A case study on English language learners' task-based interaction and avatar identities in Second Life: A mixed-methods design

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Abstract. English as a foreign language (EFL) learners' language use in 3-D virtual environments is a vibrant avenue that still deserves more research attention in the field of CALL. To contribute research and pedagogical implications to the current Second Life (SL) literature, this study aims to examine EFL adult learners' use of communication strategies during task-driven, voice-based negotiation, as well as to explore their avatar identities during their language practices in a task-based virtual course in SL. Operationalized by task-based interaction, quantitative results show that confirmation checks, clarification requests and comprehension checks are the most frequently used strategies. The interrelationship among task types, negotiation and strategy use is also established –jigsaw task prompts the most instances of negotiation and strategy use. Qualitative results drawn from triangulation of multiple data sources reveal that SL is endorsed as a promising learning environment owing to its simulated immersion, augmented reality, tele/co-presence and masked identities via avatars. This study demonstrates that implementation of task-based instruction can be maximized by 3-D simulated features in SL. It also implicates that 1) two-way directed tasks with convergent and single-outcome conditions will stimulate more cognitive and linguistic processes of negotiation involving interactional modifications, and 2) avatar identities can boost EFL learners' sense of self-image and confidence.

Keywords: task-based interaction, communication strategies, 3-D virtual environment, avatar identities.

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1.   Introduction

Even though research has shown that the unique features (e.g., immersion, avatar presence, simulation) afforded by SL –a three dimensional virtual environment– have the potential to enhance learners' motivation, engagement and virtual identities (Cooke-Plagwitz, 2008; Dede, 2005), studies done on using interactionist theory as a theoretical framework to examine EFL learners' language use in SL are still scarce (cf. Peterson, 2005, 2006, 2010). The link between EFL learners' language acquisition in task-based interaction and virtual learning in SL still needs to be connected in current SLA literature (Kraemer, 2008). We need a better understanding as to 1) why EFL learners are drawn to SL, 2) how they perceive learning English in task-based interaction in SL versus real life (RL), 3) how they feel about using avatars to interact with other avatars in English, and 4) what kinds of features afforded by SL impact their language learning experiences and outcomes. Also, a full-blown virtual language course designed under the task-based design has not been fully documented in SL literature.

Motivated by the current English learning phenomenon where digital natives' learning styles are not accommodated in traditional English classes, this research also aims to uncover whether language instruction in SL can align with digital natives' learning styles in order to resolve the long existing digital divide (Prensky, 2005a, 2005b). As such, this study seeks to explore if SL can open up a new pedagogical fertile ground for English teaching and learning. To address these theoretical and pedagogical concerns, this case study raises two major research questions:

> 1. How do EFL learners use communication strategies to negotiate meaning during task-driven, voice-based interaction in SL?

> 2. What are EFL learners' attitudes toward using avatars to participate in a task-based virtual class in SL?

Situated in cognitive interactionist theory (Long, 1981, 1983) and driven by task-based language teaching (TBLT) (Doughty & Long, 2003), this study employs a concurrent mixed-methods design to better answer the research questions quantitatively and qualitatively.

2.   Method

Nine adult EFL learners worldwide were recruited to participate in a 10-session virtual class in SL. Each virtual session had 90-minute contact hours and was

conducted twice a week. Learners, in their avatar form, used voice chat to interact with peers in different communication tasks, such as opinion-exchange, jigsaw, information-gap and decision-making tasks. Also, capitalizing on the unique features afforded by SL, students had the opportunity to perform simulation-based and real-life-oriented tasks, such as using note cards to play an ice-breaker game in the first session, show-and-telling cultural clothing worn by their avatars, and collaborating with peers in a museum field trip project. Figure 1 shows a screen capture of students taking turns presenting their cultural outfits.

Figure 1. Show-and-tell on cultural clothing presented by learner avatars

Quantitative data were collected through participants' pre- and post-task-based interaction to examine how EFL learners use different communication strategies to resolve communication breakdown during negotiation of meaning in communicative tasks. Qualitative data were collected through students' journal entries to reflect on their perceptions about their learning experience in each SL virtual session. A pre-course survey was administered to gather their demographic information and attitudes toward English learning in SL before the course. A post-course survey was also distributed to probe their perceptions about their overall virtual learning experience and avatar identities in this task-based course, triangulated with a focus group interview and the researcher teacher's observation blog.

3.   Results and discussion

Quantitative results showed that confirmation checks, clarification requests and comprehension checks were the three most frequently used strategies. Other types of strategy use were also found, such as a request for help, self-correction

and topic shift, accompanied by another two newfound strategies that had not been previously documented in task-based research in 3-D multi-user virtual environments (MUVEs) (i.e., a metacognitive strategy and spelling out the word). Following Varonis and Gass's (1985) framework of negotiation of meaning, two types of negotiation routine were also identified: single-layered trigger-resolution sequence (standard negation routine in a four turn-taking discourse) and multi-layered trigger-resolution sequence (more complex routine that involves above four turn-takings). Additionally, the interrelationship among task types, negotiation and strategy use was also established in the study. That is, the jigsaw task prompted the most instances of negotiation and strategy use, followed respectively by information-gap task and decision-making task, whereas opinion-exchange task triggered the least.

Using grounded theory approach (Corbin & Strauss, 2008), three core themes emerged from qualitative data: 1) perceptions about factors that impact virtual learning experience in SL, 2) attitudes toward learning English via avatars in SL, and 3) beliefs about the effects of task-based instruction on learning outcomes in SL. Students in this study perceived SL as a potentially effective platform to empower their language learning. The immersive participation and augmented reality afforded by SL enabled them to interact with peers or other native English speakers in real time, without the burden and expenses of physical travelling. Being able to "teleport" to different life-like places in SL also allowed them to simulate various real-life scenarios and make learning more fun and meaningful. As such, their engagement, motivation, and sense of autonomy were enhanced.

Additionally, the telepresence realized in avatars also fostered their sense of belonging to the virtual community. Their masked identities through avatars also allowed them to "take risks" in speaking English without feeling the same shyness and embarrassment as would they in a real-life conversation discourse. Students' participation in the task-based virtual course also 1) showed longer retainment of engagement and motivation as well as spontaneous oral production through communication tasks, 2) fostered learner autonomy and investment of time and effort in language practices through culture-driven tasks, and 3) deepened real-life task experiences and knowledge and language acquisition through simulated tasks.

4.   Conclusions

Drawn from both quantitative and qualitative results, this study implicates that 1) two-way directed tasks with convergent, obligatory, single-outcome conditions will stimulate more cognitive and linguistic processes of negotiation

involving interactional modifications –which also leads to more complex and lengthy negotiation routine, 2) 3-D multimodal resources afforded by SL also provide additional visual support for EFL students' input acquisition and output modifications, 3) tasks that capitalize on SL features, students' cultural repertoire and world knowledge as well as simulate real-life tasks will make a difference in their virtual learning experiences, and 4) avatar identities boost their sense of self-image and confidence.

Despite unexpected technical glitches in SL that might challenge collecting consistent data for research in SL, it can be concluded that SL still has the potential to bring real life to the 3-D MUVE and empower both English teaching and learning. It is also time to teach and learn "outside the box" in the digital age.

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