

## ABSTRAK

Penelitian ini bertujuan untuk: 1) mengetahui ketersediaan perangkat pembelajaran Sistem Kontrol Elektromekanik di SMK Negeri 1 Cimahi; 2) mengembangkan dan menilai kelayakan perangkat pembelajaran Sistem Kontrol Elektromekanik dan Elektronik melalui pendekatan saintifik dan model pembelajaran berbasis proyek; dan 3) mengimplementasikan perangkat pembelajaran yang peneliti kembangkan tersebut. Melalui metode penelitian kombinasi dengan pendekatan penelitian dan pengembangan, studi pendahuluan dilakukan sebagai langkah awal untuk menentukan kebutuhan pada pembelajaran di SMK Negeri 1 Cimahi. Kemudian dilakukan pengembangan perangkat pembelajaran dan dinilai oleh ahli beserta praktisi. Selanjutnya perangkat tersebut diimplementasikan kepada 30 orang siswa Paket Keahlian Teknik Otomasi Industri kelas XII. Setelah melalui penilaian ahli dan praktisi, perangkat pembelajaran yang telah dikembangkan termasuk dalam kategori sangat layak. Hasil implementasi perangkat pembelajaran Sistem Kontrol Elektromekanik dan Elektronik menunjukkan adanya peningkatan hasil belajar siswa.

Kata kunci : *Perangkat pembelajaran, sistem kontrol elektromekanik dan elektronik, pendekatan saintifik, pembelajaran berbasis proyek*

## ABSTRACT

*This research aimed to: 1) find out instructional equipment availability for Electromechanical and Electronic Control Systems subject in SMKN 1 Cimahi; 2) develop and assess the properness of Electromechanical and Electronic Control System instructional equipment using scientific approach and Project-based Learning; and 3) implement the instructional equipment developed by researcher. By means of mixed method research methodology with Research and Development (R&D) approach, preliminary study was conducted as the first step to determine the learning needs in SMKN 1 Cimahi. Thereafter, instructional equipment was developed and then assessed by experts and practitioners. Furthermore, the instructional equipment was implemented to 30 students grade XII of Industrial Automation Technic Programme. Based on experts and practitioners assessment, instructional equipment that has developed come under very proper category. The result of instructional equipment implementation in Electromechanical and Electronic Control System subject indicates the increase of students' learning outcome.*

*Key words: instructional equipment, Electromechanical and Electronic Control System, scientific approach, Project-based Learning*