

Edutainment With Flipped IDEAS

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EXECUTIVE SUMMARY

Virtual learning environments are receiving a growing interest due to exponential advancements in technology alongside the millennial users' preference for more modern rather than traditional means of studying. This chapter narrows down on optimizing edutainment in the classroom by strategically using the methods of flipped classroom, team-based learning, and the IDEAS method. The study provides an explained framework that highlights what needs to be implemented on behalf of the instructor and what outcomes can be expected as a result. An experimental study was conducted on students within a course at the graduate level in the United Arab Emirates (UAE). The main objective is to study the effect of virtual learning environment that incorporates the use of flipped classroom, Team-based learning and IDEAS methods on students' academic performance.

INTRODUCTION

Several technologies exist that take advantage of immersive learning environments directly in its usage; however, there lacks an efficient framework that utilizes such technologies in optimizing the extent of knowledge obtained within the limited time students can afford (Bergmann & Sams, 2015). While virtual reality, augmented reality, and mixed reality have made swift strides in educational advancements, a lack of focus on systematically implementing them in the classroom can cause it to be redundant in its purpose. Present day research has been expanding these advancements to educational technology (Dalgarno & Lee, 2010; Fowler, 2015), but little research is conducted on implementation and hence there is a need for an adaptive classroom setup that allows both students and teachers to integrate technology in optimizing the immersive educational experience. One specific branch under the virtual

learning umbrella is ‘edutainment’ which stems from the marriage of the pros of entertainment with the benefits of education (Aksakal, 2015). There is a distinct similarity between virtual learning and immersive virtual reality (VR). VR is the portrayal of an artificially created environment that replaces a user’s real-world surroundings that is convincing enough that it is able to suspend disbelief and fully engage with the created environment. Similarly, a well-designed virtual learning environment includes curriculum mapping, student tracking, and online support that allow individuals to be fully immersive in the learning process (Fowler, 2015). Education practitioners and researchers can reap the benefits of better user engagement, motivation, productivity, memory and stress management that were exclusive only to entertainment through gaming (Stein, 2014). Gamification in edutainment has five main principles for it to be successful (“Gamification in eLearning,” 2015). They are to boost motivation, build learner engagement, increase learning retention, performance feedback and enhance productivity (“Gamification in eLearning,” 2015). It is necessary to properly define these principles first in the context of edutainment, in order to propose a methodology of achieving them. Motivation can be boosted through gamification simply by adding a reward system in the form of giveaways to incentivize students to perform better (Pirker, Riffnaller-Schiefer, & Gütl, 2014). Learner engagement is a practice that is often thought to be the most difficult to build on. The purpose of gamification is that learners often spend more time than usual on academic material without realizing that they are in fact ‘studying’ (Pirker, Riffnaller-Schiefer, & Gütl, 2014). Long-term learning retention can be enforced when students are involved in fun, immersive learning (Stein, 2014). Adding elements of gaming to examination and/or projects can enhance the quality of output (Pirker, Riffnaller-Schiefer, & Gütl, 2014). Gamification demands students to be more efficient, time-sensitive and collaborative in their assignments; therefore, enhancing overall productivity (Bergmann & Sams, 2015).

BACKGROUND

As will be highlighted, this book chapter will initially contribute to the field by aligning all the fields of research that are relevant to immersive education. The proposed framework from the preliminary research was introduced and later supported by experimental evidence. Ultimately, based on this field research, the chapter justifies a unified solution to these predicted problems by proposing a disruptive edutainment model.

A virtual learning environment (VLE) is a framework of teaching and learning methods created to improve a student’s learning experience by introducing computers and the Internet into the learning process. Similarly, immersive virtual reality (VR) is the portrayal of an artificially created environment that replaces a user’s real-world surroundings that is convincing enough for the user to be fully engaged with the created environment. The proposed model employed in this book chapter is a flipped classroom approach integrated with team-based learning (TBL) and the IDEAS method (Stein, 2014). The flipped classroom approach to education is a product of blended learning strategies wherein the focus is on students’ individual application of conceptual knowledge through purposeful activities rather than traditional transfer of information (“What is the ‘Flipped Classroom’?,” 2018). TBL incorporates team building as a necessary activity for collaborative learning and includes structured approaches for in-class learning activities (Michaelsen & Sweet, 2008). The IDEAS method illustrates how the virtues of ‘improvise’, ‘design’, ‘experiment’, ‘aesthetics’ and ‘strengths’ should be pinpointed in an ideal learning experience

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