

**COLOUR SORTING ROBOT TRAINER AS LEARNING MEDIA ON THE SUBJECT
OF ENGINEERING CONTROL SYSTEM OF INDUSTRIAL ELECTRONICS
ENGINEERING SKILL COMPETENCE AT SMK NEGERI 5 SURAKARTA**

Erry Eka Kurniawan
NIM 13502241023

Abstract

This research aims to create, to know the performance, and to determine the feasibility of colour sorting robot trainer as a learning media on the subject of Engineering Control System of Industrial Electronics Engineering Skills Competence SMK Negeri 5 Surakarta.

This research is a Research and Development with 10 stages of research development procedures that include: potential and problem, data collection, product design, design validation, design revision, product trial, product revision, trial usage, product revision, and mass production. The object of this research is the learning media of colour sorter robot trainer. The subject of this research is a student of class XI Electronics Industry SMK Negeri 5 Surakarta. Data collection techniques used include testing, observation and questionnaires. The data analysis technique conducted by qualitative descriptive analysis.

The result of this research are: (1) The learning media of the colour sorting robot trainer is made up of four blocks which include: push button, 16x2 liquid crystal display, servo motor, and colour sensor with jobsheet and manual book; (2) Performance of learning media colour sorter robot trainer are works well and stable on every block or as a whole. The results of the assessment by material experts and media experts stated in the category very decent. (3) The feasibility level is obtained from the usage test to 32 students who get the value of 88% which fall into the very decent category. This means that the learning media of this trainer is feasible to be used in the subject of Engineering Control System of Industrial Electronics Engineering Skills Competence SMK Negeri 5 Surakarta.

Keywords: learning media, trainer, colour sorting robot