Enhancing the learning of Chinese with Second Life

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Abstract: This article reports on a study that incorporates SL into the curriculum of university Introductory Chinese course in Fall 2009, including its implementation and evaluation. Using the existing resources of the SL Chinese School created by Michigan State University, 7 learning tasks were designed to supplement teaching throughout the semester. Along with the face-to-face instruction in class, students were required to study by completing the tasks alone, or with their peers or the teaching assistant in the SL Chinese School outside of the classroom. In performing the tasks, students practiced what was being learned in the classroom, and explored cultural aspects relating to the language. We will discuss both the teaching experience of including SL in the curriculum from the instructor's perspective, and the feedback from students on the learning of Chinese within the virtual world. Recommendations are provided for researchers for future directions as well as for practitioners for effective use of SL in the Chinese classroom.

摘要：本文报告大学初级中文课程对第二人生虚拟软件的应用实践。在为期一个学期的教学中，我们设计了 7 项任务，要求学习者独立或合作完成。我们发现，学习者通过尝试这些任务，可以有效地复习课堂内容、学习文化知识。本文从教和学两个角度探讨第二人生在中文教学中的可行性，并对将来的研究和实践提出建设性的意见。

Keywords: Multiuser virtual environments, Second Life, virtual learning

关键词：多用户虚拟环境，第二人生，虚拟学习

1. Introduction

Multiuser virtual environments (MUVEs) have become an emerging tool in the field of education in this information era. Second Life (SL) developed by Linden Lab, is the best known and the most popular MUVEs with over 4000 people registered on the SL Educators List as of the summer 2009. They are people who are interested in exploring SL, or who are currently engaged in SL-supported education (Kingsley and Wankel 2009). This is not to mention millions of other account-registered users. As a

development space in the format of online 3-D virtual world, SL is, in terms of content, exclusively user-generated. Anyone can enter SL for free. Residents, i.e., those who inhabit the SL world, are able to create a digital character (avatar) to represent themselves, using it to interact with others from around the world. They can not only create almost anything they can imagine but also share the result with others and, thereby, develop interactive and immersive environments. This interaction is unique in that users can fully participate in a virtual world in real time just like they do in the real world. For instance, they can communicate with each other by sending an instant message, verbal exchange, or gesture; they can read a note card and keep it for future use if necessary; they can even watch multimedia presentations. Because of these user-created, community-driven features, SL has, since its inception in 2003, attracted increasing and considerable attention from researchers and practitioners, including foreign language educators (e.g., Clark, 2009; Cooke-Plagwitz, 2008, 2009; Kuriscak and Luke, 2009; Wang et al., 2009). Using six criteria proposed by Jin and Xu (2009), Xu (2010) found that the SL environment, as compared to other computer programs, achieved the highest scores with respect to its effectiveness in the teaching and learning of foreign languages. Some unique potentials of SL as compared to the traditional classroom-based language teaching are well summarized by Cooke-Plagwitz (2008, 2009). Among many other advantages of using SL in foreign language education, there are three that should be highlighted. First, SL enables learners to create their own avatars, which can effectively help introverted students to participate and learn. Second, SL provides a collaborative learning setting, which encourages students to co-construct knowledge. Third, SL forms an immersive environment, which makes students' language practice contextualized.

A major reason for the growing attention to the use of MUVEs like SL for educational purposes is that the students whom we teach nowadays are part of the "Net Generation"—a term first coined by Tapscott (1998) and later used by Oblinger and Oblinger (2005). Though different from each other with respect to the definition of the timeframe during which the Net Generation was born, they noted some characteristics of this particular group: (i) preferring to work as part of a group or team; (ii) enjoying the learning by doing; and (iii) desiring to access information immediately and easily. This kind of learning behavior is the direct result of recent advances in information technology, such as television, computer, Internet, iPhones, MP3, iPod, iPad, etc., as well as video games. Having grown up with various entertaining digital gadgets, most of which are designed to help them learn, Net Generation students or "digital natives" (Prensky, 2001) come to school with an expectation that they are learning for fun (Hay, 2000). Consequently, as observed by Oxford and Oxford (2009), in order to reach and teach these native speakers of the digital languages associated with computers, video games and Internet, educators must revisit and revise traditional pedagogy, and design and develop new techniques using the media and methodology that they understand. Trevett-Smith (2010) made a similar remark, "At a time when students will turn to Google rather than visit the library, or search Wikipedia instead of asking for a reference librarian, professors need to rethink how we use technology in our classrooms."

