

Edutainment for an Enhanced Learning Experience (ELE)

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Abstract— *The paper presents research findings on how effective use of edutainment content can increase learner response. It aims to showcase how learning/instructional material can be made more enticing and conducive for Z-Generation learners in academia. The paper looks at different tools (commercial and free) that can be utilized to create edutainment content and facilitate more creative and effective learning. It also explores the beneficial implications of edutainment from enhancing learner perception and engagement to learner responsiveness and knowledge retention. To measure the effects of edutainment a test case was selected in which students of selected courses were required to complete a weekly survey on their workload for an entire semester. An animated video objectively designed with edutainment at mind was used to deliver instructions on the purpose and importance of completing the survey and made available to students of a particular targeted course. Subsequently, response rate from students was by far the highest for the targeted course who received their instructions through the animated edutainment video when compared to all the other courses for all fourteen weeks of the survey.*

Keywords— *Edutainment, Learner Response, Knowledge Retention, Animation*

1. INTRODUCTION

The Pacific Islands region is amidst an Information and Communications Technology (ICT) revolution that could have major implications, particularly for higher level education. The University of the South Pacific (USP) is one of its kind in the world; having a total of fourteen campuses in twelve regional countries. This diversity in geographical setting and its unique demographic made it easy to realize that effective use of ICTs is essential in providing high quality education successfully in the region. Technological convergence is a by-product of such ICT advancements subsequently opening doors to facilitate even more creative ways to support learning. This has been evident with the increased usage of smartphones and tablets by the regions student population. USP's continued investment in eLearning and its new Mobile Learning (mLearning) initiative serve as excellent platforms for promoting edutainment. Edutainment is the coinage of two terms widely used to denote education which is designed to be entertaining. The objective behind adopting the edutainment concept when designing learning content is inherently to keep learners engaged and subsequently enhance knowledge retention.

2. WHY EDUTAINMENT?

Edutainment has existed in the form of parables for Television Learning (tLearning) in history. The term edutainment was used as early as 1948 by The Walt Disney Company to describe the "True Life Adventures" educational TV series. Edutainment is about placing specific messages in an entertainment context in order to achieve changes in attitudes, norms, and behaviors (Arnold, 2012). Even though the term has been occasionally used for some time now the need to invest in such a concept at

higher level education has just been realized in the south pacific. Edutainment can be divided into two broad categories (Wallde and Saronen 2012; White 2003): interactive and participatory, where students can play and participate in a game, and non-interactive and spectator, where students can just be seated and exploring animated movie, science show, virtual museums and zoos, etc.

Students in the South Pacific possess learning styles influenced by conditioning, cultural and traditional values and more recently the ICT revolution. ICTs provide a higher degree of ownership of learning and foster self-directed, lifelong learning (Dawson et al., 2012). Thus the need has risen for pedagogies to transform and explore ways in which to cater for the emergent diversity in ICT influenced learning styles of the Z-Generation students. It seems a daunting task for educators to devise a teaching strategy that caters for all student learning styles in a single sitting or using the eLearning platform. It is a well-known fact that people memorize facts or understand concepts and ideas better when they are emotionally involved (Yates, 2000). Edutainment incorporated content plays as a motivator or facilitator in learning. It is our intention to raise awareness about how effective edutainment can be in the learning process by demonstrating learning materials brought to life objectively to motivate learners to be actively engaged and responsive.

3. EDUTAINMENT TOOLS

In this digital age, there is a wide variety of tools and formats that can be used to create edutainment for the eLearning platform, ranging from flash content, animated text and illustrations, cartoons or animated movie to digital games, etc., all of which is used in order to attract and

maintain learner engagement, while incorporating deliberate educational content or messages. Harnani and Nor, 2010 suggested the reason why edutainment was not popular, because it required instructors with better knowledge and more skills than the narrative teaching, and incurred higher costs. This is no longer a barrier due to the availability of free tools that could be used to develop edutainment content.

