**ABSTRACT**

Title: SOLREI: The Universe and the Solar System, A Virtual e-Learning Mobile Application

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Abstract:

E-Learning applications are undeniably one of the most significant facets in today’s education. It was widely used in the teaching and learning process and was acknowledged and acclaimed in the field of education due to its numerous advantages. E-learning has made the teaching and learning process a lot more convenient and effective.

For this study, the proponents developed SOLREI: The Universe and the Solar System, A Virtual E-Learning Mobile Application to serve as an additional learning material for the grade - 6 students of Panpacific University North Philippines. The application is designed for android operating system versions 7 and up and can be run through mobile phones and tablets as long as it meets the system requirements and should have a storage of at least 100mb free space. The user will also need a virtual reality glasses or VR Box for better application experience. The proponents used Adobe Photoshop for designing the Graphical User Interface of the mobile application.

The proponents used Rapid Application Development as software development methodology and developed the application using C# programming language in Unity 3D

The study also aimed to identify the current teaching procedures and existing materials in teaching the topic the universe and the solar system. According to the teacher interviewed by the proponents, Audio Visual Presentations, PowerPoint Presentation and books are the existing teaching materials, which play an important role in teaching the topic. With these, the lesson is presented with slides, videos or digital arrangements and during the presentation of the lesson, the teacher provides additional information (i.e. current events, trivia facts, etc.), reinforces key points, and involves the learners in the discussion.

The e-learning mobile application is designed with a user friendly Graphical User Interface that will help the student navigate the application easily. The designed features of the application are e-Lesson, virtual reality viewing of planets and the virtual reality quiz.

The user acceptability was interpreted as highly accepted with the average weighted mean (AWM) of 3.45, while the system acceptability is accepted with the average weighted mean (AWM) of 2.95.

The proponents recommend to the future researchers to update and add more features to the mobile application.