

A slice of *Second Life*: Academics, support staff and students navigating a changing landscape

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Second Life is an on-line three dimensional virtual world which offers a dynamic educational technology landscape. The relationship between participants (real and virtual selves), and objects (both in terms of destinations and notions of capital/inventory) within this landscape, highlight the complex world(s) of an academy that, like the avatars that populate the virtual world, may continually transform to open up new possibilities. The communities, contexts and roles inherent to the experience are similarly integral to the professional development of academics and support staff. Staff and students at the Queensland University of Technology are now utilising the *Second Life* virtual environment in a variety of contexts. Although these endeavours are in their early stages, a number of themes are emerging which are instructive for future usage of virtual worlds in educational contexts. This paper examines some of the educational models that three dimensional multi-user virtual environments offer, the contexts that they operate in, and the communities they generate in order to respond to the purposes and issues that arise. It also considers the return on investment of having a place in this landscape for individuals, innovators and institutions.

Keywords: virtual worlds, *Second Life*, support, innovation, communities

Introduction

The Internet has evolved into what has been described as ‘Web 2.0’ and, in this time, witnessed the growth of online virtual worlds. The virtual world concept may be seen as embracing a wide range of interactions that reflect, replace or surpass interactions previously limited to the real world. It may therefore be regarded as occupying the Web 2.0 spectrum in which users not only view, but actively collaborate, generate, contribute and share content (McLoughlin & Lee, 2007; Hirtz, 2008). It is a socially networked landscape that includes blogs, wikis, forums, chatrooms and media-sharing sites where communities of people are able to interact in multiple modes ranging from text and images to three-dimensional (3D) environments such as massively multiplayer online games like *World of Warcraft* and *Everquest*. One such 3D environment is *Second Life*. However, unlike other such multi-user virtual environments (MUVes), the objective of *Second Life* is not the accumulation of points or completion of quests, but rather the interaction between its players. *Second Life* differs also in that the environment is created by its users rather than by the producers of the game. These features of *Second Life* make it an attractive platform for educational purposes.

At the Queensland University of Technology the educational potential of *Second Life* is now being explored as a representative case study for approaching Web 2.0 educational technologies and their usage in teaching and learning. Whilst these explorations are in their early stages, several themes and operational issues are already emerging which are instructive for future usage of MUVes in educational contexts.

Models of use of *Second Life* in education

Second Life enables a number of different models of use in education. These include:

- synchronous interactions between users ‘in world’ (that is, in the virtual environment) via modifiable on-screen characters called ‘avatars’. This type of use includes real-time classroom interactions, meetings and consultations; role plays to develop communication skills are another.
- creation of ‘machinima’, that is video of the interactions between characters in the virtual environment. Effectively, this means the creation of computer-generated imagery without the need for professional animation. Machinima can be used to depict realistic scenarios for later viewing by students or academics, and for purposes such as orientation, promotion and knowledge sharing.
- asynchronous interactions including the creation of objects ‘in world’ by one user for later inspection or use by another user. This might include students creating environments and objects of their own design for assessment or responding to pre-scripted objects.

Establishment issues

It is common for MUVES to require regular payment in order to obtain access. By contrast, *Second Life* allows both free and premium (that is, paid) access. Users who wish to establish personalised environments within the virtual world that persist between logins can do so either by owning land or by leasing land owned by others. However, land can only be purchased if the user has a premium account. *Second Life* features its own economy which includes land dealings and the sale of objects such as clothing for avatars and other objects for ‘in world’ currency known as ‘Linden dollars’ (L\$). Items like clothing, animations, notecards and landmarks are accumulated by avatars in their ‘inventories’.

Accordingly, to establish an ongoing base in *Second Life* QUT purchased land ‘in world’ in 2007 at a cost of approximately US\$3,000, half of which an ‘establishment fee’ and the other half of which was an annual ‘maintenance fee’. This land, now known as ‘QUT Island’, allows staff and students to obtain free accounts but still have opportunity to create structures and other objects in an enduring area. QUT also maintains a separate premium account for administrative and operational purposes. This enables Linden currency to be purchased with real world funds (the current exchange rate is about L\$250 = A\$1), and thereby distributed on request to staff for the purchase of objects ‘in world’.

Emerging themes from *Second Life* in education

To date only four faculties (Law, Built Environment, Information Technology and Creative Industries) have utilised QUT Island. The uses, however, have been varied. Law and Creative Industries have used the site for machinima, Built Environment for student-created virtual landscaping and urban design projects and Information Technology for interfaces with external programming. Law has also utilised the island for synchronous interactions including consultations and meetings. Growing interest includes Science, for environmental modelling, and Health, considering an experiential learning space to develop clinical decision making skills. These uses therefore reflect the different models of use already identified. Several themes emerge from these models.

The user-avatar dynamic

When a user first establishes an account, he or she has a choice from a limited range of basic avatar types (male and female). These avatars are modifiable in terms of shape, skin colour, hair and clothing. In addition, there are a large number of sites ‘in world’ from which alternative shapes, skin, hair and clothing as well as other belongings may be obtained for free or for purchase using the Linden currency. Customising an avatar to the user’s liking may require a personal investment, at least in terms of time. Customisation is also likely to mirror the preferences, values and/or hopes of the user. It can also reveal the experiential age of the avatar and the user’s level of expertise and/or wealth.

