ABSTRACT

DESIGN AND BUILD AUGMENTED REALITY
APPLICATION OF HUMAN DIGESTIVE SYSTEM ORGANS

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The human digestive system is one of the organs covered in the biology curriculum at school. Students, on the other hand, However, the passive and less interesting learning process makes it difficult for students to understand this material. In this case there is a technological innovation called AR. AR implementation can make the learning process interactive, where students can be directly involved in the learning process by interacting in real time with the virtual object being studied. Using the Blender application to design objects in three dimensions, the objects created are the Mouth, Esophagus, Stomach, Small Intestine, Large Intestine, and Anus. Unity3D is used as a tool to create AR applications. The author designed an Android-based AR application using the Markerless User Defined Target method named ORGANKU. The results of the designed system can help users learn and recognize human digestive organs more easily and interestingly, as a test the researchers will use Black Box testing as a functional test and System Usability Scale (SUS) conducted with a group of junior high school students in Temanggung Regency to get the perspective of the end user of the ORGANKU application. With the results of the SUS score on 19 respondents of 77 with the percentile approach having a value of 80%. So it can be said that the value category of the ORGANKU application is "B" or "good" with an average SUS value of 68.

Keywords:AR, Markerless User Defined Target, Unity3D, Blender, Human Digestive Organs