

ABSTRACT

The COVID 19 outbreak has had a tremendous impact. In Indonesia in the education sector, face-to-face learning in the classroom is replaced by online learning by utilizing internet applications and technology. With such sudden changes in learning methods, UNICEF Indonesia and the Ministry of Religious Affairs of the Republic of Indonesia conducted a survey on the level of development and satisfaction in learning, and the results in elementary school learning are very many children who find it difficult to learn and understand the material, especially materials that require time, practice and reasoning, as well as material Changes in The Form of Objects in the subjects of Natural Sciences Elementary School Third grade. With such case studies, the authors provide solutions by providing more interesting and easy-to-understand learning methods, namely using the concept of Augmented Reality. This android-based perwuda CPG app combines the concept of markers in the form of picture cards with augmented reality apps. Markers contained on the picture card will be captured by the camera from the smartphone device and then processed to bring up 3D objects and some 3D objects that have been animated from changes in the shape of objects on the layer in real time. Testing the system on the application using the black box method on three different types of Android-based smartphones with the results that the application can run well. Then for usability problems using a heuristic evaluation method with 10 heuristic principles to three usability experts with the results requiring some improvements, especially on the visibility of system status which has the highest severity rating value of 1.22. From the results of system testing and usability of the application, it can be concluded that the application runs well even though there is a little discomfort in the appearance of the application, but the application can still be published by making improvements that have been recommended by usability experts.

Keywords : 3 Dimensions, Augmented Reality, Android, Change of Form, Learning.