ABSTRACT

DESIGN AND DEVELOPMENT OF AUGMENTED REALITY APPLICATION FOR ANDROID-BASED HARDWARE INTRODUCTION (CASE STUDY SD ISLAM PLUS MASYITHOH)

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SD Islam Plus Masyithoh is a private elementary school that has implemented learning about information and communication technology. However, most teachers tend to apply conventional learning which causes students to feel bored and less interactive as in the introduction of computer hardware. This learning requires teaching aids to improve students' understanding, but schools have limited facilities so that students have difficulty understanding various kinds of computer hardware. Therefore, using Augmented Reality technology can provide a solution, the technology is applied using markers as targets to visualize computer hardware that has been realized into 3D objects. In the development of augmented reality systems using the Multimedia Development Life Cycle and Prototype software development methods. This method is used for the development and design of multimedia software systems. Furthermore, the author tested the application using the black box testing method, the results obtained from the black box testing are that all functions on the application features can run well. Then the author conducted usability testing with the System Usability Scale method. Of the 30 students who have filled out the questionnaire and calculated the SUS, the average score is 83.1. It can be interpreted that the application being tested obtains a grade of "B" with the predicate of "Excellent" and the conclusion in the Acceptability Ranges category is "High" with a high range of user acceptance of the application.

Keywords: Augmented Reality, Black Box Testing, Computer Hardware, Multimedia Development Life Cycle, and System Usability Scale.