It is readily apparent that educators of the 21st century must explore the use of technology to support learning. Nonetheless, how to effectively apply technology in

educational settings in order to advance learning outcomes remains a question to be answered. In particular, how should the MUVEs like SL be integrated into the Chinese curriculum so as to make the learning more effective and enjoyable? Oxford and Oxford (2009, p. 3) claim that "teachers cannot simply use technology for technology's sake; they must take advantage of specific age- and content-appropriate tools to accomplish specific pedagogical objectives." This research attempts to examine whether the SL environment supports the learning of Chinese for university students. The ultimate goal of the study is to identify appropriate ways to use SL to enhance student learning.

2. Second Life in Education

According to Clark (2009), there are at least 250 colleges and universities in the world that apply SL to promote teaching, support learning, and/or facilitate research in nearly all disciplines. Much work has been done exploring and examining the function of virtual world for higher education. *Higher Education in Virtual worlds* (Kingsley and Wankel, 2009) is one of the first serious publications that targets educators who are interested in using MUVEs in their teaching practice. Covering both the theoretical perspectives and the practical case studies of the use, and the potential use of virtual work in higher education, their book offers a wide range of valuable insights, and suggestions for educators, whether they are novice or experienced in technology-supported teaching.

At the university where the author is working, the educational benefits of SL have been exploited since 2007 when a piece of "land" was leased, which was later built into virtual Pirate Island for the sole use of the university community. Instructors of different disciplines have thus been able to engage students to learn by either creating things or using the resources specially developed on Pirate Island. For example, graduate students in the English Program were able to co-create a learning environment, i.e., House of 7 after Hawthorne's novel, The House of Seven Gables, within SL, while taking a literature course (Balkun et al., 2009). This case study shows, among other results that, with the integration of SL, the orientation of the course undergoes a transformation from teacher as "communicator of knowledge" to student as "builder of knowledge", which is difficult to achieve in the real-world classroom. Salt Marsh Dynamics (Trotta and Marian, forthcoming) is a case-based learning scenario, which makes the learning of endangered eco-systems possible for college students taking Ecology and Environment Geology courses. Such community and situated learning effectively supports team building and creative problem solving skills. In a series of studies (Hewitt et al. 2008; 2009; 2010), healthcare administration faculty used the Play2Train simulation, a virtual world platform to conduct training in SL adopted by a variety of academic and health institutions, to help both on-campus and online students in the Master of Healthcare Administration to learn how to prepare for, and manage crisis and emergency risk communication. By applying the emergency preparedness best practices in a real-time virtual learning scenario, students learned how to communicate during a crisis, think critically, and develop collaborative leadership as well as decision making skills.

