

Second Life and College English Teaching in Taiwan

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Abstract: This study examined how *Second Life* (SL) can be infused into a college English course for 25 students through task design of four activities. SL provides affordances of interaction and immersion which are conducive to their English learning and SL can easily establish an authentic environment for communication. It is argued that sound pedagogy with appropriate tasks, instead of 3D virtual world software alone, guides SL applications in the multi-member community (instructor, teaching assistants, students, and other users not in this class) advancing toward language learning objectives or sense-making in student learning. The ecological views and complex system notion of how learners interact with the SL environment in English offer new insights into how TELL scholars examine the extent to which an array of variables in the system interconnect and react to achieve our learning goal in context and across a time line as illustrated in the student narratives.

Keywords: 3-D virtual worlds; *Second Life*; complex systems; ecological perspectives

Introduction

Recently, there have been several research and pedagogical projects relating to the uses of virtual worlds in foreign language education. With three-dimensional interface and avatars (a personizable 3-D online representation), virtual world software can be implemented to become more vivid such as *Second Life* (SL), *Active Worlds*, *Quest Atlantis*, and *World of Warcraft*. Concerning the educational roles of the virtual worlds, Warburton [16] maintains that “[to transfer education to the virtual such as SL] requires us to address how to manage best our virtual identities, improve our digital and cultural literacies, understand more fully the links between immersion, empathy and learning, and develop design skills that can be used productively to exploit virtual spaces” (p. 425). Stevens [12] claims that *Second Life* has opened doors to creativity and imagination that have been particularly more transformative for education, compared with synchronous chats. Thus, virtual worlds may provide quite a few affordances for language education such as rich interaction, visualization and contextualization, authentic content and culture, identity play, immersion, simulation, community presence, and content production.

However, specific language learning benefits based on research evidence are yet to be established. More research on virtual world affordances is needed to validate their usefulness for language acquisition, other than fun which is already acceptable to the young generation. In this study, we examine how several instructional tasks were infused into a college English class in Taiwan, Republic of China (ROC) as a process of participants interacting with the SL environment. Although Taiwan is believed to be technological advanced, bandwidths are still uneven among Internet users in different settings. The uneven reality in a known technology and science public university (where

Internet connection/ bandwidth is claimed to be smooth) remained to be uncovered as this study moved along.

1. Ecological perspectives and complex systems on language learning

In ecological perspectives, language as a semiotic activity is an emergent process of meaning-making based on relations among signs, the self, the other, and the environment [15]. Learners as whole persons are exposed to affordances, not input as in traditional views, where they engage in sense-making interaction with others who may be more, equally, or less capable linguistically.

Similarly to the ecological perspectives, complex systems are proposed recently as an alternative for explaining language learning phenomena. Complex systems intersect traditional disciplines of literature, education, engineering, management, medicine, etc. This theory is built on notions of “complexity, interconnectedness, and dynamism, and [making] change central to theory and method” [7, p. 1]. Larsen-Freeman and Cameron [7] maintain that “[c]omplexity theory aims to account for how the interacting parts of a complex system give rise to the system’s collective behavior and how such a system simultaneously interacts with its environment” (p. 1). Scholars of complexity systems claim that relations among humans and social organizations are all connected, regarding language teaching and learning as dynamic. “[T]eaching is managing the dynamics of learning” (p. 199). As for their methodological principles for research language development, ecological validity which includes context as part of the system(s) under investigation is advocated, and it is also advisable to “[h]onor the complexity by avoiding reductionism” (p. 242). They also suggest that applied linguists identify a collective variable (not just a single unit of analysis) among systems over time. Longitudinal, case-study, and time-series approaches are suggested, among other traditional research methods used in applied linguistics. Two illustrative empirical studies [1] demonstrate very clearly the usefulness of these theoretical views in explaining data variation along the time line and in their environments, and their implications. Limited research has yet adopted these perspectives. In the research we have, the two views are adopted. Using the ecological views and the complex system notion may help us examine how learners interact with the environment (including possible tool use) in context and across a time line.

2. Empirical Studies on virtual worlds for language learning

Six representative studies have documented how users applied various virtual worlds and gained different benefits. Henderson et al. [3] investigated how 100 university students in a Chinese language and culture course changed their self-efficacy ratings and attributed the significant improvement to relevance of enactive mastery experiences where students collaboratively identified and ordered food in Mandarin in a restaurant which was established in SL. Their Mandarin- Chinese mastery in SL (simulated as a real-world one) impacts their confidence and thus self-efficacy ratings.

