

Implementation of the Navigator on Project Work Learning Model to Improve the Competence of CNC Machining Practices

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ABSTRACT

This study was aimed to explain the implementation process of the Navigator on Project Work (NOPW) learning model and to measure its effectiveness in improving the learning outcomes of the CNC Machining course. The method used in this study was classroom action research (CAR). The subject of this study consisted of ten students from the Master's Program of Mechanical Engineering Education, Post Graduate School, UNY in the academic year of 2017. The research design included four stages, namely planning, action, observation, and reflection. The findings revealed that: (1) The implementation of the NOPW learning model worked effectively according to the formulated syntax. To obtain optimal results, the implementation of NOPW required 4 to 5 cycles; (2) The NOPW learning model was effective in improving learning achievement or CNC machining competencies. This was indicated by the increase in the mean score of students' achievement (competency), i.e. the learning achievement in the first cycle, the second cycle, the third cycle, the fourth cycle, and the fifth cycle were 77, 44, 48, 83, and 100 respectively.

Kata Kunci: learning, competence, CNC machining