With respect to foreign language education, there has been extensive research on the effects of virtual world learning. For example, Clark (2009) explored teaching hybrid Spanish courses with the instructor teaching grammar and organizing communicative activities in class while students discussing topics and completing projects in SL outside of the classroom. By building a Spanish *hacienda* in SL which provided additional elements of language and culture, the author was able to create an immersion experience for students. Clark further argues that with students being able to meet either in a real or virtual world to perform activities, SL can be an ideal place to teach single lessons or an entire course of a traditional Spanish 1. Sykes (2009) reports on an empirical study that examines the interlanguage pragmatic development by learners of Spanish in MUVEs with respect to making appropriate requests in Spanish. The findings obtained from interview data and in-class presentation indicate that, through the use of a synthetic immersive environment, learners became more aware of the complicated pragmatic issues. Although the study showed little improvement from pre- to posttest, anecdotal evidence suggests that students who were examined learned the subtleties of making appropriate requests in Spanish. Wang et al. (2009) discuss an ongoing research collaboration between an American university and a Chinese university, which explored the integration of SL into a program of teaching English as a foreign language during two semesters in China. They found that the Chinese students of English were able to, through the SL platform, conveniently exchange ideas and opinions with English native speakers on issues that both groups found interesting, a valuable learning experience that would not be easily achieved in real life, if at all. Besides work that involves the teaching of Spanish or English, there are two published studies relating to the teaching of Chinese as a foreign language. One is Henderson et al. (2009)'s empirical research on a collaborative activity to identify and order Chinese food in Mandarin in a virtual Chinese restaurant. The study found that there was a significant improvement between students' pre and post self-efficacy ratings which, the authors believe, was the result of a lesson incorporated in SL that enriches the students' experiential learning opportunities. The other study is Grant and Huang (2010) that discussed the integration of SL as one way of addressing some issues that exist in college level Chinese language instruction. That is, the pedagogical and logistical limitations of formal classroom-based curriculum, textbook-centered context, and teacher-focused methodology. The authors suggest that incorporating learning in an online 3D virtual environment like SL provides learners with valuable opportunities to actively communicate in realistic and, therefore, meaningful ways. According to Cooke-Plagwitz (2009), SL works particularly well for the students of the Net Generation whose learning styles have been greatly affected by the evolution of information technology. Kuriscak and Luke (2009), after investigating language learners' attitudes toward SL, report similar findings: students welcomed the opportunities afforded by SL to interact with native speakers.

There are two well-developed SL sites which offer free resources specially designed for the teaching and learning of Chinese as a foreign language. One is Second Life Chinese School developed by Michigan State University (MSU). This virtual Chinese School is a place where individuals can independently learn the Chinese language and experience its culture at their own pace. Embedded in the restaurant, park, apartment building, museum, stores as well as classroom, bookstore, and office are

challenging but entertaining quests, all serving as great teaching materials. Thus learners can come to practice as many times as they want until they pick up the patterns of usage. For more information about the design concept of this Chinese school, please check into the site, http://confucius.msu.edu/secondlife/overview.html. With a registered account in SL, anyone can log in to experience the beauty of this virtual Chinese School.

A second well-developed SL site is Chinese Island by Monash University, Australia, available from http://slurl.com/secondlife/Monash%20University/72/170/28. On this island, the railway station, airport, bank, inn with tea house, clinic, multi-purpose building, village, as well as traditional Chinese college, courtyard house, and garden, are "used as a basis for Chinese language classes in both first-year and media studies classes" (http://www.monash.edu.au/international/dvc/virtualworlds/monashsecondlife.html). The aforementioned research by Henderson et al. (2009) and the study by Grant and Huang (2010) utilized the resources in this site.

In the section below we will report on a study that incorporates the resources available on MSU's Second Life Chinese School in the teaching of Introductory Chinese at college level. We will talk about the rationale of the research and its implementation, evaluation, implications, and recommendations.

3. Integrating SL in Chinese Language Instruction

3.1 Research questions and logistics

There are three particular questions that we were interested in for this study: (i) Is it feasible and plausible to integrate the SL resources into a one-semester university introductory Chinese? (ii) Does SL support students' learning? (iii) Do students welcome the use of SL as part of their Chinese learning process?

A total of 26 university students in two sections of beginning Chinese were involved in this Fall 2009 study. Except for four students who had some Chinese backgrounds due to either being born in a Chinese family or taking some Chinese before, the rest had zero Chinese skills. All the students except one belonged to the Net Generation, with an age range of 18 to 24 years old. On the first day of class, students were informed of the mandatory SL project for which they would receive 16 points toward the total grade of the course upon satisfactory completion of all the required SL activities.

