DEVELOPMENT OF AUGMENTED REALITY FOR RECOGNITION OF HIJAIYAH LETTERS FOR PRESCHOOL CHILDREN

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ABSTRACT

Hijaiyah letters or Arabic letters have been used to read the Koran by Muslims throughout the world since ancient times. Learning the hijaiyah letters is the first step to reading the holy book Al-Qur'an. To improve the ability to read hijaiyah letters in children, it is very necessary to choose the right learning method or media as well as good strategies, because they have a very big role in the learning process. The Android system is an operating system that is in great demand by people around the world, so learning applications can be used anywhere and at any time. The content required by users can be accessed easily and is equipped with multimedia facilities that are able to combine text, images and sound in one device. In its application, Augmented Reality can be implemented on devices that have cameras. This research aims to build an application that can help users introduce Hijaiyah letters on Android smartphones by applying Augmented Reality. This application will access the device's camera to recognize the Hijaiyah Letter marker so that when the marker is successfully recognized it will display 3D Hijaiyah Letters along with the audio pronunciation. This Augmented Reality application was developed based on the Linear Sequential method and Unified Modeling Language (UML) object-oriented analysis. To build this application using Vuforia SDK and Unity3D.

***Keywords**: Hijaiyah letters; 3D Objects; Augmented Reality; Android*