

**DEVELOPING COMPUTER-BASED LEARNING MEDIA  
IN THE LESSON OF SMAW PIPE WELDING  
AT SMKN 1 SEDAYU BANTUL**

**ABSTRACT**

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This study is aimed at describing the process of developing computer-based learning media in SMAW pipe welding lesson and the result of the developed computer-based instructional media for Competence of Welding Engineering Skill at SMKN 1 Sedayu.

This study is of research & development (Research and Development) which was conducted through the preliminary stage, development stage and final stage. The preliminary stage was: (1) identification of the problem, (2) formulation of objectives, (3) analysis of learning needs, and (4) analysis of students' characteristics. The development stage was: (1) development of a product design, (2) collection of materials, (3) assembly, and (4) validation by materials experts, media specialists and subject teachers. The final stage was testing the product. Expert validation was done by subject matter lecturers, media specialists and subject teachers to get feedback on the appropriateness of the media. A one on one tryout was conducted to four grade XI students of Welding Engineering of SMKN 1 Sedayu who were randomly selected. A small group tryout was conducted to 10 grade XI students of Welding Engineering of SMKN 1 Sedayu who were also randomly selected. A large group tryout was conducted 30 grade XI students of Welding Engineering of SMKN 1 Sedayu to determine the feasibility of the developed computer-based instructional media.

Based on the result of this research, conclusions could be drawn that: (1) the development of learning media for competence of welding engineering skill at SMKN 1 Sedayu Bantul was conducted through preliminary stage, development stage and final stage; (2) the result of pneumatic diktat development based on the validation by subject matter experts showed that the average score was 4.4 which belonged to "very good" criterion, by media experts was 4.4 which also belonged to "very good" criterion, and by subject teachers was 4.3 which belonged to "very good" criterion and from the media aspect, the average score was 4.3 which belonged to "very good" criterion, the average score of one on one group tryout result was 80% which meant "in accordance with the *KKM*", of small group tryout was 83% which also meant "in accordance with the *KKM*", and of large group result was 84% which meant "in accordance with the *KKM*". For that matter, the developed product of SMAW pipe welding learning media was feasible to use.

Key words: development, instructional media, SMAW pipe welding engineering