Before elaborating on the details of methods, a note is in order about the conditions under which the author conducted the project using SL. First, the author's university is a "most wired" campus, which not only supplies wired and wireless access to the internet, but also provides a laptop to each full-time undergraduate student. The models of the laptops which students have received are either Thinkpad T500/T61 or X200/X61. These models are, configurationally speaking, sufficiently sophisticated to run the SL application. Additionally, the university offers a Language Resource Center,

furnished with all the basic language learning tools, including the SL platform. With such a ubiquitous computing environment where students can get online anywhere and anytime, optimum learning outcomes can be expected. Besides good infrastructure, helpdesk support technicians who can fix any issues with laptops concerning hardware or software are available during normal office hours. Finally, the university has Teaching, Learning and Technology Center (TLTC), where knowledgeable instructional designers regularly provide training and, thereby, assist faculty to employ emerging technology to maximize student learning.

The author of this study first received training on SL. With some familiarity with the basics of the SL application, the author was able to brainstorm with two instructional designers from TLTC to identify strategies for the best use of SL for the teaching of Chinese. The discussion and technical support from the experienced instruction designers made it easier to initiate the project. Kuriscak and Luke (2009) recommended that an in-class SL tutorial for students be provided in advance so that all will be uniformly informed of what is available in the SL platform, and what they need to know in order to be able to complete the learning tasks assigned. Inspired by this recommendation, we planned a 75-minute in-class hands-on crash course on SL in the second-day class of the semester. Conducted by said instructional designers, students were shown, step by step, how to (i) download the SL application, (ii) install it onto their own laptop, (iii) create account to log in, and (iv) navigate in SL. For their convenience, the tutorial documents and links were made accessible online. In addition, any other in-class follow-up or walk-up support was available either in the Language Resource Center or at the university Helpdesk whenever students need assistance.

3.2 Tasks and requirements

To make the project support the curriculum, meaningful tasks were created that incorporated resources of the SL Chinese School of MSU. The primary purposes of including these tasks were (i) to engage students to review what was being taught in the classroom, and (ii) to enable exploration of culture and language outside the class. There are two reasons why MUS's SL Chinese School was particularly chosen for this study. First, the site of the SL Chinese School was developed under the design-based research methods for an embodied experience for learners of Chinese. The author of the current study attended Zheng et al. (2009)'s presentation about this virtual school at CALICO 2009. Second, as a virtual learning facility developed and sponsored by a higher institution, the site was not only free, but relatively safe for students.

As can be seen from the comprehensive list of tasks in Table 1, each task spanned two weeks consistently in order to provide the students with sufficient time to review what they had learned in the classroom and then to practice by doing the task. Each task had a theme which included the pronunciation of Chinese sounds, the ability to identify and write Chinese radicals and characters before proceeding, to the 5 topics that are related to Greeting, Family, Date and Time, Hobbies, and Visiting Friends. These 5 topics are the first 5 chapters from *Integrated Chinese Level 1 Part 1* (Liu et al., 2008), which were used as part of teaching materials in that semester.

The first task was to familiarize students with the SL platform and the SL Chinese School. While this task did not involve any Chinese, learning to be able to walk around with appropriate dress, and getting to know how to chat through instant message or voice is the first set of basic skills that students must grasp in order to carry out the virtual learning activities in the SL Chinese School. This task was added to increase students' level of comfort with the virtual learning technology. However, as we will see in the next section, just performing one task might not be enough to prepare for an efficient virtual learning.

