# **Techtalk:** *Second Life* and **Developmental Education**

#### By Melissa L. Burgess and David C. Caverly

In our previous two columns, we discussed the potential for using blogs and wikis with developmental education (DE) students. Another Web 2.0 technology, virtual environments like *Second Life*, provides a virtual world where residents create avatars (three-dimensional [3-D] self-representations) and navigate around an online environment (Caverly, Peterson, Delaney, & Starks-Martin, 2009). Other virtual environments comparable to *Second Life* have emerged (Virtual Environments Info Group, 2007).

Second Life differs from asynchronous blogs and wikis because the 3-D interface allows users to immerse themselves into synchronous interactivity. Information can be disseminated through video, note cards, e-mail, simulations, mapping, bodily actions, or text-based conversation histories. Avatars can discuss this information using text-based chatting (thus creating a downloadable history) or through a voice tool (requiring a microphone and speakers). Communicating synchronously through avatars provides the opportunity for greater social interactivity which is a vital factor when developing a community of inquiry within online or hybrid DE courses or learning support (Garrison, 1985; Peterson & Caverly, 2006).

#### From a MMOG to a MUVE

Second Life grew out of Massively Multiplayer Online Games (MMOG) of the 1970s such as Dungeons and Dragons (Wikipedia Foundation Inc., 2009a) and more currently World of Warcraft (Wikipedia Foundation Inc., 2009b). Emerging as Linden World in 2002, it allowed users, by invitation only, to create avatars known as "primitars" (Rymaszewski, Wagner, Wallace, Winters, Ondrejka, & Batsone-Cunningham, 2006), gawky robots made of prims (objects). Second Life was envisioned not as another game but as a new "country" where users (i.e., avatars) could explore and interact. In 2003 Second Life became publically available, which allowed Second Life to gain users and become a Massive Multiuser Virtual Environment (MUVE).

At the time of this writing, approximately 1.4 million users log into *Second Life* regularly. Activities in *Second Life* have grown from gaming to simulations, collaborations, and explorations that mirror real-world learning environments. The potential for *Second Life* for teaching and learning holds great promise for constructivist learning among DE students.

#### Second Life in Higher Education

With Second Life tools for creating and scripting, immersion into these social, collaborative spaces serves as fertile ground in higher education. There are more than 200 higher education institutions with an active presence in Second Life, sharing virtual tours of their campuses, instructional activities in a variety of disciplines, and educational experiences (Rymaszewski et al., 2006). The Second Life Educators (SLED) listserv has more than 3,900 members sharing discussions on best practices, conferences, workshops, and courses within Second Life. Examples of how Second Life is being used for instruction in higher education can also be found (Kay & FitzGerald, 2009; Mengel, Simonds, & Houck, 2009; xxArete2xx, 2009).

#### Second Life in Developmental Education

Second Life can simulate a highly engaging, problem-solving, collaborative, immersive learning environment for DE students, particularly if the pedagogy involves cognitive, social, and teaching presence (Garrison, Anderson, & Archer, 2000; Peterson & Caverly, 2006). Second Life teaching activities could provide the type of online instruction environment millennial students desire (Howe & Strauss, 2000), thereby appealing to DE students and the strategies they are developing (i.e., self-regulation, engagement, reading, and writing).

For example, a virtual environment for effective math group tutoring might be created in a campus' Second Life learning center between a tutor's avatar and several DE students' avatars as the tutor teaches them how to solve functions with two unknowns. The tutor's avatar could begin by showing math examples in business or engineering (i.e., the cognitive presence's triggering event), discussing solutions (i.e., exploration), modeling procedures for solving two functions (i.e., integration), and asking the students to solve other functions (i.e., resolution). Second Life can provide a social presence as both tutor and DE students' avatars interact in a risk-free emotional environment, allow for open-communication, and work together collaboratively. Second Life demands synchronous teaching presence as the tutor's avatar delivers instruction by defining the topics and allowing the DE students' avatars to share their understanding through discussion. Whether Second Life provides a better technological delivery mechanism than traditional online math tutoring through the addition of the avatar is a research question; still, the potential is great.

Similarly, DE student avatars could attend a simulated biology class they are unable to take due to institutional prerequisites, compare their lecture and lab notes with a Supplemental Instruction Leader's lab notes, and consequently be better prepared to take the class in the future. Other DE student avatars could attend a blocked American history class, read and annotate the textbook and primary source materials, compare their notes with each other and with the Supplemental Instruction Leader's notes, and collaboratively prepare and take a virtual test. All three of these virtual environment scenarios provide technological scaffolding to accommodate time and distance demands of many DE students as well as provide sound instruction through a cognitive, social, and teaching presence.

Thus far, one pilot study conducted in a developmental reading *Second Life* classroom at Sam Houston State University might provide some direction for DE and virtual environments (Burgess, personal communication. March 4, 2009). Delaney and Caverly (2008) found some success in another study which taught concepts of schema theory and metacognition to preservice teacher education graduate students.

