



COLLEGE OF COMMUNICATION AND INFORMATION TECHNOLOGY

**EFFICIENCY AND ACCEPTABILITY OF
MIXED REALITY APPLICATION
OF SOLAR SYSTEM IN TEACHING SCIENCE**

**A Thesis
Presented to the Faculty of the
College of Communication and Information Technology
President Ramon Magsaysay State University
Castillejos, Zambales**

**In Partial Fulfillment of the Requirements for the Degree
Bachelor of Science in Computer Science**

By:

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CERTIFICATION

This thesis entitled "**Efficiency and Acceptability of Mixed Reality Application of Solar System in Teaching Science**", prepared and submitted by **Jerico A. Lazaro, Ahljhun L. Olis, Rica B. Requelman and Xyra N. Sanchez** in partial fulfillment of the requirements for the degree **Bachelor of Science in Computer Science**, has been examined and recommended for Oral Examination.



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APPROVAL

Approved by the **PANEL OF EXAMINERS** on Oral Examination on April 16, 2019 with the grade of _____.


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Accepted in partial fulfillment of the requirements for the degree **Bachelor of Science in Computer Science**.

Date


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Abstract

The constant changed in technology and the new innovations was undoubtedly contributed largely to education. Mixed Reality (MR), one of the newest technologies and a very promising tool that allows merging of physical reality and virtual environment to enhance teaching and learning process for better and engaging learning experiences. The researchers proposed a "Mixed Reality Application of Solar System" as an assistive tool by the teachers in teaching of the lessons faster through visualizing 3D models of planets in the solar system.

In this paper, the researchers made use of descriptive-qualitative technique and a survey in gathering data. The study has undergone testing and evaluation with the help of five (5) IT experts as alpha testers and twenty (20) STEP students of Subic National High School as beta testers using the ISO 9126-1 software quality standards criteria. Alpha tests overall rated mean of 4.53, interpreted as "Excellent" on Functionality, 4.13 "Very Good" on Usability, 4.00 "Very Good" on Efficiency and 4.40 "Excellent" on Portability while beta tests overall rated mean of 4.78 "Excellent" on Functionality, 4.66 'Excellent" on Usability, 4.60 "Excellent" on Efficiency and 4.80 "Excellent" on Portability. Respondents were satisfied on the performance of the mixed reality application as manifested on the results of the survey, 4.15 "Very Good" on users' acceptance and 4.50 "Excellent: on experts' acceptance.



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Based on the data gathered from the respondents, the researchers recommended the use of the developed mixed reality application in teaching science. Respondents recommendations were mainly focused on the improvement of the graphics and user interface through adjustment of interactive buttons in the application. The researchers recommended for the future enhancement of the application to the future researchers the capability of the mixed reality application to be available in iOS and personal computers.

Keywords:

Mixed Reality, Solar System, 3D Models, Virtual Environment