

DEVELOPMENT OF VIRTUAL LEARNING MEDIA HANDLING STATION PROCESS TO IMPROVE PLC PROGRAMMING COMPETENCE OF STUDENTS IN FLEXIBLE MANUFACTURING SYSTEM PRACTICE COURSES

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ABSTRACT

This research is entitled Development of Virtual Learning Media Handling Station Process to Improve Student PLC Programming Competence in Flexible Manufacturing System Practice Course. The aims of this study are 1) to create media for virtual handling station devices, 2) to determine the performance of virtual handling station devices, 3) to determine the feasibility of virtual handling station devices, and 4) to find out respondents from end users of virtual handling station applications. This research is development research with the ADDIE William & Lee development model. The research subjects were 2 lecturers of computer-based media experts, 2 lecturers of material experts in the field of PLC programming, and 13 students as user respondents. Data were obtained using a feasibility questionnaire with a scale of 1-4. The results showed 1) the virtual handling station device application has been successfully developed and can be used to validate the PLC program in full and in real time, 2) the virtual handling station device performance test shows the results with the "Very Eligible" feasibility category, 3) expert validation test on the virtual handling station device shows the results with the "Very Eligible" eligibility category, 4) the respondent test on the virtual handling station device shows the results with the "Very Eligible" eligibility category.

Kata Kunci: *learning media, virtual, plc programming*