Chapter 1
Serious Games in Entrepreneurship Education

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ABSTRACT

One of the main strategies for fostering the entrepreneurial mindset in students has been the development of training activities inside and outside classrooms using serious games. The chapter makes a brief description regarding five serious games initiatives that intend to promote and facilitate entrepreneurship education for different educational stages. Furthermore, the authors discuss the key benefits and challenges by the introduction of serious games in the learning process. The authors concluded by identifying that serious games have the potentiality of improving the learning process by providing an immersive experience for students that increases their motivation and potentiates the acquisition of multidisciplinary competencies. However, there are some challenges that should be properly considered and mitigated, namely in terms of assessing learning goals, integration with didactical systems, and support for different styles of learning.

INTRODUCTION

Computer games are currently often used in different serious applications and especially in the terms of vocational education and training. In fact, serious games (SG) are used in a wide variety of areas, in several aspects of common life, such as for health, politics, advertising, project management, and virtual reality, amongst others. The intention of serious games is based on the idea to offer a balanced possibility for an authentic and amusing learning. Currently the teaching community is progressively discovering how game based learning supports the personalized trainings and gives new instruments for teaching basic key competences.

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At the same time, one of the main challenges of educational programmes is to ensure that education delivers the right skills for the labor market and the growth of entrepreneurship, while delivering support to young people to secure their economic future and enable businesses to grow and create new jobs. Actually, entrepreneurship is considered as the most common powerful economic force across the globe (Gwija et al., 2014). Entrepreneurship education has the capability to benefit students from all socio-economic backgrounds because it guides students to think outside the box and nurtures unconventional talents and skills. Furthermore, it fosters innovation, ensures social justice, encourages confidence and stimulates the economy.

Serious games may be considered powerful tools to sustain entrepreneurship in the context of the emerging paradigm of Technology Enhanced Learning (TEL). Serious games combine simultaneously instruction and gameplay, by challenging and involving players in motivating learning contexts. They also offer students a genuine "situated" learning experience and can concretely support the "learning by doing" approach, considering that simulations offer a more pragmatic experience and provide a safe environment in which immersive entrepreneurs could test their own business.

This study aims to identify and synthesize the main key benefits, but also challenges and issues, provided by the introduction of serious games in the learning process. For that, we initially perform a revision of literature in the field of simulations and serious games initiatives applied to entrepreneurship domain. In this context we briefly present and describe five serious games initiatives in entrepreneurship education. After that, we identified and discussed the main key benefits and challenges created by the introduction of serious games. Finally, we look for current and emergent future research directions and we draw the conclusions of our work.

BACKGROUND

According to Belloti et al. (2014), entrepreneurship is "a personal skill and motivation which draws a person to engage his abilities and efforts in the creation of new products and services". The European Commission defines entrepreneurship as "an individual's creative capacity, independently or within an organization, to identify an opportunity and to pursue it in order to produce new value or economic success" (Carvalho et al., 2012). Entrepreneurship education is often seen as a way to foster economic growth and to deal with economic crisis (Allegra, 2013). However, entrepreneurship education is often pointed as immature, not sufficiently integrated in schools curricula and not adequately addressed by national policies, particularly in European countries (Allegra et al., 2013; Belloti et al., 2014).

Today, digital technologies are part of most people lives, from the early childhood. Educators and corporate trainers did not ignore this reality and Information and Communication Technologies (ICT) are being used in education and training for several years with different approaches, including the use of games. Games have been used for a long time (Farber, 2015; Schifter, 2013) as a support for learning activities. In the last decades, the popularity of video games and the introduction of ICT in education and training gave rise to a trend known as Game-Based Learning (GBL). This trend deals with games that have defined learning outcomes. Within GBL, simulations and serious games have gained notoriety (Allegra et al. 2013; Bastos et al. 2012).