Educators can select software packages from either the commercial stream: Adobe Flash Professional, Cinema 4D, ToonBoom, CrazyTalk Animator amongst others; or the free stream: Xtranormal, GoAnimate, Blender, Muvizu, etc. Universities usually encourage the use of Free and Open Source Software (FOSS). This is one of the defining attributes of the Blender software which is primarily used for creating animated films, visual effects, art, 3D printed models, interactive 3D applications and video games providing a broad spectrum of modelling, texturing, skinning, lighting, particle simulation, and post-processing functionality in one package. Muvizu on the other hand is a popular tool for educational purposes and comes pre-packed with a variety of two-legged characters, objects, effects, and pre-made animations which educators can use to fit their own stories. The commercial packages like Adobe Flash Professional provides more functionalities and features to create full-featured animated content but has a steeper learning curve and requires knowledge of programming languages such as action script.

4. IMPLEMENTATION

The students of selected courses from the Faculty of Science Technology and Environment at USP were required to complete an extensive survey on their workload for an entire semester progressively for each of the 14 weeks. The survey was geared towards cultivating professionalism through demonstration of basic time management skills and the data gathered on student workload would be instrumental in essentially building a credit point system.

The students that were required to complete the survey were the same set of students throughout the fourteen week participation. There were reservations about the effectiveness of student participation and it was projected that traditional methods of information dissemination would not suffice. Hence it was decided by the course coordinator of the targeted course to relay instructions through a more entertaining yet informative format. Thereafter, a miniature animated video objectively designed with edutainment at mind was created and utilized to deliver instructions on the purpose and importance of completing the survey and disseminated to students of the targeted course. The video was played once during a lecture session and then posted on the targeted course's News and Announcements forum on USP's Learning Management System - Moodle. The other fifteen courses served as control groups. Figure I showcases a snapshot taken from the animated video created in the effort to use edutainment to enhance learner reception, engagement, and responsiveness.

5. SURVEY RESULTS

The survey response rate was recorded and the video was viewed by 248 out of the 260 students registered with consideration of the 3 dropouts. Subsequently, response rate was by far the highest for the target course when compared to all the other courses collectively for the 14 weeks of survey. According to the data presented in Figure II, students who received their instructions via the edutainment video responded more consistently and steadily to the weekly surveys as opposed to the control groups. This can lead to the conclusion that the edutainment enhanced instructional video aided in enhancing the students' perception, engagement and responsiveness allowing them to actively participate in the much needed student workload survey.

6. EDUTAINMENT POTENTIAL IN THE REGION

There is no doubt that ICT has changed the way student's learn. Kulik's (1994) meta-analysis study revealed that, on average, students who used ICT-based instruction scored higher than students without computers. The students also learned more in less time and liked their classes more when ICT-based instruction was included. This approach has motivated students to commit to learn and to participate in learning activities.

Edutainment seems to be a promising avenue of communication for development and enhancement of student learner experiences. It creates a more positive, affective environment for learning which consequently increases knowledge retention. Edutainment could be used as a reinforcement tool to support learning due to the practice ICT has afforded. Taking advantage of these opportunities needs a profound change in the organisation of the higher education system in the region. But the main change is that innovation becomes the heart of the learning process. Educators can truly play the role of facilitators by engaging in the development of edutainment to promote and support learning in the region.

7. CONCLUSION

The paper has presented the potential of edutainment to be used as a tool to support and enhance learning experiences. It has shown the various tools educators can use to develop high impact learning content and also showcased experimental results that support edutainment as a contributor in enhancing or maximizing learner response. The demand by current and future generations in the region to receive quality education would only grow because learners have become increasingly sophisticated in their learning habits and preferences as influenced by ICT advancements. Educators need to adopt the best practices of delivering learning materials to inspire and engage students. Considering the points discussed in this paper, higher educational institutions in the region should start to adopt the edutainment concept simply because it has a positive impact on the learning process and provides an enhanced learning experience.

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CAPTIONS FOR FIGURES

FIGURE I: Student Workload Animated Instructional Video

FIGURE II: FSTE Student Workload Survey Data