

# Internet-Based Technology Use in Second Language Learning: A Systematic Review

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## ABSTRACT

*Ever since computer technologies were accessible to second language learners and teachers, various types of computer-assisted language learning (CALL) have been harnessed in the service of teaching languages. Most recently, the advent of online technologies has sparked CALL practitioners to integrate this powerful form of teaching and learning into language education. This paper synthesizes the extant research on these online language education activities and the state of current understanding regarding the potential of Internet-based teaching and learning second languages. The results of analyzing extensive studies of Internet-based second language learning reveals that Internet-based technology has been widely used in second language learning. In addition, Internet-based technologies are effective instructional tools for second language learning and teaching.*

**Keywords:** *Computer-Assisted Language Learning, Internet-Based Language Learning, Internet-Based Technology, Online Learning, Second Language Learning*

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## 1. INTRODUCTION

Since computer technologies have been accessible to language learners and teachers, various types of computer-assisted language learning (CALL) programs have been harnessed in the service of teaching languages over the past 30 years. In the last decade, the advent of Internet technologies has sparked CALL developers and practitioners to integrate this powerful tool of teaching and learning second languages into language education. With the tools available today, online learning can be active, collaborative, and meaningful (Murugaiah & Thang, 2010).

The present review examines extensively the existing research on online language education activities and the state of our current understanding regarding the potential of Internet-based teaching and learning second languages. This review focuses on three research questions: (1) how have Internet-based technologies been used in second language learning; (2) how have Internet-based technologies enhanced second language skills; and (3) how have Internet-based technologies changed students' and teachers' perspectives of second language learning and teaching?

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## 2. METHOD

The technologies examined in this review refer to Internet-based technologies used in second language learning. This includes language course work like voice boards, wikis, blogs, course management tools (e.g. Blackboard System), and online language learning games. Any studies that were not using Internet technology as a central tool weren't included. To locate the research literature on Internet-based technology used in second language learning, I used the databases PsycINFO, ERIC, EEBSCO, and Education Full Text. The initial database search was based on a combination of the two groups of key words: (1) second language learning, foreign language learning, and (2) online learning, online teaching, and Internet-based learning. Manual search of references, such as the Annual Review of Psychology and the Handbook of Educational Psychology were also used to identify the exiting literature.

As a result, a total of 117 articles from 28 journals were selected for the review. Based on the number of articles cited in this review paper, the top six journals are Computer Assisted Language Learning, ReCALL, Modern Language Journal, CALICO Journal, Computers in Human Behavior, and Computers & Education.

This article is organized as follows: First, the Internet-based technologies that are used in second language teaching and learning is described. Afterwards, the effect of Internet-based technologies in second language acquisition and students' and teachers' perspectives of online learning are discussed. Finally, the potential problems of online second language learning and implications for future work are provided.

## 3. INTERNET-BASED TECHNOLOGIES USE IN SECOND LANGUAGE LEARNING

The extensive Internet-based technologies have been used in the following four areas: (1) telecollaboration, (2) 3D virtual worlds,

(3) mobile-assisted language learning, and (4) authentic online videos. Telecollaboration, such as Facebook, wikis, blogs, and podcasts have been widely used in second language learning, and there is extensive research on several kinds of online collaborative learning (e.g. Guth & Helm, 2012; Lee, 2009; Ware & O'Dowd, 2008). On the other hand, authentic online videos are a more traditional teaching and learning method that has been used even before the Internet technology emerged. Authentic online videos are usually used as a part of other online learning tools (e.g. Second Life and podcasts) but there is limited research on it. Existing research on each of these four areas are discussed in more details below, with starting with telecollaboration, the most widely researched type of technology used by second language learners and educators; and ending with authentic online videos, the least researched area of technology with this population.

### 3.1. Telecollaboration

Research has revealed that students reported positively about their language learning experience in online collaborative learning (see Lehtonen & Tuomainen, 2003; Guth & Helm, 2012; Lee, 2009; Ware & O'Dowd, 2008). Currently, Facebook is considered the most popular platform for online social networking among young generations, especially university students. It was found that students believed Facebook could be used as an online environment to facilitate English as Second language (ESL) (Kabilan, Ahmad, & Abidin, 2010). In addition, Facebook-integrated instruction can significantly enhance students' interest and motivation as it is already something they are familiar (Shih, 2011).

Wikis represent a unique type of collaborative learning where collaboration amongst peers can result in a project where multiple users are able to add their thoughts and ideas in order to create a comprehensive and combined final product (Bradley, Lindstrom, & Rystedt, 2010; Chao & Lo, 2011; Kessler, 2009; Lund, 2008). Wikis also hold the potential for col-

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