LEARNING THE SECOND WAY

Universities have been developing online learning facilities for doctors and medical students for many years. Now they are turning to the virtual world of Second Life, reports **Daniel Stott**

Hospital life, but not as we know it: above, an intensive care unit; right, a patient waiting room; and below, a patient with healthcare staff

Not many lecturers would appreciate their students flying into lecture theatres dressed as cybergoths, but since September Coventry University has begun to encourage such behaviour. The university is pioneering an MSc course in clinical management that holds problem based learning groups for students in Second Life, an online virtual world. The course trains students in managing healthcare facilities and is the first healthcare course to use Second Life as a learning platform.

Second Life is an internet based application that uses three-dimensional graphics to

represent an online environment. Users may register for free, adopt a character (known as an avatar) from an online menu, and then explore the virtual world of Second Life. Not only are avatars able to interact with each other through on-screen dialogue boxes—and more recently voice recognition—but they can also create new buildings and online facilities using Second Life's simple programming tools. Users are also able to create islands—online territories that are separate from the environment's "mainland" and can have restricted access through passwords.

Other medical schools are beginning to follow Coventry's lead and are developing

modules and courses using Second Life. St George's Medical School, part of the University of London, for example, is looking at ways in which Second Life can be used to help students interact with patients in a safe, simulated environment. Emily Conradi, the school's electronic projects manager, also predicts that Second Life has the potential to "enable students from all over the world to gather and hear from expert speakers who could be based anywhere in the world."

Maggi Savin-Baden, professor of higher education research at Coventry University, thinks that Second Life has advantages over traditional types of distance learning: "Students get a greater sense of being in the same room or the same space as other participants in the process. It's more active."

At Coventry University's Second Life island, 10 students are being employed to build learning facilities for the new intake of Second Life learners.

Potential applications

At Cornell University, New York state, academics have pioneered the use of virtual reality for a range of psychiatric problems. People with phobias of flying, for example, can experience a virtual flight without leaving the safety of the consultation room. Using a computer headset, the patient is exposed to an ascending hierarchy of fear inducing

HOW UNIVERSITIES ARE USING SECOND LIFE

- The University of Nottingham is researching bullying. About 50 avatars have taken part in interviews monitored in Second Life by an occupational psychologist
- The University of Plymouth and Thomas Jefferson University in the United States have developed a sex education zone featuring films about HIV and a stand with current sexual health news
- Cornell University is conducting research into post-traumatic stress disorder, measuring the physiological responses of veterans of the Iraq war and previous Gulf war while participating in a virtual tour through a combat scenario
- Imperial College, London, has a Second Life version of their real world Sir Alexander Fleming building, complete with teleport signs to the library and lecture theatres

experiences, from taking a cabin seat with the engines off, to descending and landing in bad weather.

A similar intervention involves virtual public speaking, in which the therapist can control the responses of a virtual audience, ranging from ringing applause to an atmosphere of deep boredom and agitation.

At Idaho State University researchers have designed a Second Life learning environment incorporating two islands, Asterix and Obelix. Dr Ramesh Ramloll, one of the programmers who designed the islands, explains the attraction of learning in Second Life: "It engages people in a way that traditional methods don't. Also, using Second Life costs dramatically less than designing your own virtual reality environment from scratch, and building environments in Second Life is a collaborative exercise with people who are experts in whatever field you want to learn about."

Recent exercises conducted on Idaho's islands include a "pavement triage" pandemic flu disaster, during which doctors attended to infected patients on the streets surrounding a virtual hospital. Participants were able to plan disaster responses in online meetings and were able to use emergency equipment, such as triage tents, which had been designed and programmed to closely mimic real world facilities. "Teams of players on Second Life would be told on-screen that some sort of disaster was unfolding," explains Dr Ramloll.

"They would then have to collect their uniform, and by clicking on their vests, they would be told what their responsibilities were and the name of the person they would have to answer to during the exercise."

"Another recent exercise involved practicing evacuation drills for the Elks Rehabilitation Hospital here in Idaho using a simulation constructed on Second Life."

Dr Ramloll explains that you can get people from different agencies networking and sharing ideas in these exercises. "One of the things that we've been working on is getting people from different roles speaking to each other in 'plain text' on Second Life—so that involves cutting out a lot of the code numbers and acronyms that might be well understood in one organisation but meaningless to others," he says.

Pitfalls

Using virtual reality as a learning application does, of course, pose potential problems as well as having possible advantages. Professor Savin-Baden recalls how during one Second Life tutorial "a scantily clad young lady turned up and asked if she was at a nightclub." Access to university islands can, however, be locked by administrators, meaning unwanted guests can, in theory, be kept out.

Professor Savin-Baden says that some students are initially lukewarm about the idea of having an element of their course being conducted in Second Life. Students without

experience of the virtual world are given tuition in easy tasks, she explained.

Cost is another potential stumbling block: maintaining and programming environments in Second Life may be cheaper than designing virtual solutions from scratch, but the costs can still be considerable. In addition to the £6000 (€8600; \$12 500) paid for Coventry University's island, Professor Savin-Baden says that a further £20 000 has been spent on programming. Costs are also associated with making sure that computers on campus are powerful enough.

There is some debate about whether spending money on virtual learning platforms is worthwhile, but some university marketing departments have already spotted the potential that having a virtual presence offers in terms of college branding and attracting future generations of computer literate and Second Life savvy students.

Hamish MacLeod, senior lecturer on the MSc in e-learning course at Edinburgh University explained, "I have had one or two inquiries about the masters course from prospective students who have made a point of visiting Holyrood Park [Edinburgh University's Second Life campus] before getting in touch—a hint that Second Life can play a role in recruitment."

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