

Chapter 9

A Multi-Disciplinary Approach to Designing Business Management Games

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ABSTRACT

Computer games have become an important part of the new digital economy, employing thousands of Information Technology professionals worldwide. Their role as a novel approach to reduce the distance between students and knowledge is also well documented. In this chapter, we will describe a multi-disciplinary approach to designing a particular class of educational games: business management games. We argue that through a better understanding of the relationship between work-domain based decisions and processes, professional game designers can achieve effective results. The design approach was based on intensive collaboration and co-design meetings with business management researchers and professors. The result was a game called “SimCompany”, aimed at teaching children about business management concepts, thus promoting an entrepreneurship culture in classroom settings. “SimCompany” proved effective as a teaching tool about business management concepts, and initial evaluation showed a positive increase in students’ rate of learning, when compared to traditional teaching methods.

INTRODUCTION

The power of games as learning instruments has become unquestionable. Our students have

changed radically and today’s students are no longer the people our educational system was designed to teach. Today’s students represent the first generation to grow up with the new digital technology, having spent their entire lives surrounded by and using computers, videogames,

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digital music players, video cams, cell phones, and all the other toys and tools of the digital age. Today's average college grads have spent less than 5,000 hours of their lives reading, but over 10,000 hours playing video games (not to mention 20,000 hours watching TV). This is one out of many reasons why both researchers and practitioners have started to embrace games as educational tools, as opposed to the traditional vision of games as merely entertainment instruments.

The process of designing novel educational games, however, is still far from becoming well defined. In this book chapter, we describe "SimCompany", a fun game designed to instill in children (9-14 years old) the entrepreneurship spirit. As the young player progresses in the game, the basic concepts of consumer behavior, marketing and strategic management are described, illustrated and reinforced in a fun, easy and engaging way.

The goal of the game is to reach the last level and complete it with the greatest amount of points accumulated and before time expires. As an example, we provide a brief description of the levels of this game, taken from the game's script, which was outlined through a multidisciplinary design approach involving designers, programmers, user interface experts and - most importantly - entrepreneurship and management research and experts.

The remaining of this chapter is structured as follows. The next section, "Background" provides a starting point of discussion and contextualizes this research, in terms of existing educational games and also conceptualizing the learning experience *per se*. The third section describes the approach followed and also describes the "SimCompany" game in some detail. The results from evaluation sessions are also presented. Finally, sections "Conclusions" and "Future Work" present a summary of the findings as well as future avenues of research in this field.

BACKGROUND

Some authors observed that computer games have achieved their massive reach without going through the education system. While games may be an ideal companion to classroom instruction, they do not have to go through the classroom to access students. Other educational reforms depend on the teacher as the medium and do not necessarily take into account the many demands and constraints already faced by educators. Video games give teachers and parents the ability to reach students where they live, bypassing many of the challenges associated with restructuring the education system from the inside out.

Games for Learning

Using games as an educational tool is not a novel approach. Their true potential emerged from the fact that 50 to 60 percent of all Americans play games and the typical game players are relatively young computer users (Kafai, 1995). Particularly popular games include the simulation genre, e.g. *The Sims* and *SimCity*, which allow players to create and manage simulated communities and worlds. *Spore* is another title aimed at simulating evolutionary adaptation (Maxis, 2006).

Games have also been used for serious purposes. Early examples include games that promote health behavior change and management for children, such as *Packy and Marlon*, and adventure game for children to learn about diabetes self management skills, and *Rex Ronin*, a smoking prevention video game. Games have also proven effective in teaching children a foreign language (Baltra, 1990).

Serious games have also been developed for adults to train personnel in a variety of areas. Examples include Visual Purple's *Angel Five*, modeling a weapons of mass destruction terrorist attack with the trainee coordinating resources between federal, state, and local agencies; BreakAway's *Incident Commander* trains first responders and

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