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Research Article

## Transcending the Philippine Educational Culture through Virtual and Augmented Reality with the Integration of the Learning Management Systems

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## ABSTRACT

Amidst the current pandemic situation right now, the Department of Education and the Commission on Higher Education are facing a lot of challenges that will take place this coming opening of classes, and part of their initiative is to adopt the mode of flexible learning. In the case of other Higher Education and other educational sectors which caters to practical and situation cases either scientific or technical approaches in facing the real-time situation. The Researcher is proposing a new alternative flexible learning that will ease up the situations of the current pandemic in all education levels, which is the integration of Virtual Reality, of AR learning content as part of the educational authoring tools, a web-based platform for the development of Augmented content, the distribution of which is accomplished through standardized Learning Management Systems (LMS) using SCORM packages library. Furthermore, a collaborative framework solves the problem of standard integration of Augmented and Virtual Reality applications in education offering a distributed framework which is the Learning Management System platform, (Barbadillo, Barnera, Goñi, & Sánchez, 2014). Upon the implementation of this interactive and immersive technology platforms, higher-order thinking or critical thinking skills will develop further.

*Keywords:* Learning management systems, augmented reality, virtual reality

## Introduction

Amidst the current pandemic situation right now, the Department of Education and the Commission on Higher Education are facing a lot of challenges that will take place this coming opening of classes, and part of their initiative is to adopt the mode of flexible learning. A lot of flexible learning delivery mode is under discus-

sions right now but what is important is education will not be hinder because of the pandemic. In the case of other Higher Education and other educational sectors which caters to practical and situation cases either scientific or technical approaches in facing the real-time situation. Challenges are taking in place because there are questions that need to be solved like how

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about those rural areas with no internet connection and schools that don't have any facilities for the Learning Management Systems. E-learning system is designed to help students build their comprehension towards their respected academic subjects to make their experience in learning more nourishing and engaging remotely, (Mobo & Sabado, 2019). The Researcher is proposing a new alternative flexible learning that will ease up the situations of the current pandemic in all education levels, which is the integration of Virtual Reality, Augmented Reality, and Learning Management Systems. In this case, the critical thinking skills of the students will still be prioritized and develop further. The use of Augmented Reality (AR) that offers great learning opportunities and challenges for educators with the integration of the Learning Management Systems (LMS) with different libraries and frameworks have been proposed for the development of AR learning content as part of the educational authoring tools, a web-based platform for the development of Augmented content, the distribution of which is accomplished through standardized e-learning using SCORM library, (Coma-Tatay, Casas-Yrurzum, Casanova-Salas, & Fernández-Marín, 2018). Furthermore, a collaborative framework solves the problem of standard integration of Augmented and Virtual Reality applications in education offering a distributed framework which is the Learning Management System platform, (Barbadillo, Barnera, Goñi, & Sánchez, 2014). Upon the implementation of this interactive and immersive technology platforms, higher-order thinking or critical thinking skills will develop further.

## Methods

Due to the current pandemic situation, the researcher decided to float a questionnaire through Google Form and have it answered by the Faculty and Students in selected colleges in Zambales and Olongapo City. Qualitative and Descriptive Research will be used in the research methodology. Qualitative and descriptive research is well suited to this study of classroom teaching because tightly controlled experimental research is hardly possible, (Nassaji, 2015). It was answered by both students

and teacher immediately and can generate a tallied report based on the online systems. Upon the online retrieval of the data, the researcher easily interpreted the results statistically.

## Results and Discussion

In Conclusion, transcending the Philippine Educational Culture is really challenging specially in this time of pandemic, but moreover with the aid of the 21st Century Educational Technology it can be solved by implementing and combining pedagogical approach by using the Learning Management Systems with Augmented Reality and Virtual Reality. This is facilitate and foster this new paradigm in learning, they have utilized the most up-to-date multimedia or LMS technologies to enhance both the learning process and the team connectivity in a sequence modality, (Orsak & Etter, 1996).

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