Interactive and Collaborative Learning in Virtual English Classes

Lan Li, Department of English, Hong Kong Polytechnic University, Hung Hom, Hong Kong

EXECUTIVE SUMMARY

This paper reports the tactile learning experience with simulated 3D learning environments in an English Department at a Hong Kong university. With the belief that multimedia instruction and multimedia learning help the learner's construction of knowledge (Mayer 2005, p.2), sections of Second Life were embedded into three separately taught English subjects. Various student activities were carefully designed, such as knowledge hunting, intercultural communication, peer assessment and assimilation of workplace tasks. In order to find out if students are motivated to use SL and if learning through a virtual environment is more effective than a traditional classroom or a 2D online environment, a questionnaire survey was conducted among the students. Student feedback was also retrieved from the reflective essays on the virtual learning activities. Positive feedback asserts that SL is an interesting, interactive and entertaining environment for both independent and collaborative learning. SL can be used for the placement of teaching materials, the demonstration of certain functions, initiating instant communication and enabling peer assessment in the learning process. The main difficulties according to the students are motivation, complications with technology and time consumption. On the whole, we regard Second Life as having future promise for facilitating linguistic development. However, usage of the platform requires substantial resource investment in order to ensure adequate design of interfaces and appropriate virtual activities for learning purposes.

Keywords: Intercultural Communication, Linguistic Development, Multimedia Instruction, Multimedia Learning, Second Life, Three-Dimensional (3D) Learning Environments

ORGANIZATION BACKGROUND

The Virtual PolyU was built in 2007. It is the first SL campus in Asia with a simulated environment for different teaching & learning tasks. Until now, eleven departments have set up various 3D learning facilities on the virtual campus and served over 4000 student avatars. For example, the Virtual Hotel enables students of tourism to deal with virtual customers; nursing students can practice medics with patients in the Virtual Hospital, and business students can hold virtual negotiations with business avatars. Herold (2010) summarizes the four key educational functions of SL: teaching, learning, assessment, designing and resources. The virtual PolyU English Department was opened in 2009. It was designed as a Tree of Knowledge

with five floors: the first and second floors are lecture halls; the third and fourth are exhibition halls for student learning products. The ground floor is a Drama Lab which is currently under construction. There is also a Roof Garden for holding conferences and other activities. The tree could be developed on an even bigger scale, with different branches for different subjects or different functions; the development possibilities are endless within SL, limited really only by resources (Li et al., 2012).

Setting the Stage

Second Life (SL) celebrated its 10th anniversary in June 2013. Its 3D-rich-media virtual environment has shown great potential for simulating real life in different sectors: education, arts, medicine, military, science, business and so forth, although it is not quite as sophisticated as other online community services such as Facebook or Twitter. According to the website of SL 21.3 million people in the world today are using the platform for a variety of different purposes such as sports, working solution, task-based games, role-plays, and competitions. It has become a part of popular culture. Interestingly, the education community is the fastest growing and among the most vibrant, active, and dynamic in Second Life with over 700 educational institutions having set up virtual campuses, including some world's leading universities such as Oxford University, Imperial College London, University of Edinburgh, Yale and Ohio University. Research has found that some students perform better in an online learning environment due to the comfort it provides them in participating in learning activities: "We are hoping to discover that Second Life is an environment in which every student feels comfortable about taking part in academic discussions"(Fox et al., 2009).

Modern technologies are becoming a significant part of human existence around the world. Fox et al. (2009), drawing on different data sources, summarized that almost one of every four people worldwide uses the Internet, three of every five people use cellular phones, and over 400 million videogames were sold in 2009. They regard these technologies as 'low-immersive virtual environments' or 'low-end virtual reality' (Fox et al., 2009, p.95), because the interaction is outside the virtual world and controlled by keyboard or play stations. Users do not really immerse in the virtual world. High-end virtual reality is the experience of losing oneself in the digital environment and shutting out cues from the physical world; it is known as *immersion* (Witmer & Singer, 1998). The tracking and rendering process allows a much greater level of interactivity than traditional media. Unlike other media, a user in a virtual environment has a role within the medium, and his or her actions have an immediate and observable impact on the content of the medium. According to Fox et al. (2009), virtual worlds differ from other applications in three ways. First, virtual worlds allow for real time simultaneous interaction, whereas systems such as Facebook and Friendster are generally mediated through time delay mechanisms. Secondly, virtual worlds allow users to create fully customized self-representations, or Avatars, far more flexible than image creations in online communities like YouTube. Avatar activities have been investigated in extensive studies; the self is represented visually and textually through synchronous chat. Users in the immersive virtual world of SL tend to behave in accordance with the norms of 'real' face-to-face communication which in turn creates what has been termed 'self-presence'. Self-presence connotes a feeling of connection between oneself (the 'self' as perceived in reality) and the self as an avatar; this furnishes a great sense of connection with other avatars which in turn facilitates the possibility of language learning and idea exchange via interaction with other avatars. Finally the basic rules of physics apply within virtual worlds making Second Life three dimensional and navigationally comparable. Students can travel around the world in SL and communicate with people from different cultural backgrounds.

Mayer's cognitive theory of multimedia learning asserts that people build mental representations from words and pictures (Mayer, 2005). With the advancement of modern

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