Chapter 16
Multi-User Virtual Environments:
User-Driven Design and Implementation for Language Learning

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ABSTRACT

Various features of multiuser virtual environments (MUVEs) make them promising and, potentially transformational, contexts for the development of second language (L2) skills. While there has been a surge of interest in the use of MUVEs for language learning, there is still a relatively small body of empirical evidence that supports our understanding of how these immersive spaces can best be utilized for second language education. After a brief introduction to relevant research on MUVEs and language learning, this chapter is divided into two primary sections. The first section describes one component of a larger empirical study of the first MUVE built specifically for learning Spanish pragmatics. The following section utilizes the empirical findings, combined with lessons learned from classroom implementation, to suggest design considerations for those wishing to implement MUVEs in the language classroom. While the specific focus of the chapter is language learning, the findings are intended to be generally applicable in other disciplines as well.

INTRODUCTION

The design, implementation, and evaluation of any new learning innovation require thoughtful, context-based inquiry to inform both theory and practice. This is especially true in the case of emergent technological tools, which often have a profound impact on social and professional practices (Brown & Adler, 2008; Thorne, 2000; Thorne & Payne, 2005). Witness, for example, the explosion of Twitter as a critically important social networking site[1] or the rapid increase of people who regularly interact with, and within, multi-user virtual environments (MUVEs). Concurrent with transitions in social and professional contexts, we have witnessed a notable increased interest in the use of MUVEs for educational purposes (de Freitas, 2006; Prensky, 2001; Sawyer & Smith, 2008).

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Various features of multiuser virtual environments (MUVEs) make them promising and, potentially transformational, contexts for the development of second language (L2) skills (Sykes, Oskoz, & Thorne, 2008; Sykes, 2009; Thorne, Black, & Sykes, 2009). This includes, for example, metapragmatic and pragmatic strategies as well as opportunities for meaningful intercultural communication. While there has been a surge in interest in the use of MUVEs for language learning (Sykes, 2009; Thorne, Black, & Sykes, 2008; Zheng et al, 2009), there is still a relatively small body of empirical evidence that supports our understanding of how these immersive spaces can best be utilized for second language education. Even less data exist to map real-time learner behavior during participation in MUVEs to learning outcomes. However, as with any educational tool, data are critical to informing design and implementation practices. In the spirit of design-based research, this chapter aims to "create and extend knowledge about developing, enacting, and sustaining innovative learning environments [MUVEs]" (The Design-Based Research Collective, 2003, pp. 5) for L2 learning. This chapter begins by briefly highlighting background information relevant to understanding MUVEs and second language learning. The remainder of the chapter is then divided into two primary sections. The first describes one component of a larger empirical study of a synthetic immersive environment (a specific type of MUVE to be described shortly), built specifically for learning Spanish pragmatics (i.e., making requests and apologizing). Using a triangulation of data from various data collection points – (1) 120 hours of in-game play, (2) one-on-one interviews, (3) pre and post assessments and surveys, and (4) learning outcome projects – this section defines patterns of user behavior related to the learning outcomes. The next section of this chapter utilizes the findings from the study combined with lessons learned from implementation to suggest design considerations for those wishing to implement MUVEs in the language classroom, either through task design for existing MUVEs or the creation of their own virtual space. While the specific focus of the chapter is language learning, the findings are intended to be generally applicable in other disciplines as well.

BACKGROUND

Participation in MUVEs is no longer considered merely a hobby or extracurricular activity. Rather, it is a significant, international cultural practice that contributes to an overall shift in the perception and construction of reality, including the political, economic, and social choices people make outside of virtual contexts (Castronova, 2005, 2007; Thorne, 2008). When considering the role of MUVEs in language learning, we must conceptualize them as more than merely practice spaces. Instead, the perspective taken here advocates a move towards transformational educational practice; this makes use of the emerging digital spaces in culturally relevant ways while allowing for learner construction of knowledge.[2] Prior to our primary discussion of the empirical study and design considerations presented in this chapter, this section briefly presents relevant background information to frame our discussion of MUVEs in language learning. This includes a review of L2 research relevant to the current project as well as a description of three prominent types of MUVEs. Ten general, potentially beneficial, characteristics of MUVEs for second language learning are also discussed.

MUVEs and Second Language Learning

As is the case with any emerging field, early studies often present more questions than answers. This is true of empirical research that examines MUVEs and language learning. In general, the results indicate a positive value of MUVEs for language learning, especially in the areas of task-