

Virtual World Technology: E-Learning Tools for Communication Disorders

Stacy Williams, Ph.D. CCC-SLP
Assistant Professor
Department of Communication Sciences
Case Western Reserve University
11206 Euclid Avenue
Cleveland, Ohio 44106
stacy.williams@case.edu
216-368-3352
Fax 216-368-6078

Program Summary

One of the most important challenges facing the field of communication disorders is the development and implementation of efficient and effective methods for teaching clinical decision making skills. Virtual world technology offers rich, contextual based learning environments that create a community of learners. It promotes learning in a safe, controlled, learner-centered environment wherein students can repeatedly practice a range of skills without the risk of failure. Virtual learning environments demand a high level matrix of knowledge, skill and professional judgment; qualities that contribute to successful, competent clinicians.

Generation Y students (age 5-25) have a wide range of technology experience: the World Wide Web, mobile devices, instant messaging, online social communities and video games. This group of students currently makes up 20% of the population today which is estimated to be over 70 million people. To ensure that we're meeting the needs of Y generation students and building on their technology experiences, 5 key principles for good course design are recommended along with technology solutions:

- **Challenge students to higher levels of learning & problem solving (case studies)**
 - PATsy <http://www.patsy.ac.uk/>
- **Use active forms of learning (simulations)**
 - VICSR <http://www.case.edu/vicrsr>
- **Provide frequent and immediate feedback to students (use of IM and email)**
- **Use a structured sequence of different learning activities (less PowerPoint)**
 - Second Life <http://www.secondlife.com>
- **Fair system for assessment and grading (multiple forms of assessment)**

References

- Brown, J.S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. *Educational Researcher*, 18(1), 32-42.
- Cobb S., Beardon L., Eastgate R., Glover T., Kerr S., Neale H., Parsons S., Benford S., Hopkins E., Mitchell P., Reynard G. & Wilson J. (2002) Applied virtual environments to support learning of social interaction skills in users with Asperger's Syndrome. *Digital Creativity* 13(1), 11-22.
- Jacobson, L. (1993). Welcome to the virtual world. In: Richard Swadley (Ed.). *On the cutting edge of technology* (69-79). Carmel, IN: Sams.
- Kneebone, R.L., Scott, W., Darzi, A., & Horrocks, M. (2004). Simulation and clinical practice: strengthening the relationship. *Medical Education*, 38, 1095-1102.
- Lave, J. & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation*. New York: Cambridge University Press.
- McLellan, H. (1991). Virtual environments and situated learning. *Multimedia Review*, 2(3), 25-37.

- Mikropoulos, T, Katsikis, a., Nikolou, E., & Tsakalis, P. (2003). Virtual environments in biology teaching. *Journal of Biological Education*, 37 (4), 176-181.
- Parsons, S. & Mitchell (2002). The potential of virtual reality in social skills training for people with autistic spectrum disorders. *Journal of Intellectual Disability Research* 46(5), 430-443.
- Riva, G. (2000). Virtual reality in rehabilitation of spinal cord injuries: a case report. *Rehabilitation Psychology* 45,81-8.
- Rothbaum, B., & Hodges, L. (1999). The use of virtual reality exposure in the treatment of anxiety disorders. *Behavior Management* 23, 507-25.
- Scerbo, M. (2004). Medical virtual reality simulation: Enhancing safety through practicing medicine without patients. *Biomedical Instrumentation & Technology*, 225-228.
- Steuer J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of Communication* 4(2) 73-93.
- Syder, D. (1996). The use of simulated clients to develop the clinical skills of speech and language therapy students. *European Journal of Disorders of Communication*, 31, 181-192.
- Weis. P.A., & Guyton-Simmons, J. (1998). A computer simulation for teaching critical thinking skills. *Nurse Educator*, 23, 30-33.
- Wilson, B. & Myers, K.M. (2000). Situated cognition in theoretical and practical context. In D. Jonassen & S. Land (Eds), *Theoretical foundations of learning environments* (pp. 57-88). Mahway, JF: Erlbaum.