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The Design of Android-Based Interactive Lean Manufacturing Application to Increase Students' Work Skill in Vocational High School: The Development and Validity

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ABSTRACT

Vocational education graduates should have expertise competencies according to their fields so that it is easy to fill the job market, but this condition is not in line with expectations. BPS data as of February 2020 still shows the open unemployment rate, which is dominated by SMK graduates, at 8.49%, meaning that it is the highest-ranking contributor to open unemployment. One indication of this high percentage is the lack of work skills for vocational school graduates in the world of work. This lack of work competence is indicated because the learning process is not integrated with the real world of work. Therefore, improvement steps are sought through a learning process that integrates school learning with the real world of work by developing media that support learning activities with the real world of work. Therefore, the purpose of this research is to design an Android-based interactive lean manufacturing application to improve the work skills of vocational students. This study uses the 4D development method (four-Ds) for the development of android-based interactive lean manufacturing applications and uses a survey method for validity and this AR application will be validated by 12 experts. The results of this study indicate that the validation test of android-based interactive lean manufacturing applications included in the valid category. So it can be concluded that the Android-based interactive lean manufacturing application technology has been valid to be used in the learning process.

Keywords: *Lean Manufacturing; Interactive; Android; Validity*