Virtual worlds are genuinely real spaces for learning

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Virtual worlds — shared graphical spaces on the Internet — are an exciting new medium for the 21st century. They are the natural *evolution of digital technologies* that are defining the 21st century, just as telephone, radio, film, and TV helped to define life in the 20th century. Virtual worlds constitute a growing space for collaborative play, learning, work and e-commerce, a fact that is beginning to impact on education in significant ways. Originally developed as text-based games, virtual worlds now feature three-dimensional (3D) social worlds with complex and colourful graphical interfaces, allowing interaction with other people and objects and providing immediate feedback. Everyday use of email, Facebook, Instant Messaging, Twitter and other online ways of collaborating, connecting and representing ourselves can make it easier for educators to consider the opportunities that virtual worlds may present. However, to some adults, virtual worlds can look like 'fun and games', and without active participation they may find it hard to discern the potential for learning and teaching. Schroeder (2008) helps us understand that virtual worlds are persistent virtual environments in which people experience others as being there with them, and where they can interact with them.

Teachers and others with a stake in young persons' education need to participate in the new digital world because there is a generation gap in how youth and adults view the value of online activity. Adults tend to be in the dark about what youth are doing online, and often view online activity as risky or an unproductive distraction. Young people, however, see the social value of online activity and are generally highly motivated to participate. (MacArthur Foundation 2009, p. 5). Perhaps this is why students find virtual worlds engaging and fun, joining them outside the normal school day as part of their online activities.

Gee and Levine (2009) urge teachers to become mentors and guides with essential 21st century toolkits, explaining that the innovation-based global age requires us to retool foundational literacy skills and link them with other competences, such as critical thinking, collaborative problem solving, and media literacy in 3D virtual worlds.

Learning in virtual worlds

The capacity for innovation is exciting, particularly as teachers and teacher librarians begin to explore how to harness virtual worlds for better learning outcomes. The challenge for schools is to fast-track ways to bring 'out of school' virtual worlds activity into the daily learning cycles; to bring back the connections between school and home and to provide learning environments that are authentic to the technology use of students.

Virtual worlds can operate on computer desktops, laptops, hand-held games consoles, ipads and mobile phones. Some of the virtual worlds that teachers might hear about include: DimensionM, Whyville, World of Warcraft, Quest Atlantis, Second Life, Club Penguin, Aion, Sploder, Unity 3D.

Some common attributes of virtual worlds include:

- persistence of an 'in-world' environment within which action takes place
- a shared space allowing multiple users to participate and interact simultaneously
- avatars (people or characters), which are customisable, 3D representations of real people
- immediacy of action that occurs in real time.

Virtual worlds facilitate 'unintentional' learning, where students discover and create knowledge not for its own sake but in order to accomplish something they want to do, resulting in stronger comprehension and deeper knowledge (Educause 2006). Virtual worlds can be hugely powerful and innovative, but as with all teaching, without effective pedagogy they can also be disruptive and confusing.

Some key aspects to consider include:

- understanding the basics in order to explore your choices and options
- collecting best practices relevant to your school's setting and, where possible, observing a class or group of students in action
- trying out virtual learning environments to better understand how to boost student engagement and create new options for lesson delivery
- planning curriculum changes, remembering to make the new curriculum different to the existing one
- making the curriculum fun and making it count.

The key in virtual worlds is matching

'Virtual worlds constitute a growing space for collaborative play, learning, work and e-commerce, a fact that is beginning to impact on education in significant ways.'

the promise of technology with the creative minds of educators and their students. Virtual worlds can be interdisciplinary, provide authentic cultural, historical or scientific experiences, and offer systems of teaching that point the way to a new method of learning — one that is immersive, interactive and virtual.

Teacher librarians who wish to incorporate the evolving literacy and information needs of the digital generation into their teaching practices will want to understand and apply the pedagogy of new virtual worlds environments, adopting and promoting learning in virtual worlds as soon as the local school environment allows. The challenge is to accept that the metaverse is here to stay and that schools can and should embrace learning in virtual worlds (O'Connell & Groom 2010).

So how do you decide what to do?

