

ABSTRACT

Automation Expertise Group in Industrial Engineering Faculty has 10 units of PLC Siemens S7-1200. Siemens is market leader of PLC in industry but it's not well known brand in education section. Availability of learning resource of Siemens' PLC still rare and limited, however learning process won't be effective and efficient without high availability of comprehensive resource. This final project focuses in building comprehensive resource and designing E-learning as teaching tool PLC Siemens S7-1200 in automation expertise group Industrial Engineering Faculty.

First step is formulating the problem and determine the objective, analyzing application, resource and user requirement. The results of analysis become reference in designing konten and website. Konten divide into 2 group, theory and case study. Theory konten expected to increase knowledge about PLC Siemens S7-1200 and basic thing to solve the study case which can be look in many factory. User level will be different dependent on how many study cases can be solved. Konten is presented in video and flash animation. E-learning web constructed by using PHP programming and MySQL database.

Evaluation have been done by giving pre-test and post-test, between that respondent learn from E-learning resources. Evaluation result shows an increase in mean scores in post-test. It can be concluded that E-Learning increases student's comprehension about PLC Siemens S7 1200

Key words: automation, PLC, ladder diagram, E-learning.