

## ABSTRAK

### **PENGARUH PENERAPAN MODUL PEMBELAJARAN TERHADAP HASIL BELAJAR SISWA PADA MATERI ALAT PENUKAR KALOR SISTEM TATA UDARA KOMERSIAL**

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Penelitian ini bertujuan untuk memperoleh hasil nilai pengaruh penerapan modul pembelajaran terhadap hasil belajar siswa pada materi alat penukar kalor sistem tata udara komersial. Metode penelitian yang digunakan yaitu *Research and Development* (R&D) dengan desain penelitian *pre-experimental* bentuk *one group pretest-posttest design*. Penelitian dilaksanakan di SMK Negeri 1 Cimahi paket keahlian Teknik Pendingin dan Tata Udara (TPTU) dengan jumlah populasi sebanyak 68 orang siswa. Responden penelitian ini yaitu siswa kelas XII TPTU B sebanyak 31 orang siswa. Instrumen penelitian yang digunakan adalah instrumen penilaian modul, angket respon siswa, dan instrumen tes belajar. Uji validitas modul menggunakan *judgement expert* dan diperoleh nilai menurut ahli media 88,8% yang dinyatakan sangat layak, menurut ahli materi 78,4% dinyatakan sangat layak, dan hasil respon siswa 75,3% dinyatakan sangat layak. Berdasarkan hasil *pretest* diperoleh nilai rata-rata hasil belajar siswa sebesar 60,0. Setelah proses pembelajaran menggunakan modul, nilai rata-rata hasil *posttest* meningkat menjadi 83,7. Hasil uji hipotesis diperoleh bahwa  $H_a$  diterima, yaitu terdapat pengaruh penerapan modul pembelajaran terhadap hasil belajar siswa pada materi alat penukar kalor sistem tata udara komersial. Berdasarkan persamaan regresi yang didapat, diketahui bahwa besar kontribusi penerapan modul pembelajaran terhadap hasil belajar siswa adalah sebesar 14,4%. Simpulan dari penelitian ini adalah modul pembelajaran memberikan pengaruh positif terhadap hasil belajar siswa.

Bagiawati Rahayu Paweka, 2019

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Kata kunci: modul pembelajaran, hasil belajar, sistem tata udara komersial.

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## ABSTRACT

### **THE IMPACT OF APPLIED SELF-INSTRUCTIONAL MATERIALS TOWARDS STUDENTS' LEARNING OUTPUT ON CHAPTER OF HEAT EXCHANGER IN COMMERCIAL AIR CONDITIONING SYSTEM**

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The purpose of study is to obtaining value effect of applied self-instructional materials towards students' learning output on chapter of heat exchanger in commercial air conditioning system. The method of study is Research and Development (R&D) which pre-experimental one group pretest-posttest design. The study was held in Vocational School 1 Cimahi concentration Refrigeration and Air Conditioning with total population is 68 students. Respondent of study is students class B grade XII as much 31 students. Instrument of study used self-instructional materials assessment, questionnaire of students' responses and test. The validity test of self-instructional materials was test by judgement experts and got score 88,8% from media experts and stated very well, 78,4% from content experts and stated very well, and 75,3% from students' responses stated very well. Based on students' mean score of their pretest result obtained score 60,0. After learning process using self-instructional materials, students' mean score of their posttest result increase became score 83,7. Hypothesis test result obtained that alternative hypothesis was accepted, which is there was effect of applied self-instructional materials towards students' learning output on chapter of heat exchanger in commercial air conditioning system. Based on regression test results, contribute value of applied self-instructional materials towards students' learning output is 14,4%. The conclusion for this study is self-instructional materials was given positive effect towards students' learning output.

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Keyword : self-instructional materials, students' learning output,  
commercial air conditioning system.

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