ABSTRACT

Learning media is used to make the learning process more effective and efficient. the process of projection image learning in Mechanical and Electrical Workshop course still uses conventional methods, it is deemed necessary to use a new innovation by utilizing existing technological developments, in order to facilitate students' understanding of the Concept of Projection.

By utilizing Augmented Reality (AR), where AR is a technology of combining virtual objects (text, images, and animations) into the real world. the 3D AR Projection Image applications on android will display different types of orthogonal projections, where there are two types based on how to project views, namely European projections and American projections. the implementation use markers that will be accessed by an Android smartphone camera, then displaying the objects in three-dimensional (3D) projections and place the projection views on the smartphone screen.

Based on all content and systems that exist in the application are running as expected, the results of testing delay performed on capturing Markers with 1032 Lux conditions, a distance of 20 cm and angles 300 as optimal conditions produce the average delay is 0.715 seconds. Survey the benefits of the application of the best MOS results with a value of 4.30 while the Survey function features and application appearance of the best MOS results with a value of 4.46.

Keywords: *Orthogonal, European projection, American projection, and Augemented Reality*