Ho, Rappa, and Chee [4], based on experiential learning, applied *Second Life* and a structured argumentation discussion board to train 45 12th graders critical thinking for writing an academic paper. They thoroughly discussed contextual factors and designed intervention. Effective instructional design was emphasized in their planning and implementation stages. Liang [8] in a Taiwan EFL context examined how twenty college students took a journalistic writing class on SL. It was found, based on her questionnaire data, that students had various reactions towards SL content, pedagogies, and technical

functions in her class. Developing Time2Play out of SL, Pereiral et al. [10] examined how eight children constructed stories with a usability test. SL was found feasible for children to create stories together. Kuriscak and Luke [6] examined the Spanish students' attitudes toward using SL for corrective feedback. Students who interacted with native speakers were found to show more positive attitudes in the virtual environment than those who talked with non-native speakers. Students also felt a sense of empowerment and achievement for being able to manage a conversation with native speakers. Jauregia, Cantoa, Graaff, Koenraadc and Moonen [5] investigated how two Spanish learners and two teachers interacted in the SL who aimed at maximizing authentic social interaction and intercultural awareness. They found two of their tasks could stimulate learners to explore virtual worlds.

Deutschmann, Panichi, and Molka-Danielsen [2] explored how SL helps thirteen doctoral students increase oral participation and improve performance. They envisaged that the great sense of privacy in the virtual world would lower anxiety. For data analysis, special considerations were taken:

In an ecological approach to learning, however, the environment does not exist per se (i.e. static) but is determined through a series of interactions: subject-learner, subject-teacher, mode of transmission-learner, subject-group, group-teacher, learner-learner, etc. and is as variable as the infinite possibilities of these interactions. The outcome of these interactions then goes on to feed into yet further interactions between elements in the environment in a continual process of change. In this sense the system is dynamic and interdependent, and variables cannot be isolated. p. 212.

They argue that outcome and design in their instructional process are all interrelated. These echo views of complex systems.

3. Research questions

From the review of several empirical studies above, we have learned that the chat function in virtual worlds seemed to be the major tool that was applied for enhancement of language learning [11, 17]. Students' self-efficiency and interaction management (including pragmatic or intercultural abilities) were major dependent variables being investigated [3, 14]. Task design or curriculum resources were emphasized for virtual world infusion to be effective [2, 4, 11]. Course goals of enhancing vocabulary, grammar, oral skills, and writing through SL have been examined [6, 8, 10]. The study by [2] is one of the few projects that have examined in depth the complex relations between the dynamic task process and the curricular goal. TELL research necessitates the consideration of both language learning potential in its context of implementation and technological affordances in the same environment. Along the same line of [2], a study of the author [9] is reported by emphasizing in what ways the affordances of *Second Life* have impact on English learning and teaching in Taiwan, ROC. Two research questions guided the study:

- 1) To which extent do SL technological affordances limit or enhance the TELL course to achieve its goals?
- 2) How does the student group assess the four tasks designed in the course for English learning and teaching of foreign languages?

Further comments are added in this paper in order to dialogue with TELL professionals in the conference of Computers in Education 2012.

4. The Study

The context of this study was a third-year college selective course called “Computer Assisted Language Learning”. Dual goals were set for this TELL course: English learning and teaching foreign languages through the use of technology. A small portion of the students are trained to become high school English teachers, and a good portion of students who graduate from this department tend to serve as an English teacher in private sectors for a long or short period of time. As an EFL learner and a potential pre-service teacher, twenty-five students with English and other foreign languages as their majors took this course as participants in an Asian context. The instructor (a professor in TELL) and three MA-TEFL graduate students served as research assistants who participated in some in-class course tasks or online chats when all of them were at different places and times. None of the students had any prior experiences with *Second Life* (SL). They all had experiences of face-to-face peer review activities for their writing class, but only half of them had used wikis for peer reviews before. More formal assignments such as lesson plans, essays, and PowerPoint files were uploaded to a MOODLE course site.

Four communicative tasks were designed: (a) orientation to SL and chatting in SL, (b) SL for peer review, (c) SL for English teaching, and (d) an SL tour. A 25-item evaluation questionnaire and a focus interview were used to elicit students’ perceptions on infusing SL into the course. A 12-item interview protocol was designed to investigate in more depth the views of twelve voluntary students on their overall SL experiences.

4.1 Results

4.1.1 Assessing Technological Affordances of Using SL in This Course

Three inherent technological features in SL were desired by many participants in this study: virtual reality, the text chat function, and 3D scenes, confirmed with students’ responses to the open ended question in the questionnaire. Highlighting virtual reality, over half of the participants held a positive attitude toward the near-real-life environment in *Second Life*.