Table 1: Tasks for SL Project

Tasks	Weeks	Goals	Students required to
1. Know your way	Week 2	Practice the basics of SL	Dress up oneself; walk & fly
2. Visitor Center	Week 4	Practice pronunciation	Say place names
3. Look for radicals	Week 6	Practice radicals & Characters	Identify radicals/ characters
4. Self-introduction	Week 8	Learn to introduce oneself	Introduce oneself
5. Ask questions	Week 10	Learn to say Zhèsh ìsh énme? Nàsh ìsh énme	Describe things in rooms
6. Tour cities in China	Week 12	Learn to say Wǒ xǐhuān… Yīnwéi	Watch PPT and make sentences
7. Talk about hobbies	Week 14	Learn to talk about hobbies	Ask each other questions
8. Let's have a party at Mr. Li's	Week 16	Learn to say things at a friend's place	Reply when welcomed or offered with drinks

Tasks 2 to 8 were created for enhancing the learning of materials covered in the class. Since the subjects were beginners of Chinese, they just finished learning *pinyin* by the end of the 4th week. Task 2 offers them an opportunity to become familiar with the SL Chinese Island by getting to know where each place is located, and learning how to say the place names correctly in Chinese. In doing the task, students reviewed *pinyin* and used it for a real function. In order to assist students with this task, an audio file was made and posted online in advance, which contains the reading of all the place names recorded by a teaching assistant. To utilize the road signs and places names written in Chinese characters as well as in *pinyin*, we had students look for, and identify the radicals that they had learned in the classroom by doing Task 3 after they were introduced radicals around the 6th week. With characters associated with *pinyin* and English presented in the visual landscapes on the Island, all these adding authenticity and meaningfulness, the learning of Chinese radicals and characters became a less daunting task. After students learned the topics of Greeting, and Family, we encouraged them to learn the lessons offered by the SL Chinese School by doing Task 4. For this task, students were guided to explore different ways of introducing oneself, and greeting each other. Tasks 5, 6 and 7 all required paired work. Task 5 expected students to learn extra vocabulary related to furniture and objects in an apartment, and to learn to ask the questions *Zhèsh ìsh énme* "What is this?" *Nàsh ìsh énme* "What is that?" and answer the

questions. For Task 6, students must first of all watch a PPT slide available on the site, which is an itinerary of travelling in China. After watching the PPT slide, students were required to talk about which city they wanted to see if they were offered an opportunity to visit China, and provided a reason. Students were instructed to do some research, in advance, on the places of historical interests in China, and include the sentence pattern such as "Wǒ xǐhuān… yīnwéi" in their conversation. Task 7 concerns hobbies, which the majority of students were interested in talking about. Task 8 is a group activity, which required everyone in the class to go to Mr. Li's to have a party. This task was scheduled at the last-day of class, when students had finished the chapter *Visiting Friends*, and had obtained a good grasp of basic structures and vocabulary to carry a simple conversation.

Table 2: Requirements of Task 5

Now that we finish Chapter 1 *Family*, teleport to Lianhua Apartment Building of Second Life Chinese School with your partner, and do the following: a. Visit each of rooms in the building, i.e., R101, R102, R201, R202, R301, R302 b. Learn the new words for things/objects inside the rooms by clicking each of them c. Learn to say the wh- question, *Zhè/Nà shì shénme*? (What is this? What is that?) d. Learn to answer the questions by using each of the new words just learned e. Submit your dialogue via email

Figure 1: Bedroom and Kitchen in an Apartment

For a better understanding of how tasks work, take a look at the requirements of Task 5 in Table 2. For this task, students were required to visit, in pairs, the apartment in Lianhua Apartment Building. While in the room, students must first learn the new vocabulary about each of the objects that they saw in the rooms, and then learn how to ask and answer questions using *Zhè shì shénme* "What is this? *Nà shì shénme* "What is that?" What is nice about this virtual apartment is that not only does it consist of different rooms, such as the living room, bedroom, and the kitchen, each room is furnished with furniture or objects that one would usually see in a real-world apartment. Furthermore, each piece of furniture or object has *pinyin*, and character embedded behind the scene, which will pop up after being clicked. For instance, after clicking the pot on the oven in

the kitchen, as shown in Figure 1, one will see *guō* 锅 showing up. When the cupboard above the counter is clicked, the door will open, and *yán* 盐, *yóu* 油 will show up if they are clicked respectively. This kind of interactive way of presenting the vocabulary helps students to learn and memorize new words.