A natural outcome of customisation of the avatar is the user’s identification with his or her avatar, an embodiment that can ‘transform the space of a virtual world into a sense of place, [grounding] the experience of the player in a sense of presence with others, allowing for...an opportunity to truly engage in the “play of imagination”’ (Thomas & Brown, 2007, p3). Thus, for example, a meeting between avatars in a virtual boardroom may operate as an effective substitute for a meeting between the users in a real boardroom, or a safe environment for role-play to practice specific skills and responses such as interviewing, providing feedback on performance without real-world consequences.

Machinima and narrative learning

It has been recognised that ‘narrative-centered (sic) learning environments [can] provide engaging worlds in which students are actively involved in ‘story-centric’ problem-solving activities.’ (Mott et al, 1999).

Narrative learning has been employed to great effect in the first named author's program for the Law Faculty, *Air Gondwana*. This program is designed to teach first year students basic negotiation skill and practice. It includes the use of machinima to realistically depict a storyline involving the contractual negotiations of a fictional airline. As Agostinho (2006) has observed, the use of characters to present tasks and critical information in a simulated environment can be a useful strategy in the creation of more authentic learning environments online. This allows a subject to be dealt with in a more realistic manner than if presented in a decontextualised fashion.

Projects such as *Air Gondwana* illustrate the fertile landscape *Second Life* presents for QUT's explorations and experimental activities. They also illustrate the shift to a post-transmissive use of educational technologies towards the engaging, more authentic, active and interactive designs the QUT Learning Design Framework (2004) aims to foster.

The status of the student-user

An important consideration impacting upon the design of any education initiative utilising virtual worlds relates to the status of student-users and their level of access to the internet. Typically dial-up access is inadequate for online 3D virtual worlds like *Second Life*. Also, for practical and financial reasons, universities commonly limit student internet access by imposing quotas. Access to virtual worlds for synchronous interactions or extended periods required for asynchronous educational models such as virtual landscaping, and orientation to *Second Life*, can quickly exhaust standard access quotas. Accordingly these educational models require strategies that address such access issues.

Machinima models similarly require consideration of student-user status. Academic-created machinima should be available in both broadband and dial-up versions, be capable of being downloaded as an alternative to streaming, and be supported by transcripts to ensure equity in student access. Strategies are also indicated for students on dial-up access required to create machinima.

A facilitator of real and virtual communities of practice

Collaboration on tasks 'in world' is apt to produce a community of learners. Users may be physically located in disparate places, and may not ordinarily experience first-hand interaction with other users. However, their avatars may have close working relationships which may thereby be enjoyed vicariously by those users. A community has also evolved external to the program. A shared location like QUT Island requires structures to be put in place for the effective, orderly and amicable use of the space. This includes allocation of spaces within the location and an agreed charter governing use and 'in world' behaviour. In parallel to this management structure, a network of users has also evolved for the sharing of skills and knowledge through use of blogs, wikis and knowledge repositories. This network holds the potential for future collaboration across disciplines. Networks can extend across universities, and connect to wider communities of interest both in-world and out-world, including SLED (Second Life Educators), Ausslers (Australian Second Life Educators and Researchers) and the NMC (New Media Consortium).

Learning in communities of practice reflects natural, informal learning processes that capitalise on access to expertise, mentors and opportunities to collaborate and legitimately participate from the periphery (Lave and Wenger, 1991). Strand, Udas and Lee (2004) make the point that much of the knowledge and skills that educators gain comes from informal training such as job mastery, discussions with colleagues and as members of professional 'communities of practice'. These communities of practice may be centred on a specific project, a special interest or professional practice and, while normally informal, are integral to the ability of both the institution and sector to know and learn.

This explorative project also works as a catalyst for QUT's ability to build expertise around the use of MUVES in education, with *Second Life* itself potentially a powerful community building tool. Knowledge sharing and collaborative projects arising from such fertile ground encourage academics and professional support staff to together navigate new paths such as OpenSim, (a MUVE hosted on the university's own servers), alternatives.

Return on investment

Involvement in *Second Life* has required a modest investment of funds by the university to establish an ongoing base of operation and premium account to assist with distribution of 'in world' currency. Since a free account can be obtained, staff and students are not required to make a monetary investment. However, use of *Second Life* may represent a substantial investment in time, particularly by early

adopters and innovators. Whether that investment can be justified depends upon the return that investment produces. That return may be measured in terms of the learning experience afforded to students and the professional development of staff in the skills and pedagogy associated with the technology, policy and infrastructure.

The 'just-in-time' approach of initial activity has helped to identify specific pedagogical, operational and support issues, informing a broader, more considered response by QUT to planning continued support for innovation. This, aligned with thoughtful evaluation planning, is part of the challenge for how best to realise priority strategies in 'top-level learning and teaching plans...to facilitate optimal student learning outcomes by seeking out and capitalising on emerging technologies' (Smith & Brown, 2005, p616) and encourage a communicative and collaborative approach.

Conclusion

The use of 3D multi-user virtual environments such as *Second Life* holds exciting prospects for education. Such environments invite new educational models that foster a sense of presence, place and community for students and richer, more authentic learning experiences. Further work is indicated for scaling up the pockets of innovation, presently being pursued in a number of different faculties, to leverage cross-disciplinary collaboration and achieve learning experiences that closely resemble real world experiences in the virtual world. The use of *Second Life*, as a representative case study for Web 2.0 educational technology emerging as potential tools, will be evaluated according to criteria such as equity, accessibility, relevance, effectiveness, appropriateness, usefulness and return on investment. *Second Life* is not envisaged as the only path open in this changing educational landscape, but offers an engaging, effective vehicle to fulfil specific needs in a cost effective option.

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