Chapter 100
Providing Career Guidance to Adolescents through Digital Games:
A Case Study

Ian Dunwell
Coventry University Coventry, UK

Panos Petridis
Coventry University Coventry, UK

Petros Lameras
Coventry University Coventry, UK

Maurice Hendrix
Coventry University Coventry, UK

Sara de Freitas
Coventry University Coventry, UK

Sylvester Arnab
Coventry University Coventry, UK

Kam Star
PlayGen, UK

ABSTRACT

In an evolving global workplace, it is increasingly important for graduates and school-leavers to possess an understanding of the job market, their relevant skills, and career progression paths. However, both the marketplace and career paths are becoming increasingly dynamic, with employees more frequently moving between sectors and positions than was the case for previous generations. The concept of a "job for life" at a single organization is becoming less prevalent across sectors and cultures. In such a context, traditional approaches to career guidance, which often focused upon identifying a suitable occupation for adolescents at an early stage and establishing a route towards it, are being challenged with the need to communicate the value of transferrable skills and non-linear progression paths. This article explores the role digital games might play in allowing learners to develop these skills as part of a wider careers guidance programme. Through a case study of the "MeTycoon" serious game, the potential reach of such games is discussed, with 38,097 visits to the game's website, and 408,247 views of embedded educational videos. An online survey of players (n=97) gives some insight into their opinions of the game's impact and appeal, with positive comments regarding the design of the game and its emphasis on creating an enjoyable gaming experience whilst providing educational content.

DOI: 10.4018/978-1-4666-8200-9.ch100

INTRODUCTION

Career guidance is an essential component of school and university-level education when seeking to ensure leavers effectively translate academic qualifications to solid job prospects and opportunities (Hughes & Gration, 2009). With the rapidly evolving and increasingly globalised job market, demands are also being placed on the nature of this guidance and its need to support the development of a wide range of career skills and capabilities. Simplistic guidance often consists of simply presenting a prospective graduate or school-leaver with a range of professions to which they might be suited, though this fails to address their longer term career success: Will they be able to identify opportunities for non-linear progression? Can they recognise and react to changes in their profession? How will they respond to redundancy? Embedding these skills into a young audience can be challenging, as it requires a high degree of forward thinking, and often must be delivered before the individual experiences problems and opportunities first-hand.

In the background section of the article, we describe how digital technologies, and specifically games, might be applied to allow for some degree of experiential learning (Kolb, 1984) in advance. Furthermore, we consider how these games may prove capable of stimulating a higher degree of engagement than more static educational resources such as textbooks or websites, in turn generating intrinsic motivation amongst players to learn career skills. We present the MeTycoon serious game and its design principles: the game creates a role-playing environment in which the player must offset their lifestyle choices against income requirements and job preferences, whilst unlocking skills and professions by experiencing more formal learning resources. The research method adopted to examine the game considers both the statistics derived from online deployment and usage, and a voluntary, non-incentivised survey of the player base, to ascertain opinions and self-reported metrics of impact amongst players. High usage of the game without a required investment in direct marketing or promotion shows sound reach potential for such interventions, and in our results and discussion we explore how the findings might translate to future career guidance solutions, or to the wider field of game-based learning.

BACKGROUND

The 2013 NMC Horizon Report (Johnson, 2013) asserts the perspective that games are effective tools for increasing student's motivation and engagement by involving them in a memorable learning experience. A serious game can be defined as "a game in which education (in its various forms) is the primary goal, rather than entertainment" (Michael, 2006). Concept scaffolding and simulation of real world experiences may allow the a student to solve problems and enhance their subsequent performance (Ferreira, Palhares, & Silva, 2013). As an example, a survey of 264 students playing an online educational game (Huang, Huang, & Tschopp, 2010) found a relationship between reward and motive. Further studies (Schaffer, 2004) have shown that games can support novel approaches to learning by scaffolding players' experiences in new worlds, allowing them to learn by trying to solve loosely defined problems inside the game. This brings to the fore the notion of 'learning by doing'. Other authors (Hwang, 2012) have argued that pedagogically-driven games reflect strong commitment to educational values and have great potential to drive students in achieving intended learning outcomes.

As part of the European Commission's Digital Agenda strategy, and policies to support pathways to employment, the potential of digital games is demonstrated by the widespread adoption and use in the 21st century. Digital game audiences are expanding rapidly, and games thus have the potential to engage hard-to-reach groups. A 2013 report commissioned by the EC reported that