Chapter 10
Re-Purposing a Recreational Video Game as a Serious Game for Second Language Acquisition

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ABSTRACT

Serious games designed for educational purposes promote acquisition of knowledge and skills that are valued in the both the virtual realm and the real world. However, the million dollar question is how do we design serious games that produce positive learning outcomes without sacrificing the element of fun? The authors' answer is simple but no less profound. Don't recreate the wheel; instead use it to create new technology! Using this premise, they re-purpose the recreational Massively Multiplayer Online Role Playing Game (MMORPG) EverQuest® II as a serious game, leveraging the entertainment value and readily accessible developer tools to promote learning in the context of Second Language Acquisition (SLA). They outline the process of transformation, first identifying the affordances attributed to MMORPGs and then evaluating the impact of gameplay experiences on SLA. Promising results from experimental studies reveal that in-game social interactions in the target language between native speakers and non native speakers provide a higher degree of engagement and significantly increase second language vocabulary acquisition and reading comprehension skills compared to traditional classroom instruction. They conclude with the design of two game modules that promote vocabulary acquisition, reading comprehension and conversational fluency.

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INTRODUCTION

Interactive digital media such as video games serve primarily as a source of entertainment, surpassing both the movie and music industries as the number one form of entertainment in America (Electronic Arts, 2007; Mainelli, 2001). Additionally, video games attract thousands of players who spend numerous hours mastering game objectives (Roberts et al., 2005). However, video games are often criticized for being mindless entertainment, lacking in educational value. Researchers argue that video games embody an underutilized, ideal learning environment with clearly defined goals, resources for completion of game tasks, adaptability to players' skills, immediate feedback and rewards, and natural progression of increased difficulty that contributes to increased engagement (Aldrich, 2005; Begg et al., 2005; Gee, 2003; Koster, 2005; Prensky, 2001). Video games provide an active, personal experience that is difficult to duplicate for each student in the traditional classroom environment. We perceive video games to be models of virtual learning environments where the player represents a user model of the active learner. Recreational video games create a "flow" or high level of enjoyment that correlates learning with the obstacles encountered during gameplay (Csikszentmihalyi, 1990; DeBold, 2002). Therefore, gameplay activities which support learning in the virtual realm can transfer to positive learning outcomes recognized in the real world.

Researchers have investigated the plausibility of video games as effective pedagogical tools in both traditional and informal learning environments. Pillay et al. (1999) posit that video games engage players in complex cognitive processes such as problem-solving tasks associated with scientific reasoning. Because video games create gameplay experiences that closely emulate the learning process, game designers have created a new genre of video games known as *serious games,* games that do more than just entertain (Aldrich, 2005; Chatham, 2007). Unlike recreational video games, serious games create opportunities for players to acquire and develop knowledge or life skills that are valued in both the virtual and real worlds (Aldrich, 2005; Chatham, 2007; Mayo, 2007). Successful integration of traditional learning objectives with the elements of entertainment, play, and fun becomes the goal for developing serious games. As the serious games movement gathers momentum, the game industry and researchers are asking challenging questions: What is the educational value of a particular video game as it relates to a specific domain? What do players learn as a result of gameplay? How can we realize the benefits of video games in the context of educational assessment? How do game designers merge the positive aspects (e.g. flow, high level of engagement, etc.) of gameplay with domain-specific objectives? More importantly, how can game designers create serious games that produce positive learning outcomes without sacrificing entertainment value or accumulating expensive production costs? One solution lies in developing game modules (game modding) based upon experimental studies of players' interactions during gameplay that transform existing commercial video games into serious games with positive outcomes (Rankin et al., 2008).

This chapter outlines the process for repurposing recreational video games as serious games. First, we examine the potential of one particular genre of video games, Massive Multiplayer Online Role Playing Games (MMORPGs), as unorthodox language learning tools, correlating gameplay experiences to second language pedagogy. Secondly, we discuss the results of experimental studies of English as Second Language (ESL) students playing a commercial video game to determine the feasibility of MMORPGs as Second Language Acquisition (SLA) tools, specifically English proficiency. Finally, results from experimental studies inform the design of two game modules, an in-game dictionary that facilitates vocabulary acquisition and reading