Figure 2: Instructor Greeting Each Student

Figures 2 and 3 show the two screen shots of Task 8 when it was in progress. In Figure 2, the instructor, as a hostess, stands at the door, greeting each student when s/he enters Mr. Li's home. Figure 3 shows the scene of students at the party in the living room.


Figure 3: In the Living Room of Mr. Li's

Task 8 was completed in Language Resource Center, where each computer was fully powered, so that during the process of the task, students would not run into the potential problem of losing batteries. Another advantage of using the Language Resource Center was that each workstation was equipped with a headset, so that students could talk to one another with a good quality voice.

As instructed, all the tasks had to be completed outside of class. Each task was posted on Blackboard, a course management application, in due time. A reminder of the assignment was also sent to students via email reminding them to do the task. Depending on the nature of task, students must perform Tasks 1, 3, 4, 6 alone; they must complete Task 2 with the teaching assistant; they must finish Tasks 5, 6, 7 in pairs; they must participate in Task 8 with the whole class. There were two ways for the instructor to check students' assignment. One was through a follow-up in class, asking students questions about the task. The other was to have students submit their work via email. Thanks to the built-in function available in SL, students, after chatting, can easily copy and paste the record of their dialogue, located in the 'history' window of the local chat box, and email it to the instructor. Students must submit their dialogue for the tasks involving a partner, for which they received comments or corrections.

3.3 Learner attitudes and performance

As mentioned above, except for one, all other students who were involved in this study belonged to the Net Generation. Although only a very few of them had heard about the SL program, this group appeared very excited on the first day when they were informed of the project. Some students picked up navigation skills right away in the tutorial class; some were able to modify their avatar's appearance so as to look great. Figure 4 shows the work from a pair of students for Task 5, asking and answering questions about the objects and furniture in both living room and the kitchen.

Figure 4: Student Work for Task 5

However, to our surprise, as the time passed by, some students gradually became late in doing the assigned tasks as required, and some even did not bother to try. An examination of the students' general performance on tasks, as shown in Table 3, indicates that only 7 out of 26 students completed all the tasks properly, for which they received full credit, i.e., 16 points. 15 students did the tasks ok, but left some tasks incomplete, thus, receiving 12 to 14 points. 4 students did only a few tasks.

Table 3: General Performance of Tasks

No. of Students perform very well	No. of Students perform OK	No. of Students did not perform well
7 (27%)	15 (58%)	4 (15%)

Given that this group, except for one student, was a part of Net Generation, why did only one third of them perform well with the technology-related tasks? Why did some students not complete the tasks as expected? Was that because of difficulty with the language or was that because of problems with their computer? Was the failure of completing the tasks an indication of a lack of capability, or a lack of learning motivation? Furthermore, what was students' learning experience? Did they learn? In order to find out what students thought about the project, the author administered a questionnaire at the end of the project.

Here the discussion will focus on the two particular questions in the questionnaire: (i) *What do you think of the Second Life tasks developed for this semester*? (ii) *Do you want me to continue to integrate Second Life in the teaching/learning of Chinese in Spring 2010?* The feedback from the students was mixed regarding the first question. On the one hand, some students expressed a positive experience about the virtual learning. For example, one student wrote, "it helps learn, and it's fun". One said, "it was a fun interactive way to learn Chinese". Another student said, the tasks "allowed me to talk to others in the class and I get to know them". These students enthusiastically suggested continuing the tasks in the following semester when answering the second question. For example, some even provided such suggestion as designing tasks that have "more interactions and tasks with incentives to encourage students to go on to Second Life", or having students "do some of the gamed tasks, like find a girlfriend". On the other hand, there were less encouraging comments from students. For instance, I "couldn't get navigation around the Island, -- couldn't always find the location", or "couldn't find a partner", or "I felt that technical difficulties were much", or "my computer didn't work properly", or "I got too frustrated and confused on technology rather than Chinese". Not surprisingly, this last comment was from the student who was not part of Net Generation, and who did not perform any other learning tasks except for the first and the last one. It is obvious that this student did not feel comfortable with the technology. Those students who commented negatively suggested not continuing the project, because (i) they did not have time to do assignments; (ii) they could not find a partner to work with. Out of these negative comments, the complaint about the difficulty of using the computer technology in SL, which had prevented them from completing tasks, was beyond our expectation. However, this finding is along the lines of the observation made by Kuriscak and Luke

