

ABSTRACT

AUGMENTED REALITY DESIGN FOR LEARNING TOBA HOBO SCRIPT WITH MULTIMEDIA DEVELOPMENT LIFE CYCLE METHOD

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Based on the previous explanation, a pre-survey was conducted to see the actual condition of Batak Script knowledge for children by distributing a temporary questionnaire. This questionnaire consisted of indicators of Batak Script Knowledge and Batak Script Technology and Learning to 10 respondents. The results of the pre-survey showed that 70% of the children gained knowledge of the Batak script. 100% of children feel that learning Batak script using Augmented Reality (AR) technology is very interesting. This application aims to increase students' understanding and interest in Batak script and preserve the culture and traditional heritage of the Batak tribe in the digital era. The method used in this research is the Multimedia Development Life Cycle which involves the stages of analysis, design, development, implementation, testing, and evaluation. Literature study is conducted to understand the Batak script writing system, existing learning methods, and augmented reality technology. Application development involves programming, testing, and iteration to ensure quality and functionality. The application development involves programming, testing, and iteration to ensure quality and functionality. After the application has been developed, the implementation stage is carried out in the learning environment in the hope that it can increase the understanding and interest of students. Testing is carried out through observation, and questionnaires with children and adolescents to evaluate the effectiveness of the application. Testing also uses the black box method with the respondent's smartphone to verify the main functionality of the application, such as AR display, History Video, Quiz, Info, and Guide as well as application stability in various conditions of use. This application was built using Unity and the vuforia library which is able to display images in 3-dimensional form into a real environment using markers and Android smartphones. Augmented Reality is intended to introduce Batak script and preserve the cultural wealth of North Sumatra. The result is Black Box Testing reveals the functionality of a very feasible application with a score of 97.05%. Augmented Reality applications can be run on an android smartphone with a maximum distance of 60cm on the marker and evaluation results to users who are given questionnaires. and obtained an overall application value of 82.5% which is categorized as good.

Keywords: *Learning, Batak script, Augmented Reality, MDLC, students*