Implementation of Augmented Reality Technology as a Swimming Learning Media

Maria Lysis Sastra Kurnia Jastradaf
Informatics Study Program, Faculty of Science & Technology
University of Technology Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : listajastradaf@gmail.com

ABSTRACT

Swimming is one of the most popular water sports. However, the current swimming learning process still relies on conventional learning media such as books, video tutorials and 2D images which are unable to visualize swimming movements as a whole. To overcome the limitations of previous learning media, augmented reality technology was implemented as a swimming learning media. This technology is capable of displaying 3D animation of swimming movements and allows users to learn interactively through the marker scanning process. The research method uses software engineering methods with a waterfall approach, including data analysis through observation and questionnaires, as well as system design using use cases and activity diagrams. Implementation is carried out via the Unity 3D platform, while testing uses the black box testing method. Test results show the system is responsive, accurate, compatible, stable and easy to use. Thus, the implementation of augmented reality technology is suitable for use as a more effective and interesting swimming learning media.

Keywords: swimming, augmented reality, learning media, 3D animation, marker-based