

Student Welding Skill Competition Development Model with KKNi and Competency Certification Approach in Vocational School

**Putut Hargiyarto , Riswan Dwi Djatmiko , Arif Marwanto
Lecturer Department of Mechanical Engineering Education FT UNY**

ABSTRACT

This study aims to (1) obtain a model of the organization of the Student Welding Skill Competition, (2) determine the organization of the Student Welding Skill Competition model implementation, (3) determine the management of the Student Welding Skill Competition, and (4) determine the results of the Student Welding Skill Competition which can accommodate the interests of learning welding practices while meeting the competence aspects in the form of competition .

This study is a survey to describe a systematic, factual , and accurate information on the facts , properties , and relationships in Student Welding Skill Competition phenomena. The steps are: (1) establish guidelines, modules, technical instructions and SOPs ; (2) set a piece of observation, (3) collect data, (4) analyzing the data, (5) discussion of the results of data analysis, and (6) concluded that the results analysis in the form of data description and recommendation. Quantitative data analysis techniques, to calculate the frequency, average, and percentage. In addition another trend seen from the median, mode and standard deviation that occurs, then concluded qualitatively.

Conclusion : (1) the implementation model of Student Welding Skill Competition learning module contains teaching materials, SOP, evaluation procedures, training and competency testing, (2) the implementation of the model shows that there is an increased learning outcomes with a significant difference between before and after the learning activities, (3) management aspects of Student Welding Skill Competition is good towards very good, but there are findings : inadequate rewards for participants and teachers, lack of coordination among the stake holder, the place of training in school workshops with inadequate facilities, (4) Student Welding Skill Competition results are : weaknesses in the knowledge and understanding of the participants to determine the requirements of welding, the error in the set up SMAW machine, set the welding current, the awareness of the importance of occupational health and safety equipment, as well as the presence of welding defects in welds. It is not able to accommodate the interests of welding practices while meeting the learning aspect of competence in the form of competition / certification .

Keywords : Model Development, Student Welding Skill Competition