Chapter 20

Pleasant Learning Experiences: Augmenting Knowledge through Games and Interaction

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ABSTRACT

There is no discussion on treating games (pure interactive experiences) as structured and complex activities that can be used for solving problems and then for learning. The Multimedia field is purely transversal and strategic. It can be applied to different sectors, providing innovative solutions from the mixing of knowledge and different perspectives. Different academic programs are focusing on the integration of the creation, the design, and the engineering “pieces” in any learning process.

La Salle-URL has offered a unique multimedia engineering degree since 1996 plus an innovative Multimedia Creation, Design, and Engineering (MCDEM) master program since 2005. Both degrees mean new approximations to the training, teaching, and learning experiences with suitable syllabi that take into account different technologies and methods in order to ensure the best learning performance for students.

Both degrees are adapted to the new European framework (Bologna process and European higher education area) in terms of teaching methodologies and evaluation rubrics. The authors listened to the industries. They were told to incorporate soft skills within their layouts, and therefore, they introduced project-based approaches in which students solved real problems coupled with real environmental parameters.

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INTRODUCTION

Entertainment dazzles, amuses and gives pleasure to the senses (The Free Dictionary, 2009). On the other hand, a game is an interactive experience in which we use an interface to undertake a series of tasks while conquering challenges at the same time that we live through a playful experience. We might say that a (serious?) game adapts to the user who is interacting, providing with visual, auditory and probably tactile feedback. It can be said without a doubt that this seems to be the perfect tool with which many teachers have been dreaming of from immemorial times (Davidson, 2008).

Recent informative articles (Badia & Garcia, 2010; Garcia & Badia, 2010; Kevin & Steven, 2010) suggest that our training efforts should rather be directed towards the creation of multidisciplinary profiles instead of very specific ones. These profiles would intend to work and dialogue between different fields. Dr. Guillem Bou (Garcia & Badia, 2009; Garcia, Fonseca, & Pifarré, 2010) states that current Humanities should be strengthened with Science and Technology. This affirmation recalls the beginnings of the scientific thought.

The Edutainment field studies the act of learning through a medium that both educates and amuses at the same time. Games are built on the top of several items which are also profitable for the design of an educational experience: different types of media (boards, cards, computers or tablets...), different playing experiences (RPG’s, Arcade, Shoot’em Up’s, Strategy, …), technologies (3D engines, different programming languages, games consoles and platforms, VR and AR peripherals, …), algorithms (Artificial Intelligence, Physical Simulation, Lighting, …) and different final applications, such as teaching and mentoring. Games are very good examples of multidisciplinary productions, like any interactive experience able to keep the user immersed “in another reality.” In fact, video games can be considered as a particular case of collaborative virtual environments and these are made of different disciplines (graphic design, usability and user centered design, script and narrative, technology management, etc.).

Our aim is our students learn how to manage complexity at the same time that their personal skills (Badia & Garcia, 2010; UNIDUESTO, 2010; Garcia & Badia, 2010). According to Kurt Squire (Davidson, 2008), different playing experiences with different “game plays” allow players (users / students) to learn and manage complexity. The user, immersed within a virtual environment, continuously experiences and monitors the surrounding context and then decides (reassigns) goals and milestones in real time. Patterns are followed and detected and times are evaluated, again interactively, thanks to the received signaling that triggers emotional responses to the player. This is a pure case of cognitive complexity which consists of repeating once and again until the user is able to obtain a master in the discipline. The creation of games and simulators takes into account a complete life cycle (pipeline) which consists of several blocks, result of its inherent complexity. Learning consists of facing challenges, having in mind clear goals, managing conflicts and following a set of rules. Users should interact and socialize with all types of profiles, whereas they enjoy (without getting bored and thus balancing the necessary skills) and do not lose a bit of interest. That is, keeping the flow (Schell, 2008) as psychologists would suggest. Explore, socialize, collect, settle and, why not compete? In short, discover. All these experiences can be felt when playing.

In this article, we present and justify some of the educational initiatives carried out by a unique official degree in Multimedia Engineering in Spain and the MCDEM graduate program. The latter follows the previously mentioned degree and consists of the creation of Serious Games to serve different needs and clients. Both degrees are offered by the Media Technologies Department at La Salle-URL (2010).