

Chapter 21

A Systematic Review of Video Games for Second Language Acquisition

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ABSTRACT

This study overviews contemporary studies on the use of video games for second language acquisition within the past ten years spanning the development of computer-assisted language learning (CALL) and its connections to SLA, definitions of video games, empirical studies on the facilitative roles played by video games for second language (L2) learning and utilizing massively multiplayer online role-playing games (MMORPGs) for language learning. The purpose of this chapter is to help the readers obtain a systematic understanding of the development and application of video games in second language education. Findings of this study suggests that players are able to acquire L2 knowledge while playing video games. It also suggests that future research should focus more on the actual integration of video games into language instruction.

INTRODUCTION

Second Language Acquisition (SLA) scholars Leaver and Willis (2004) proposed three basic premises for acquiring a second language effectively: language learning is a complex non-linear process; language is best learned through a variety of comprehensible input and exposure to the target language; learners need to use the language through interaction. Similarly, Zhao and Lai (2009) identified four key factors for effective second language acquisition, including rich input, adequate use of the target language in an authentic environment for real purpose, quality negative feedback and individualized instruction. In contrast to the ideal language learning environments, the paucity of adequate exposure to target language (TL) and lack of motivation to use the language in a real environment comprise considerable challenges for language learners (Zhao & Lai, 2009). Separation from the TL makes “repeating the contents of textbooks in isolated ways” (Suh, Kim and Kim, 2010, p. 371) a typical learning approach for students,

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especially for those who live in communities where the TL is not spoken. As a result of inadequate exposure to the target language in the culturally relevant context, the literacy performance gap between ELLs and native English speakers in the United States remains critical in the past decade (Wilde, 2010; Banerjee, Alsaman, & Alqafari, 2016).

With the development of technology, the integration of Computer-Assisted Language Learning (CALL) has become an integral part of SLA. Researchers (e.g. Chapelle, 2009; Payne & Whitney, 2002; Stockwell & Harrington, 2003; Thorne, 2008) integrated a variety of SLA theoretical approaches to inform the pedagogical implications of technology-oriented language education. Chapelle (2009) grouped 4 general theoretical perspectives of SLA—cognitive linguistic perspectives, psycholinguistic perspectives, the language in a social context, and human learning—to illuminate how SLA theories can be used to enhance CALL research and practices.

Empirical studies have been conducted to investigate whether and how modern technologies facilitate second language learning. A review study conducted by Zhao (2003) presented research on the effectiveness of technology use in second language instruction between 1997 and 2001. The large mean effect size of this meta-analysis indicated that applications of technology have a very positive impact on all aspects of language education. He concluded that modern technology can enhance the effectiveness of language education by eliciting more authentic communications, high-quality input, and useful feedback. Parmaxi and Zaphiris (2017) reviewed 41 published empirical studies from 2009 to 2013 on the use of Web 2.0 technologies in the field of Computer-Assisted Language Learning (CALL). These studies were selected from four top-ranked CALL journals (Smith & Lafford, 2009): *Language Learning and Technology*, *CALICO Journal*, *Computer Assisted Language Learning*, and *ReCALL*. They concluded that Web 2.0 technological tools effectively support several language skills, including writing, intercultural awareness, speaking, and autonomous learning. They also pointed out that social constructivism was the top SLA theory employed by researchers. This finding aligns with the evolution of second language learning theories from behaviorism and cognitivism to social constructivism (Kolb, 1984). That is to say, language learning methodologies have experienced a radical shift from a lecture-based form of knowledge transmission to more socially constructive and collaborative approaches, such as communicative language teaching and task-based language teaching (Ellis, 2003; Thomas, 2012).

At the early 21st century, the widespread popularity of video games has attracted educational researchers (e.g. Gee, 2003; Squire, 2009; Watson, 2007) across disciplines to seriously investigate the educational value of video games. Squire (2006) stated that “the study of games and learning is ready to come of age” (p. 167). In SLA, an increasing number of studies have been conducted to examine the benefits of video games for language learning from a both cognitive and constructive perspective. For example, researchers (Bytheway, 2015; Hussain et al., 2015; Ebrahimzadeh & Sepideh, 2017) found that commercial video games can increase students’ language learning motivation and engagement. Peterson (2010) described video games, especially Massively Multiplayer Online Role Playing Games (MMORPGs), as arenas for second language learning tools.

BACKGROUND

The connection between rule-bound games and human learning has been identified in the early works of educational research. Piaget (1961) proposed that the socialization associated with rule-governed games promotes children’s cognitive development. The video games industry began in the early 1960s

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