Prototipe Media Laboratorium Berbasis AuRI (Augmented Reality with Industry) untuk Mengembangkan Produk Pembelajaran Berbasis Kebutuhan Industri

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ABSTRACT

The government, through the direction of the 2022 Research policy, prioritizes technology-based integrated learning, including in the fields of Social, Human and IT, one of which is the development of teaching models and materials that can be implemented online without reducing the quality of learning. One aspect of the review that is focused on is learning in the field of vocational education, where the main aim is to produce graduates who have employment levels in line with industry needs. Effective and efficient learning is needed to optimize existing resources, one of which is learning through the application of Augmented Reality technology. Augmented Reality will help visualize teaching materials in cyberspace as a reflection of real products that have been adapted to industry needs and support technology-based integrated learning. The aim of this research is to develop AuRI (Augmented Reality with Industry)-based laboratory media for integrated design and building design learning based on industrial needs. The development of laboratory media will focus on the field of construction expertise which is integrated with the scope of mechanical and electrical competencies in a simple building. This research was developed using the System Development Life Cycle (SDLC) approach which is described by the V-model, starting with the requirements analysis, requirements specification, design specification and program specification stages. This prototype ends with testing including acceptance testing, system testing, integration testing, and unit testing. Meanwhile, product testing includes aspects of functional suitability, performance efficiency, compatibility and usability. The development of a laboratory media prototype based on AuRI (Augmented Reality with Industry) will be divided into 3 stages, including: needs assessment, development of Augmented Reality, and finalization of AuRI. This prototype will be developed and implemented in laboratory learning for initial pilot projects in the construction sector and has been adapted to industry needs. Prototype trial data will be tabulated and effectiveness test results will be analyzed descriptively. The outputs that have been achieved are: (1) Appropriate Technology products, laboratory media prototypes based on AuRI (Augmented Reality with Industry); (2) IPR for laboratory media prototype products based on AuRI (Augmented Reality with Industry); (3) Submitted articles in the Scopus indexed international journal i-JIM (International Journal of Interactive Mobile Technologies); (4) IA with Partner Industry. The output of this research is targeted at TKT Level 7, AuRI (Augmented Reality with Industry) based laboratory media prototypes are implemented and integrated into laboratory learning.

Kata Kunci: *Augmented Reality, Industry, Vocational Education*