Unstable bandwidths posed a great limitation for students’ access to SL anytime as the participants wished outside of the class time. When we held SL orientation and instructional sessions in a Lab of the university computer center, mostly the Internet connection was smooth enough for demonstrations and student practice due to faster CPU or larger memory chips on computers in the specific room. However, our students had access to private service carriers of Internet after school, which was slower. The connection problems were found to match 64% of student frustration where they encountered limitations or occasional breakdowns of SL experiences when they worked in the university dormitory or other rooms with slower CPU or memory capacity in the computer center. For those who had access to a commercial Internet connection, SL worked satisfactorily. Compared with text-based chatting in SL, teleporting was less stable.

4.1.1 Assessing SL for the Course Goals

Even when this course was conducted in such a limited technology context (unstable SL connection), positive points concerning various SL applications for English learning and teaching were highlighted by the participants, partly complemented by task design in this course. Concerning specific affordances which SL provides in order to help English learning, serving as a cultural context for English learning was ranked as the top at 88%, followed by “the help of a context for learning, and opportunities to express oneself” (80%,

68%) respectively. As far as task design in this course is concerned, online chats were rated very high for the ease of interacting with others (96%), fostering students' ability to express in English, and understanding of foreign cultures (both 84%) as well as for promoting students' general English proficiency (64%). Concerning effectiveness of the four tasks, the SL tour was ranked at the top as it promoted students' understanding of the SL functions and environment, like all other tasks, as well as helped students' vocabulary learning. Unsurprisingly, peer review in SL helped with reading and writing of English, compared with other tasks. Three modes of doing peer review were compared: SL peer review, face-to-face peer review, and wiki peer review. The face-to-face mode was found to be preferred to the wiki mode, and to the SL environment. Additionally, students expressed that the classmates' demonstration of using SL to teach English slightly assisted in tuning their ears for English input. Concerning the use of SL for English teaching, slightly over half of the students rated SL being a helpful technology platform. 76% of them agreed that SL reduced the anxiety level of English learning, and 72% believed that SL provided a real-life context which is helpful in learning English.

4.1.3 Assessing Complexities and Individual Variations with Ecological Perspectives

We analyzed artifacts, assignments (such as lesson plans, PowerPoint files for presentations), and chat logs of individual students in detail, complemented by the questionnaire and interviews data in order to establish students' narratives across eight weeks to illustrate their processes of working through the designed tasks as well as to illustrate the complexities involved in the SL environment.

In the orientation tasks, students had much fun as they chose and made their own avatars, which allowed changes of their physical appearance, attire, gestures and names. This was the most innovative and enjoyable task when the entire class met in the computer lab. In a specific example of peer review, the involved pairs of students showed the concern for grammatical accuracy, and also commented on the beginnings of the peer's second and third paragraphs, which were revised accordingly, after the comments were adopted. To explore ideas for using SL for English teaching, one student had shown a critical stance on using SL for children to learn English: she commented that SL was too idealistic as a platform to teach young students to learn English. At the end of the semester, she turned in a MOODLE lesson as a term project which is teaching Cantonese to her classmates-college students. On the other hand, through exploring SL in a tour task in-world, several students showed a sophisticated level of SL use and linked it for English teaching and their own language and culture learning.

The interviewed students' narratives showed they reacted differently to SL and the task design in this course and thus resulted in different levels of success. Due to the space constraint, one complete successful story by Jane was illustrated, complemented by another participant's story for comparisons (see Table 2).

In the beginning, Jane had tried the voice chat function in SL and ended up using text messages because her partner, Leslie met technical problems. However, she believed that text chat helped her improve sentence-level writing skills. During the communication process, she had to type correct sentences so as to convey precisely her messages across. Concerning the three modes of doing peer reviews, Jane pointed out that wiki's interface is akin to that of the popular blog that youngsters use nowadays. Despite Jane's dissatisfaction toward SL peer review, her attitude toward the SL tour was very positive. In the very beginning of the tour, she had the freedom to choose the place she liked- an amusement park called Vella's Palisades. Meeting no users online, she felt disappointed and turned to the facilities in the park and found them interesting and exciting for manipulation. Jane also appreciated the activity of sharing their online tours with

classmates via in-class PowerPoint presentations. The activity broadened her horizon about the diversity of cultures in different countries.

As for using SL to teach English, Jane confidently stated that the SL tour, when implemented in an English class, could bring students fruitful learning outcomes. Instead of designing traditional paper flashcards to help students learn a new word in the classroom, teachers using SL can teach words by showing students real objects in SL and even ask students to experience them (e.g., have a cable car ride). Also the SL tour serves as a contextualized environment for teaching narrative writing. Jane pointed out that her previous English composition teacher asked her to recall past experience by imagining a visit to a place; it was a difficult decontextualized writing task for students who have no real experience. To illustrate, she could write a narrative essay based on a tour to an amusement park with less effort, compared with the situation that she had to write without having any experience or by making up a story. Aside from vocabulary and writing skills, she believed the tour task could be used for training speaking.