(2009, p. 193). That is, the Net Generation students may be strong with playing special technology, i.e., the technology that is involved in the programs especially designed for generating funs, but they are less experienced or motivated with utilizing technology for learning. While the SL technology has been shown to be effective for beginners of Spanish, as observed by Clark (2009), the current study suggests that the technology seemed to discourage some of our students from trying it enthusiastically.

4. Discussion and Conclusion

With respect to the three questions that we raised above, here are some tentative answers. In terms of whether it is feasible and plausible to integrate SL in Chinese language instruction, the answer is obviously YES. While the learning experience with SL is mixed, there are some observations on the benefits of using the SL from the teaching perspective. First, SL offers an opportunity for students to interact with each other easily. This kind of interaction in SL will make the learning a co-constructive and enjoyable social experience if the instructor can develop a workable strategy to help students find their partners. For today's students who are busy with working as well as studying, the SL platform offers them a convenient and comfortable place to meet and practice the language if the tasks designed can assist them with learning and progressing. Secondly, explorations of cultural aspects such as objects, buildings, landscapes, places of interest, etc. in the virtual world make visitation of the country possible without costing anything. Here, again, tasks are crucial in the sense that they must be interesting enough to attract students to explore the authentic contexts on their own, and engaging sufficiently to sustain their motivation for repeated exploration. Thirdly, SL presents creative ways for students to learn the language meaningfully in a context. With contextualized interactions and meaningful communications, language learning is no longer merely repetition, and recitation, which are usually boring, and less effective (e.g., Lee and VanPatten, 2003). It is no doubt that SL plays a significant role in connecting students for social and experiential learning.

In regards to the question to what extent SL supports the learning of Chinese, further empirical research is required. Possible directions would be to conduct an experimental study, which should examine and compare the learning of Chinese in two different conditions: one is the regular teaching without the use of SL; the other is the teaching plus the support from the SL. Only when the quantitative data on the effect of the learning is obtained can a substantial conclusion be made. However, caution must be exercised to avoid a hasty conclusion or overgeneralization. Sometimes just one empirical research may not be sufficient enough to offer a conclusion about the effects of technology-supported language teaching. In the study of the second language acquisition of Spanish pragmatics, as the data obtained did not support any significant progress from pre- to posttest, Sykes (2009) suggested some further considerations for future studies in design, implementation and research.

In terms of the question whether students welcome the use of SL in their learning of Chinese, responses and reactions varied. We speculate that many unknown factors

could be at work in that regard. Maybe the tasks are time-consuming, therefore many students could not afford time to do. It was possible that the technology involved in SL was a bit complicated so that students had to give up. Another possibility is that the percentage of the overall marks for the SL project is a bit too low so students felt that their efforts were not worthwhile, or they were not motivated enough to explore on their own. There might be some other reasons involved. Thus, it would be informative and helpful, for future study, to require students to write up journals recording their frustration and excitement with the virtual learning. In exploring the use of SL in Chinese language instruction, instructors need to be aware of students' thoughts and reflections. In the case of those students who did not perform certain tasks as assigned, it would be necessary for the instructor to find out immediately why students failed to do the work, and address the issue right away. If it involves the language, the instructor should go over the difficult points again and make them clear to students. If it is a technology-related problem, the instructor should help by arranging a better support service. If it is related to the lack of time or the lack of partners, the instructor should work with students to resolve the issue. Using the virtual world to support the teaching of Chinese is much like having students perform task-based learning. In order to achieve effective outcomes, the instructor should play multiple roles: a teacher, an architect, a chairperson, a resource person, or a facilitator (e.g., Willis, 1996; Lee and Vanpatten, 2003). As pointed out by Clark (2009, p. 168), "If students are living and working within the Second Life community, they are discovering knowledge on their own. Our role as teacher will change from being authority figures and knowledge-keepers to being guides".

