

## **ABSTRACT**

### ***PLC OMRON CPM2A SIMULATOR LEARNING MEDIA DEVELOPMENT BASED COMPUTER USING VISUAL BASIC FOR SMK NEGERI 3 WONOSARI***

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The purpose of this research was (1) to develop a PLC OMRON CPM2A simulator learning media based computer using visual basic in SMK Negeri 3 Wonosari, (2) determine the feasibility stage of development and learning media CPM2A OMRON PLC simulator according to a computer-based curriculum Education Unit (SBC) in SMK Negeri 3 Wonosari.

The research method used is the method of research and development. Development of instructional media products CPM2A OMRON PLC-based simulator using visual basic computer through several stages, namely (1) a preliminary study, (2) planning, (3) initial product development, (4) revision of the design, (5) initial field trials; (6) revision of I, (7) main field trials; (8) revision II; (9) operational field trials; (10) revision of the final product, and (11) product improvement. The research was conducted at Grade XI Industrial Electronics Engineering Department SMK Negeri 3 Wonosari. Data was collected using a questionnaire instrument. The analysis technique used is the qualitative and quantitative analysis to determine the feasibility study media CPM2A OMRON PLC simulator based computer.

Results of this study was generated in the form of instructional media instructional media shaped products CPM2A OMRON PLC simulator-based computer. Based on the syllabus, standards of competence and basic competences materials then developed products into three (3) sections, namely (1) form for writing console PLC program, (2) form the simulator to see the results of the PLC program has been made, (3) sheet lab work for three (3) meetings. Test the feasibility of the simulator instructional media CPM2A OMRON PLC-based computer developed, according to one assessment expert lecturers material gain overall percentage of 80.8% with a very decent assessment criteria, assessment materials ahi 2 overall percentage of 77.9% obtained with very decent assessment criteria , from 1 media experts obtain the overall percentage of 91% with a very decent assessment criteria, and the worksheet lab to obtain a percentage of 90.2% with a very decent category, out of 2 media experts to obtain the overall percentage of 75% with a decent assessment criteria, for sheet lab work to get a percentage of 75% with grade rating, and earn a percentage of the field test was 81.8% overall with very decent assessment criteria. Eligibility standards if the overall learning media is not less than a minimum standard that is feasible. Based on these data it can be concluded that the media pembelajaran CPM2A OMRON PLC simulator-based computer is feasible for use in SMK Negeri 3 Wonosari.

**Kata kunci : *Simulator Learning Media, PLC OMRON CPM2A***