ABSTRACT

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The development of learning media in world education in the industrial era 4.0 is a priority as a means of practicum activities carried out so that students can understand the lessons presented. With technology that develops rapidly and is fully automated, it is hoped that students can understand how a system works.

This study aims to create a practical tool that can simplify the Asphalt Mixing Plant (AMP) process using Programmable Logic Control (PLC) which can be programmed with the Human Machine Interface (HMI) screen panel as a display of working processes and to create a basic learning module for a programming language for PLCs. and HMI. The research method uses Research and Development with the ADDIE technique from Robert Maribe Branch (2009), namely: Analysis, Design, Development, Implementation, and Evaluation.

From the results of the feasibility test with a total value of 51.06 and a percentage of 85% of the trainers get the "VERY FEASIBLE" category and the reliability test with an alpha value of 0.75 gets the "RELIABLE" category. The results of blackbox testing as a whole the tools that have been designed can be said to work optimally as expected as a practicum tool. The basic learning module for the programming language is easy to understand and has been approved by the supervisor.

***Keywords**: Trainer, Asphalt Mixing Plant (AMP), PLC, HMI*