

ABSTRAK

Media pembelajaran *Augmented Reality* (AR) berbasis Android pada materi Simulasi *OSI Layer* dikembangkan untuk membantu peserta didik memahami fungsi dan peran setiap lapisan *OSI Layer* yang bersifat abstrak. Pembelajaran yang masih didominasi metode ceramah dan media presentasi dua dimensi menyebabkan peserta didik kesulitan membedakan fungsi setiap *Layer* serta memahami alur kerja pada model *OSI*. Untuk mengatasi permasalahan tersebut, dikembangkan media pembelajaran *OSI LAYER Academy* menggunakan metode *Research and Development* (R&D) dengan model *ADDIE* yang terdiri atas tahap Analysis, Design, Development, Implementation, dan Evaluation. Media ini menampilkan model tiga dimensi tujuh lapisan *OSI Layer* yang dilengkapi visualisasi dan informasi pada setiap *Layer* serta dapat diakses melalui perangkat Android. Hasil validasi menunjukkan tingkat kelayakan sebesar 94% dari ahli media dan 92% dari ahli materi dengan kategori sangat layak. Sementara itu, hasil uji coba pengguna memperoleh persentase 96% pada uji perorangan, 96,25% pada uji kelompok kecil, dan 95% pada uji kelompok besar. Hasil tersebut menunjukkan bahwa media pembelajaran yang dikembangkan sangat layak digunakan sebagai media pembelajaran untuk membantu peserta didik memahami materi Simulasi *OSI Layer*.

Kata Kunci: *Augmented Reality*, Android, Media Pembelajaran, *OSI Layer*, *ADDIE*.

ABSTRACT

The Android-based Augmented Reality (AR) learning media for OSI Layer Simulation was developed to help students understand the functions and roles of each OSI Layer, which are considered abstract concepts. Learning activities that are still dominated by lecture methods and two-dimensional presentation media often make it difficult for students to distinguish the functions of each Layer and understand how the OSI model works. To address this problem, a learning media called OSI LAYER Academy was developed using the Research and Development (R&D) method with the ADDIE model, consisting of Analysis, Design, Development, Implementation, and Evaluation stages. This media presents a three-dimensional model of the seven OSI Layers equipped with visualizations and information for each Layer and can be accessed through Android devices. The validation results showed a feasibility score of 94% from the media expert and 92% from the material expert, both categorized as highly feasible. Meanwhile, the user testing results obtained scores of 96% in the individual trial, 96.25% in the small-group trial, and 95% in the large-group trial. These results indicate that the developed learning media is highly feasible to be used as a learning medium to help students understand OSI Layer Simulation material.

Keywords: *Augmented Reality, Android, Learning Media, OSI Layer, ADDIE.*