In the short publication *Virtual Worlds*, you can learn more about the context in which virtual worlds are changing the way we interact with others online. There are hundreds of spaces in the metaverse — but you do not need to know them all, or be actively involved in them all. The key to engagement in this new learning space is information, connection and collaboration — and I suggest, a certain amount of courage coupled with a bit of fun and whimsy.

Jokaydia Community of Practice

Any Australian wishing to learn about, and stay up-to-date with the developments in virtual worlds and virtual learning need go no further than the *Jokaydia Community of Practice*. Jo Kay, aka 'jokay Wollongong', is a freelance digital designer and facilitator working in virtual worlds and educational technology. She has been helping educators and organisations in school, TAFE and tertiary sectors to use new and innovative technologies for learning.

An ongoing and extensive list of virtual worlds is maintained at the Australian 'Jokaydia Virtual Worlds Wiki', which is part of Jokaydia.com: <http://jokaydia.com/>. Join Jo and other educators in JokaydiaGrid: <http://jokaydiagrid.com/>, where there is a lot of exploration going on into various spaces and hypergrid environments. JokaydiaGrid is a PG environment designed for engaging kids in virtual worlds adventures, and is a much more viable alternative for K–12 educational use. 'Watch this space' for ongoing developments in 2011 for schools and students.

Why not come to the next meeting or 'unconference' on Jokaydia — there are always training sessions or personal help on offer to new avatars!

School of Information Studies

Teacher librarians are very fortunate as the School of Information Studies, at Charles Sturt University, has a virtual space in Second Life, the virtual world launched by Linden Lab in 2003. The SIS virtual space is used for online interactions and learning with students. Learning in an online course is no longer restricted to 2D interactions. The real-time benefits of meeting with colleagues and attending sessions 'in world' are exciting and innovative:

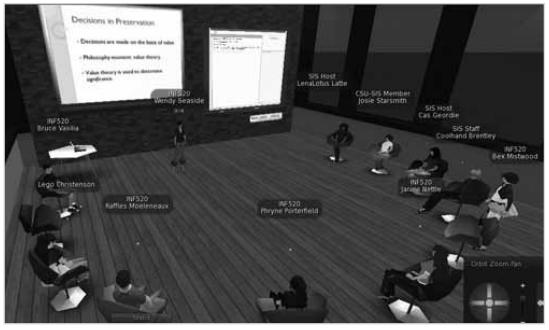
> *Students are encouraged to attend online discussion sessions hosted by faculty and guest speakers, deliver their own inworld presentations, join information professional and educator groups, participate in professional development activities, visit a range of library, museum and education campuses and islands and meet with lecturers for individual consultation* (Hider, Kennan, Hay, McCausland & Qayyum, 2010).

Currently students enrolled in both undergraduate and postgraduate courses in *Social Networking for Information Professionals* and *Preservation of Information Resources* are using Second Life as part of the curriculum, with plans to support teaching and learning in other subjects in the future. It is a space that I hope to be able to meet teacher librarians (or those studying to join the profession) in 2011 as we develop our skills and understandings in this environment.

Visit the SIS SLURL at: <http://slurl.com/secondlife/jokaydia%20III/210/200/21>.

Quest Atlantis

Quest Atlantis (QA) is an extraordinarily popular international learning and teaching project from Indiana University: <http://atlantis.



Students in INF520 course in a virtual presentation.

'The key in virtual worlds is matching the promise of technology with the creative minds of educators and their students.'

crlt.indiana.edu/> that uses a 3D multi-user environment to immerse children, ages 9–16, in educational tasks. QA combines strategies used in the commercial gaming environment with lessons from educational research on learning and motivation. In this virtual world Questers level up through sharing knowledge and wisdom when they complete curriculum challenges in the form of quests and missions. The game involves rich narrative which invites students to help light up the arch of wisdom, a relic rescued from the crumbling ruins of Atlantis. As students progress in the game they gain rewards and status, ranging from inworld currency to becoming a member of the Student Congress, a world completely designed, built and managed by students. At the time of writing there were 53,047 Questers (students) having completed over 107,981 educational missions in over 25 countries about the globe.