#### **Potential for Virtual Environments**

Developmental educators are facing a sharp turning point with regard to Web 2.0 technologies and the ways in which they can be utilized in DE classrooms. This prompts the need for further exploration and research. Examples of questions to investigate this goal might include: What new literacy skills (Leu, Kinzer, Coiro, & Cammack, 2004) do our DE students actually have, and what do they need? How can educators capitalize and build on these new literacy skills using Web 2.0 technologies? How must educators align individual views of learning environments to accommodate and nurture these new literacies with instruction that responds to the unique opportunities they offer? And, most importantly, what affordances are there, if any, for DE students with these new literacies?

#### Conclusion

Taking steps toward the discovery of Web 2.0 technologies will advance conversations on this front, thereby enabling an informed direction and

application regarding this pedagogical/paradigmatic shift. We invite the DE teaching and learning community to further this important dialogue by joining DE organizations (i.e., College Reading and Learning Association [CRLA], National Association for Developmental Education [NADE]) and their respective technology special interest groups. Engaging in ongoing professional conversations on Web 2.0 and other technologies will help to advance knowledge to reflect the teaching and learning needs of 21st century DE students.

#### References

- Caverly, D. C., Peterson, C. L., Delaney, C. J., & Starks-Martin, G. (2009). Technology integration. In R. F. Flippo & D. C. Caverly (Eds.), *Handbook of college reading and study strategy research* (2nd ed., pp. 314-350). New York: Routledge.
- Delaney, C., & Caverly, D. C. (2008, April). *It's a wonderful* Second Life. *Or is it?: An exploratory study of constructivist learning in a virtual world.* Invited paper presented at the College of Education Faculty Research Colloquium, Texas State University-San Marcos.
- Garrison, D. R. (1985). Three generations of technological innovations in distance education. *Distance Education*, 6(2), 235-241.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in higher education. *The Internet and Higher Education*, 2(2/3), 87-105.
- Howe, N., & Strauss, W. (2000). *Millennials rising: The next great generation*. New York: Vintage.
- Kay, J., & FitzGerald, S. (2009). *Second Life in education*. Retrieved March 20, 2009, from http://sleducation.wikispaces.com/educationaluses
- Leu, J. D. J., Kinzer, C. K., Coiro, J. L., & Cammack, D. W. (2004). Toward

- a theory of new literacies emerging from the Internet and other information and communication technologies. In R. B. Ruddell & N. Unrau (Eds.), *Theoretical models and processes of reading* (5th ed., pp. 1570-1630). Newark, DE: International Reading Association. Retrieved March 20, 2009, from http://www.readingonline.org/newliteracies/leu/
- Mengel, M. A., Simonds, R., & Houck, R. (2009). Educational uses of *Second Life* [video]. *YouTube*. Retrieved March 22, 2009, from http://www.youtube.com/watch?v=qOFU90UF2HA
- Peterson, C. L., & Caverly, D. C. (2006). Techtalk: What students need to know about online discussion forums. *Journal of Developmental Education*, 29(3), 40-41.
- Rymaszewski, M., Wagner, J. A., Wallace, M., Winters, C., Ondrejka, C., & Batsone-Cunningham, B. (2006). Second Life: *The official guide* (2nd ed.). Indianapolis, IN: Wiley.
- Virtual Environments Info Group. (2007). *Virtual worlds comparison chart*. Author. Retrieved March 5, 2009, from http://www.virtualenvironments. info/virtual-worlds-comparison-chart
- Wikipedia Foundation Inc. (2009a). *Dungeons & dragons*. Retrieved March 20, 2009, from http://en.wikipedia.org/wiki/Dungeons\_%26\_Dragons
- Wikipedia Foundation Inc. (2009b). *World of warcraft*. Retrieved March 20, 2009, from http://en.wikipedia.org/wiki/World\_of\_Warcraft
- xxArete2xx (2009). Education in *Second Life*: Explore the possibilities [video]. *YouTube*. Retrieved March 22, 2009, from http://www.youtube.com/watch?v=TMGR9q43dag

Melissa L. Burgess (mlbo24@shsu.edu) is a Literacy Specialist and Developmental Reading instructor at Sam Houston State University and David C. Caverly (Do2@TxState.edu) is professor and director of the Developmental Reading Program at Texas State University-San Marcos.

### The University of Missouri-Kansas City

## **❖** Supplemental Instruction ™ *Workshops*

Jan. 4-6, 2009 (optional day Jan. 7)	Mar. 8-10, 2009 (optional day Mar. 11
May 17-19, 2009 (optional day May 20)	Aug. 2-3, 2009 (optional day Aug. 5)
Sept. 6-8, 2009 (optional day Sept. 9)	Nov. 1-3, 2009 (optional day Nov. 4)

The International Center for Supplemental Instruction at the Center for Academic Development offers training in Supplemental Instruction. The training focuses on the procedures for selecting SI courses and SI leaders; evaluation and funding of the program; ongoing training and supervision of SI leaders; theoretical frameworks underlying the SI model; and effective learning strategies and SI session activities.

Supplemental Instruction • The Center for Academic Development • University of Missouri - Kansas City SASS Building, Room 210 • 5100 Rockhill Road • Kansas City MO 64110-2499 (816) 235-1174 • fax (816) 235-5156 • cad@umkc.edu • www.umkc.edu/si/