APPLICATION OF ANDROID-BASED AUGMENTED REALITY TECHNOLOGY AS A LEARNING APPLICATION MEDIA FOR INTRODUCTION TO THE HUMAN RESPIRATORY ORGAN SYSTEM

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ABSTRACT

The development of science and information technology is currently very fast, in line with the times, the use of technology is increasing and has a very important role in helping the teaching and learning process. Learning media also follows technological developments, starting from print, audio, computer technology to combined print and computer technology. Currently, learning media resulting from a combination of print and computer technology can be realized using augmented reality (AR) technology. Augmented reality is an effort to combine the real world and the virtual world through certain programming devices so that the boundary between the two is very thin. Augmented reality technology can be used as a medium for learning respiratory organs to replace systems that still use conventional media such as whiteboards, pictures or teaching aids. It is hoped that the existence of learning media using augmented reality technology can be used as an alternative to introduce the human respiratory organ system which will make users interested in learning about it and can simplify the learning process and increase users' interest in learning. In this research, Unity was used to build an Android-based application and Vuforia SDK so that the application built could be an augmented reality technology application. To convert 2D object images into 3D using monster mash, then for modeling images of respiratory organs in 3D they are made using blender software, and for the user interface display they are made using figma. This respiratory organ system learning media with augmented reality technology can be run on an Android platform of at least version 9.0. The system can display the shape of the human respiratory organ system in the form of a 3D object and pop up a short description of the 3D object displayed, and can display audio containing sound from the pop up description.

Keywords: Augmented Reality, Media, Learning, Organ Systems, Android