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Communication strategies in a multimodal virtual communication context

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ABSTRACT

Using VEC3D as a platform, this study examines the influence of task type on the use of communication strategies (CSs) in a 3D virtual environment that enables English as a Foreign Language learners to employ multiple communication modalities. A curriculum based on a communicative, interactive, task-based, and computer-mediated approach to CSs and language acquisition is developed and implemented in conjunction with a comprehensive framework for analyzing CS use in this innovative virtual environment setting. Analysis of the data provides information about learners' use of various CSs during synchronous computer-mediated communication. The findings shed light on how task type influences learners' use of verbal CSs, including gambits/fillers, appealing for assistance, paraphrasing, borrowing, avoidance, and all-purpose words, as well as non-verbal CSs in the form of haptics, kinesics, paralanguage, and object communication, as means of avoiding communication breakdowns during virtual events. The results reveal that role-play tasks elicited more CS use from learners than open-ended discussion tasks.

1. Introduction

This study concerns itself with the issue of how new computer-mediated communication (CMC) technologies affect English as a Foreign Language (EFL) learners' use of communication strategies (CSs), focusing specifically on the influence of task type in a virtual context. In the virtual world, just as in the real world, the communication process involves the interplay of symbols that are transmitted, received, and interpreted by various communication forms. Galvin and Wilkinson (2006) defined the process as a "constant symbolic interaction of sharing, exchanging, and coordinating meanings" (p. 4), with *symbols* in this context including verbal and non-verbal expressions, objects, and ideas. The newest generation of virtual environments features multiple interaction channels (e.g., voice-based communication and videoconferencing), avatars, and virtual reality systems that facilitate the transmission of symbols to convey users' meaning. These innovations represent major improvements upon traditional text-based CMC, in which users' communication cues were limited to what might be called "static" symbols, like emoticons. Although not commercially available, VEC3D (see Fig. 1) represents one example of this new breed of multimodal 3D system. VEC3D has the potential to improve communicative efficiency as a result of its ability to provide for aural and visual transmission of meaning, similar to what would be found in face-to-face human communication.

In the EFL context, the aforementioned close approximation of a "face-to-face" setting can effectively enhance the interactions between learners and teachers. VEC3D encourages learners' use of CSs, both the verbals (e.g., paraphrasing) and

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Fig. 1. Communication through VEC3D interaction.

non-verbals (e.g., miming), which reduce communication breakdowns to sustain communication. Research has not yet been conducted to specifically explore the use of CSs in the 3D virtual setting. To bridge this gap, this study attempts to answer the following research questions: 1) What verbal and non-verbal communication strategies do learners employ in this multimodal virtual environment? and 2) Does task type affect learners' use of communication strategies?

2. Computer-mediated communication in virtual environments

CMC was originally supported by "networked computers" (McQuail, 2005) using traditional formats such as e-mail and chat rooms. Even with the incorporation of traditional CMC systems into virtual environments and innovations such as multiuser domains (MUDs) (Parks & Roberts, 1998), CMC systems have remained largely text-based. Accordingly, the study of communication or discourse within virtual environments has focused mainly on text-based CMC. Several researchers (e.g., Peterson, 2006, 2008) have studied text-based CMC to understand participants' communication forms, patterns, and functions. Peterson (2006, 2008) considered MOO (MUD, object-oriented) and 3D virtual environments (i.e., Active Worlds) in this context. Other researchers (Gajadhar & Green, 2003; Masterson, 1996) have explored online text-based chat, categorizing non-verbal forms and functions by analyzing transcript excerpts. As mentioned previously, CMC, in forms such as the virtual chat features provided by early versions of virtual environments (e.g., Active Worlds and Second Life), has been predominantly text-based. The lack of non-verbal communication cues (i.e., paralanguage, facial expressions, gestures, and touch, which are generally collectively referred to as "cues filtered out") in these virtual environments severely hampers learners' social interaction, and also limits both the sophistication of communication and what we might call "social presence", which can be defined as "a sense of being together" (Hwang & Park, 2007).

As technologies have evolved, CMC forms have also evolved into synchronous voice-based CMC (SVCMC). With the advent of SVCMC tools (e.g., Voice IP), much of the communication within virtual environments has shifted from texting to talking. For example, newer versions of Active Worlds and Second Life now support voice chat. The new generation of SVCMC tools facilitates more sophisticated communication in terms of information depth, manners of communication, enhanced synchronicity, and user autonomy.

As might be expected, the development of these SVCMC tools has had an impact on foreign language learning (e.g., Bueno, 2010, 2011; Bueno & López Pérez, 2013; Özdener & Satar, 2008; Satar & Özdener, 2008). For example, Information and Communication Technologies (ICTs) have been successfully integrated into the foreign language classroom (e.g., Bueno, 2010, 2011; Bueno & López Pérez, 2013). In terms of the effects of such integration, and building on her previous (Bueno, 2010) research into oral proficiency and pronunciation development, Bueno (2011) documented how SVCMC affected EFL learners' oral and general proficiency achievement, time spent on task, and amount of L2 use.