

OPTIMIZATION OF THE LEARNING PROCESS OF MACHINERY PRACTICE THROUGH THE IMPLEMENTATION OF PROJECT-BASED LEARNING MODELS IN THE DEPARTMENT OF MECHANICAL ENGINEERING EDUCATION, FT UNY

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ABSTRACT

This research was carried out with the aim of: (1) obtaining the right formulation of project-based learning stages to be implemented in complex machining learning; (2) knowing the achievement of practical competence by students after implementing a project-based learning model.

The approach used is the Kemmis and Taggart model of Classroom Action Research. The research was carried out for three cycles. Data collection techniques using observation techniques, documentation and interviews. The collected data was then analyzed by quantitative descriptive analysis.

The results that have been achieved are: (1) the formulation of the appropriate project-based learning stages to be implemented in complex machining learning, namely group division, determination of themes (jobs/tools), job/tool ??design, job/tool ??making process, assembly process, testing & finalization; (2) the learning process of complex machining practice can be carried out optimally, with indicators that students are able to complete the creation of jobs/tools on time, practical competence can be achieved by students to the maximum, which is marked by the achievement of an average student achievement of 86 and the achievement of student employability skills of 90%.

Kata Kunci: optimization, machining practice, project-based learning