanical Mechanics by material experts, media experts, and subject teachers.

This research was conducted by Research and Development (R&D), which refers to Sugiyono's research and development model (2010). This research involve ten stages : (1) looking for potentials and problems, (2) data collection, (3) product design, (4) design validation, (5) design revision, (6) product trials, (7) product revisions, (8) trial use, (9) product revisions, (10) product production. Methods of collecting data used were observation and questionnaires. The instrument used was in the form of a questionnaire with a scale of 4. The questionnaire was used in the process of expert validation and user eligibility assessment (subject of Mechanical Mechanics). The data analysis technique used in this study was quantitative descriptive analysis.

Based on the results of the study it was found that: (1) Mechanical Mechanics learning modules have been produced for Class X Construction and Property Engineering Skills Program at SMK Negeri 3 Yogyakarta by using ten development steps that refer to the Sugiyono development model (2010), (2) The level of module eligibility Mechanical Engineering learning in the Construction and Property Engineering Expertise Program at SMK Negeri 3 Yogyakarta is determined through three product assessment activities: (a) the results of the assessment conducted by material experts obtain a feasibility level of 87.5% in the very feasible category, (b) the results of the assessment by media experts obtained a feasibility level of 90% in the very feasible category, and (c) the results of the assessment by two teachers of Mechanical Engineering subjects, each of which obtained a eligibility level of 76.4% and 78.6% in the very feasible category.

Keywords: learning media, modules, engineering mechanics.