For the teachers who are interested in including SL into their Chinese teaching program, here are three important suggestions. First, increase the weighting of marks for the SL project so as to raise students' awareness of the significance of performing the tasks in the virtual world. The current study shows a small number of students who completed all the tasks satisfactorily, while many others left some tasks incomplete. Such a result could be derived from the possibility that the students did not have much incentive to make their best efforts for a time-consuming, challenging, but lower-weighted project.

Second, in addition to arranging learners to practice with their own peers, try to recruit native speakers to participate in the project so that learners could access the expertise of native Chinese speakers. College students in China or Chinese students studying in the same American university would serve as best partners, as they are in the same generation group as the learners, thus showing the same interests to communicate with each others. The earlier and richer exposure to the native language that students receive, the better learning outcomes they achieve.

From the current study, we find that more research is required with respect to the designing of tasks that can serve "curricular goals and instructional models". While SL is a powerful tool, tasks or activities form the crucial part of the pedagogy. That means the instructor needs to develop pedagogically-sound tasks to motivate learners to learn. With so many resources available on SL islands, instructors must identify and select right materials, and use them to create engaging activities. To that end, instructors must take

into account learner backgrounds, pedagogical issues, and teaching goals. The purpose of utilizing SL is to enrich and extend real-world classroom teaching and learning. As remarked by Oxford & Oxford (2009, p. 2), "successful integration of technology into the classroom in a pedagogically sound manner involves more than simply introducing a software program or other innovation to the students in a classroom. Technology integration must be thoughtfully planned out based on curricular goals and instructional models". Our study highly suggests that more planning is required before such a project is undertaken. For example, to run a successful group activity on the SL platform like "Let's have a party at Mr. Li's", we suggest the following. (i) Try to meet students in a bigger space. If that is not possible, break the class in small groups so that each time the instructor is with a small group instead of the whole class. This way, the interaction between the instructor and students is easier and more effective. (ii) Give clear directions to students as to what to do and what not to do while the instructor is having a dialogue with one student or there is a conversation between two students. Just like the natural conversation taking place among a group of people in the real world, everyone should follow a rule in terms of who at what time takes a turn to speak. Maybe the instructor can run a Round-Robin activity by asking one question and having each student respond. This practice is even more important in the virtual world; otherwise, it will be too noisy with many persons speaking at the same time. (iii) Prepare some activities in advance and assign the activities to those students who are waiting to have a dialogue or who have done a dialogue with other students. (iv) Make sure that everyone including the instructor test out the built-in microphone so that when doing a group activity, the equipment works properly. There is a button beneath TALK on the SL viewer, which can be clicked to enable the avatar to speak hands free. This feature is very useful for the instructor who has to use hands to navigate in order to interact with students. Unfortunately we did not know the availability of that function until the task was completed.

To conclude, this study has shown an integration of SL in the one-semester university beginning Chinese course. It is found that some students enjoyed the virtual learning, while others were discouraged for various reasons. However, the author observed some benefits of the SL-supported teaching, and intends to conduct further research to explore its effectiveness along the lines of the suggestions recommended. As an emerging tool, SL has much to offer the field of Chinese language instruction, and learns of Chinese. For its best practice, focus should be on developing tasks that aim to enhance students' learning.

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