

**PENGEMBANGAN MODUL SISTEM BAHAN BAKAR KONVENSIONAL
PADA MATA PELAJARAN PEMELIHARAAN MESIN KENDARAAN
RINGAN UNTUK KELAS XI DI SMK MUHAMMADIYAH 1
BAMBANGLIPURO**

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ABSTRAK

Tujuan penelitian ini adalah : (1) menghasilkan produk modul sistem bahan bakar konvensional kelas 11 di SMK Muhammadiyah 1 Bambanglipuro yang dikembangkan; (2) mengetahui kelayakan modul sistem bahan bakar konvensional di SMK Muhammadiyah 1 Bambanglipuro.

Penelitian ini menggunakan penelitian pengembangan (research and development) yang dilakukan di SMK Muhammadiyah 1 Bambanglipuro. Tahapan penelitian yang digunakan dalam penelitian pengembangan ini mengacu pada model ADDIE dikembangkan oleh Dick and Carry (1996) yang meliputi; (1) *analysis*; (2) *design*; (3) *development*; (4) *implementation*; (5) *evaluations*. Validasi desain produk dilakukan dua kali yaitu validasi materi oleh ahli materi dan validasi media oleh ahli media. Penelitian ini dilakukan pada 24 siswa kelas XI Teknik Kendaraan Ringan A di SMK Muhammadiyah 1 Bambanglipuro. Teknik pengumpulan data dilakukan menggunakan angket (kuesioner). Teknik analisa data yang dilakukan dengan teknik analisis deskriptif kuantitatif persentase yang diterjemahkan terhadap kategori skala kelayakan.

Hasil penelitian ini berupa Modul Sistem Bahan Bakar Konvensional Untuk Kelas XI. Modul tersebut terdiri atas 3 bab, yaitu bab 1 yang berisi pendahuluan, bab 2 berisi materi, rangkuman, tes formatif, dan kunci jawaban, bab 3 berisi soal evaluasi dan kunci jawabannya. Hasil validasi dosen ahli materi, ahli media dan uji coba kelayakan oleh siswa menunjukkan bahwa produk yang dikembangkan termasuk dalam kategori sangat layak untuk diterapkan dalam pembelajaran di SMK Muhammadiyah 1 Bambanglipuro. Hasil analisis kelayakan produk dari ahli materi diperoleh penilaian kelayakan 72,64%, dari ahli media diperoleh penilaian kelayakan 77,4%, dan dari ujicoba siswa diperoleh penilaian kelayakan sebesar 78,3%.

Kata Kunci : *pengembangan, modul, sistem bahan bakar konvensional*

**THE DEVELOPMENT MODULE OF CONVENTIONAL FUEL SYSTEM ON
SUBJECT MAINTENANCE OF LIGHT VEHICLE MACHINES FOR
ELEVENTH GRADE IN SMK MUHAMMADIYAH 1 BAMBANGLIPURO**

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ABSTRACT

The purpose of this study is : (1) produce a class 11 conventional fuel system module product at SMK Muhammadiyah 1 Bambanglipuro that was developed; (2) find out the feasibility of a conventional fuel system module in SMK Muhammadiyah 1 Bambanglipuro.

This research uses research and development conducted at SMK Muhammadiyah 1 Bambanglipuro. The stages of research used in this research development refer to the ADDIE model developed by Dick and Carry (1996) which includes; (1) analysis; (2) design; (3) development; (4) implementation; (5) evaluations. Product design validation is done twice, namely material validation by material experts and media validation by media experts. This research was conducted on 24 students of eleventh grade of Light Vehicle Engineering A at SMK Muhammadiyah 1 Bambanglipuro. Data collection techniques were carried out using a questionnaire. The data analysis technique was carried out with a descriptive quantitative analysis technique of percentage translated to the feasibility scale category.

The results of this study are Conventional Fuel System Modules for eleventh grade. The module consists of 3 chapters, namely chapter 1 which contains an introduction, chapter 2 contains material, summaries, tests, and answer keys, chapter 3 contains evaluation questions and answer keys. The results of the validation of the material expert lecturers, media experts and the feasibility trials by students showed that the products developed were included in the category very feasible to be applied in learning at SMK Muhammadiyah 1 Bambanglipuro. The results of the product feasibility analysis of the material experts obtained a 72.64% feasibility assessment, 77.4% of the media experts obtained a feasibility assessment, and from the student trials obtained a feasibility assessment of 78.3%.

Keywords: development, modules, conventional fuel systems