Begonia Island

After the success they experienced using Quest Atlantis, Lucy Barrow at Ballarat Grammar School began

Student working in Quest Atlantis.

to explore other platforms that could be used with older students and to investigate how to integrate virtual worlds into the curriculum. Lucy discovered the OpenSim alternative to Second Life on ReactionGrid: <http://reactiongrid.com/> which is the genuinely affordable way for schools to investigate the benefits of virtual worlds which accommodate both privacy options and collaboration features — without breaking the school budget.

Begonia Island emerged as a virtual worlds project for students using OpenSim and ReactionGrid. They have two separate areas known as *Begonia Island* and *Begonia Gardens*. Their private space, Begonia Island, opened in May 2010, is made up of users from the school community and is a place to create, share, explore and participate in interactive learning activities. In order to provide opportunities to share and collaborate with students and teachers from other schools, they also have *Begonia Gardens*, a public space located on ReactionGrid.

Learning highlights for students in their project were:

- Developing *problem-solving skills*: 'I found a solution to my avatar issue …'
- *Self-directed learning:* 'It's your decision ...'
- Students have realised there is a real *purpose* to their work: 'Teachers and students are going to use *what I created*'.
- Students don't want to leave the computer lab!
- Lucy Barrow regularly talks about these 3D projects at virtual worlds conferences and seminars and updates her reports and reflections at the Begonia Island blog at: <http://begoniaisland.edublogs.org/resources/> or on: Twitter@begoniaisland. In addition, Begonia Island bookmarks can be found at: <http://www.delicious.com/lucybarrow/bgsvirtualworlds> and presentations are located at: <http://www.slideshare.net/lucybarrow>. Lucy blogs at: <http://lucybarrow.edublogs.org/>.

Booralie Island

Another school that has been doing a lot of work in 3D environments

Students at Ballarat Grammar School working on their virtual project.

is the Northern Beaches Christian School in Sydney. After establishing Booralie Island in Second Life, Steve Collis has now also developed their OpenSim version of Booralie Island in Reaction Grid. Their new Open Sim island is 8 times as large as their original, with the benefits of more control as well as being able to provide their young primary students with access to the virtual world. Steve has recruited student leaders from every grade and trained them up rigorously to be 'moderators' of the new virtual world. They protect the space against misbehaviour, cyber-bullying, or vandalism. The students themselves set the tone and culture of the virtual world. Steve regularly talks about their virtual worlds experiences, sharing new insights and enthusiasm with all. Follow his blog at: <http://www.happysteve.com/> and jump on the category for 'virtual worlds' for a roundup of posts on the topic. You

Fashion Central at Booralie Island.

may also like to visit the Booralie Island wik: <http://booralieisland.wikispaces.com/> which includes his *Booralie Charter* for download and a YouTube tour of the original island.

Virtual Worlds Camp

Across the world, a friend from the Jokaydian Community of Practice, Jeff Agamenoni has demonstrated another playful way to get students involved in Virtual Words. Jeff set up a wonderful two-week-long Virtual Worlds Camp for kids in his local district in Montana. During the camp, the kids explored Quest Atlantis and jokaydiaGRID. This type of activity provided added value for the curriculum — after school and in the school holidays — extending learning into the everyday fun spaces for our students. Visit Camp Jokaydia Flickr images to get a taste of the fun! <http://www.flickr.com/photos/teacherman79/sets/72157624653664024/>. Congratulations to Jeff and the Montana kids for this innovative use of JokaydiaGrid.

Keeping up with news about virtual worlds

There are a few ways to stay in touch with developments in virtual worlds. There is a growing community ready to answer your questions at the Second Classroom: <http://secondclassroom.ning.com/>. Join the group, stay in touch, or, better still, share your own learning journey with others. There are also good online journals for additional information. Since 2006, *Metaverse Journal:* <http://www.metaversejournal.com/> has provided an Australian perspective to news, projects and events for virtual worlds across industry and other sectors around the world. The journal provides a clear indication that education cannot ignore the transition and transformation that is taking place in online learning environments.

The Journal of Virtual Worlds Research: <http://secondclassroom.ning.com/> is dedicated to open scholarship, and the majority of the JVWR content is submitted to the double-blind peer-review process.

The challenge is there for all to grab. Now … what shall I (my avatar) learn today?

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