

DEVELOPMENT OF AUGMENTED REALITY-BASED LEARNING MEDIA AT SMK NEGERI 3 YOGYAKARTA DEPARTMENT OF CONSTRUCTION AND PROPERTY BUSINESS

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ABSTRACT

The COVID-19 pandemic encourages the emergence of new adaptations and habits in society, including education. One of the problems in the world of education that has occurred during the COVID-19 pandemic includes the need for appropriate post-covid-19 learning media to support the learning process. The WFH policy and the teaching and learning process with the PJJ system provide quite complex challenges to maintain the quality of graduates and the achievement of learning outcomes. Students' ability to understand the basics of building construction and land measurement techniques has decreased compared to when there was no pandemic.

The problems in this research are formulated: (1) How to build and develop AR products to facilitate students' understanding of the basics of building construction and land surveying techniques at SMK Negeri 3 Yogyakarta?; (2) How is the quality of the feasibility of AR products that have been developed in terms of content and development media?; (3) How is the effect of AR products on students' understanding of the expected competencies?. Answering the formulation of the problem, this flagship research has the following objectives: (1) Produce Augmented Reality products for the basics of building construction and land measurement techniques at SMK Negeri 3 Yogyakarta; (2) Knowing the quality of Augmented Reality products so that they are suitable for use by students and teachers; (3) Overcoming learning problems that have existed in the Construction and Property Business Department of SMK Negeri 3 Yogyakarta, especially in the post-covid-19 pandemic.

This research proposal is a continuation of solving problems regarding education in Indonesia, especially at the SMK level. This research is in line with the vision and mission of UNY by leading to the basic framework of research development on the theme of developing inclusive and adaptive education with a focus on improving the quality of vocational and vocational education with applied technological innovations contained in the RIP LPPM 2021-2025.

The approach used in this modeling is the RnD method. The research is divided into three stages, namely: need assessment and testing of Augmented Reality products, Augmented Reality product development, and product finalization. This product is implemented in SMK with engineering and technology expertise in civil engineering, namely at SMK Negeri 3 Yogyakarta, Department of Construction and Property Business. Before implementing the product to users, the media and material feasibility tests are carried out by experts. Data collection techniques used using two methods, namely observation and questionnaires. The questionnaire was conducted on students of SMK Negeri 3 Yogyakarta, majoring in Construction and Property Business. The planned outputs are: (1) Augmented Reality Appropriate Technology products; (2) IPR (Intellectual Property Rights) for Augmented Reality development; (3) National Journal Articles with ISSN (Jurnal JPTK); (4) International Seminar Articles (ICSI). Reviews from students of SMK Negeri 3 Yogyakarta as product users and media experts as well as material experts. The results obtained from the development of media can help students understand the subject.

Kata Kunci: Augmented Reality, buildings, learning media, post-pandemic learning, SMK