The teaching activity Jane designed was to make use of the SL chat with an instructor's assigned topic or task to complete. She indicated that SL can become a promising future language learning tool by connecting learners with other learners/native interlocutors. The chatting and SL tour tasks were effective activities in enhancing students' English learning. Some other creative SL tasks or SL sites can be designed to help students' English learning. The story of another student named Carol is summarized and compared as shown in Table 1.

Table 1. Comparisons of highlights of two students' narratives

Task domain	Jane	Carol
Orientation and text chatting/Technological affordances: Voice chat	Did not use voice chat	Did not use voice chat; Carol and her classmates thought SL could help college students who often stay online, especially the shy students (cf dialogue in Appendix 3);
Peer review	Learning to use note-cards takes time, compared with wikis or blogs.	Compared her past face-to-face peer reviews, the SL review was rated higher.
Pedagogical activity	Bring fruitful outcome; tour as effective task; contextualized learning	Relate words and topic of discussion to SL in-word as context; learn from others and through communication; SL as very promising pedagogical platform
Tour	Link tour to classroom oral presentation; learn words and writing from tour task;	acquainted with Tim Rinq (outside member of this class, native speaker); learned culture and words through tour task

The two stories by Jane and Carol show they are similarly positive about SL experiences in this course. Different explorations of locations, writing on note-cards, and vocabulary items they acquired illustrated the learning affordances which SL can provide from one individual to another.

5. Discussion

The study aims to explore the dynamic relations between the course goals of a TELL course (for learning English and teaching languages) and the task design using SL. Orientation, peer review, teaching activities, and a tour were four tasks we have designed with a progression of the learners' SL familiarity levels. During the eight weeks of our SL experiences, the major technological hiccup is the bottleneck caused by the students logging in at the same time and the unstable Internet access. This had caused their

frustration and failures of some communication breakdowns or task completion (if not entirely). In spite of unstable Internet connection as shown in student frustration, positive comments from students are encouraging for us and TELL teachers who may design useful tasks to circumvent this technology limitation (unequal Internet access). Technologically, the inherent SL virtual-world features such as immersion for exploration to various exotic virtual locations, identity formation, and online chatting with a variety of users from different cultures have made this environment unique as a pedagogical platform for language learning and teaching.

Similarly to what other studies have shown [17], chatting is a very useful communicative tool particularly in the SL community. Through chatting, students achieved meaningful exchanges and task completion and thus learning. Teaching assistants, instructors or much more experienced SL users such as Tim are capable peers in SL available to help students to learn while doing tasks or talking to learn from each other. Reduced apprehension and embarrassment, persistent chat records, physical and linguistic co-presence [3], and collaborative group work are confirmed in the study.

During the eight weeks, complex relations among objects in SL (made by other users), our participants (instructor and teaching assistants), other users in SL, the students themselves, the entire environment, the messages from all the members, and task completion processes are evolved, changed by themselves and have changed others across a time line. On the one hand, the ultimate semiotic affordances which SL can provide remain to be seen due to the unstable Internet connection (and thus in-world construction of objects or related activities). On the other hand, the instructor felt satisfied with the ways SL was incorporated into this TELL course as it added one new element to the course which had its objective to familiarize the target learners with possibilities of virtual worlds for language learning and teaching.

Conclusion

In this study, the student group seems to benefit from the SL tasks through English and culture learning and also from learning how to teach English using SL, in spite of the unstable Internet connection. They indicate frustration due to unstable Internet connection, but also enjoy learning with SL in this TELL course. It is argued, as supported in the previous literature, that pedagogy plus members in the community, instead of 3D virtual world software alone, guides TELL applications in various educational contexts with appropriate tasks toward language learning objectives or sense-making in student learning. The ecological views and complex system notion of how learners interact with the SL environment in English offer new insights into how TELL scholars examine the extent to which an array of variables in the system interconnect and react to achieve our learning goal in context and across a time line as illustrated in the student narratives.

Would the game culture associated with SL be inappropriate for university courses that target other language skills? This will demand a course instructor's ingenuity, as Stockwell [13] maintains: "the most important responsibility for those teachers who make the decision to use technology as a part of their language learning environments is to ensure that they are familiar with the technological options available and their suitability to particular learning goals" (p. 118). Teachers' (assistants included) and students' competences and their readiness for SL should be taken into account. There are many possibilities for synergistically combining the rigor of instructed L2 classrooms with the immediacy and vibrancy of language use in cyberspace using SL or other tools.

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