

DEVELOPMENT OF TRAINER UNITS PICO HYDRO POWER PLANT AS A LEARNING MEDIA POWER GENERATION PRACTICES

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ABSTRACT

This study aims to: (1) develop a trainer unit as a learning media for the Power Generation Practice course; and (2) knowing the feasibility of the trainer unit as a learning media for the Power Generation Practice course. The method used in this research is development research using the ADDIE model (Analyze, Design, Develop, Implement, and Evaluate). The object of the study was the trainer unit of Picohydro Hydroelectric Power Plant. The trial subjects from the research were material experts, media experts, and students of the Department of Electrical Engineering Education, Faculty of Engineering YSU. The learning media development research in the form of a power plant trainer unit (PTL) was implemented in small class in the even semester of the 2017/2018 academic year. Data collection techniques are carried out by using instruments to assess the feasibility of learning media developed. The data analysis technique uses descriptive quantitative. The results showed: (1) the picohydro power plant trainer unit as a learning medium for the Power Generation Practice course had been successfully developed with the ADDIE model through stages: needs analysis (curriculum analysis, material analysis and analysis of student characteristics); design design, planning of tools and materials needed, and jobsheet design; product development and design implementation (design of trainer units, preparation of material and equipment requirements needed, construction of trainer units, and performance testing); and product testing includes the stages of small group trials and large group trials; and (2) the picohydro power plant trainer unit is declared very feasible to be used as a learning media for the Power Generation Practice course.

Kata Kunci: *learning media, trainer, picohydro*