Real Learning in a Virtual World:
A Case Study of the School of Information Studies' Learning Centre in Second Life

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ABSTRACT

Following a review of the online delivery of distance education programs within the School of Information Studies (SIS) program at Charles Sturt University, a team of academics worked with an external consultant to design a purpose built SIS Learning Centre in Second Life (SL), a 3D virtual world environment in which people (via their avatars) may act as if in the 'real' world. This paper discusses the design and implementation of a variety of teaching and learning activities in this virtual world environment, examining both student and faculty experiences throughout the teaching sessions, and exploring the affordances provided by the 3D virtual world of Second Life. Findings suggest that most students see this approach as providing a valuable opportunity to interact with each other and with faculty. For academics, the benefits provided by Second Life are acknowledged but the time commitment required to establish and manage the class in this virtual world need to be considered when adopting this approach.

Keywords: LIS education; Second Life, Virtual Worlds; E-Learning; Distance Education; Education Programs

INTRODUCTION

The School of Information Studies (SIS) at Charles Sturt University (CSU) has been offering education for librarianship for nearly forty years. As a School of Library and Information Science in the Riverina College of Advanced Education, it started offering both undergraduate and postgraduate programs in library and information science (LIS) in the mid-1970s (Hider & Pymm, 2006). From the beginning, geography dictated that to be successful, the School needed to attract students who were not resident, or willing to move, to the southern New South Wales town of Wagga Wagga where the university campus is situated. Thus, the School established itself as a specialist in LIS education by distance. Gradually this program grew while on-campus enrolments fell with the result the time the School had become part of the new Charles Sturt University established in 1989, its LIS program was offered in distance mode only (Hider, Kennan, Hay et al, 2010). Since that time, CSU has become the largest provider of degree-level education for the library profession in Australia, including teacher librarianship, graduating around half of all the undergraduate and postgraduate LIS students in Australia (Heazlewood, Pymm & Sanders, 2006).

The success of CSU's LIS programs has enabled the School of Information Studies to build a relatively large faculty, covering the full range of librarianship specialisations, offering nearly 100 subjects across both undergraduate and postgraduate programs. It was from this position of strength that the School approached a faculty restructure in 2008 that significantly altered its lines of reporting and accountability. This restructure provided the opportunity and incentive to review the existing curriculum of the School, with a view to expanding its offerings, improving the distance education (DE) student experience and further cementing its predominance in the Australian LIS education market place.

Early in 2009 a number of focus groups were undertaken, involving practitioners, employers, relevant professional organisations and other academics to assist in determining future directions for the course. Flowing from this was strong endorsement for the use of social networking platforms and other relevant Web 2.0 applications in order to try to personalise and improve the distance students' experience of online study. Student feedback over many years both within CSU and in the literature more generally (see for example Yildiz & Chang, 2003; Zhao et al, 2005; Beldarrain, 2006; Keppell, Au & Chan, 2006; Garrison & Vaughan, 2008) suggest that building connections and engagement with instructors and other students are important factors in ensuring a positive student experience while studying off-campus.

Thus funding was provided to enable all subjects to be redeveloped. This included consideration of how to make the most of the opportunities offered by the online world and

social networking software. Thus consideration was given to the use of blogs, wikis, Facebook, Linked In, Skype, Delicious, Twitter, Flickr, YouTube, Etherpad, SlideShare, TokBox, Amazon Cloud Computing and Second Life (Hider, Kennan, Hay et al, 2010). For this last, Second Life, funding was also provided for the development of a CSU presence in this virtual world in order to exploit the potential for DE teaching offered by such an environment. It was anticipated that the Second Life CSU-SIS Learning Centre (as illustrated in Figure 1) built in the second half of 2009, would provide an immersive synchronous 3D learning environment offering the opportunity to further develop student interaction and provide space for new and innovative teaching and assessment activities (Hay & McGregor, 2010; Hay, McGregor & Wallis, 2009).

Figure 1: CSU-SIS Learning Centre (ground level) in Second Life

SECOND LIFE

Second Life is a three dimensional virtual world created by Linden Labs in 2003 which can effectively mirror the 'real' world. Users – individuals and organisations – can join this world by creating a virtual presence via an avatar, or by developing space in the form of an island, a building or even a classroom. Within this environment avatars can talk to each other using text chat and voice (VoIP), and interact with each other using movement, gestures and sound. This environment provides DE students with an opportunity to meet and participate in discussions, debates and excursions, complete simulations and role-play activities, be involved in virtual tours and quests, and listen to real-time lectures and experience interactions with experts as virtual guest lecturers (Gregory, Willems, Wood, et al, 2011; Gregory, Lee, Ellis, et al, 2010).

Many organisations, including libraries and library schools have established a presence in Second Life offering a wide range of activities to targeted user groups (eg. students, alumni) or to anyone who cares to visit their island or buildings. The School of Information Studies at CSU is not the first LIS School in Second Life with the San Jose State University and Sheffield University having been there since 2007 (SJSU, 2010; Webber, 2010). San Jose State University now offer a wide range of activities and have even developed open-source software to assist in linking Second Life with their learning management system, Moodle (SJSU, 2010).

Other academic users include the University of Florida, where a number of faculties are making the most of Second Life's "… potential for collaboration, immersion, aesthetics, creativity, social interaction" (Fishwick, 2007), and White (2010) from Harvard noted that "these kinds of immersive educational environments can help to make distance education an even more powerful force for global change." Professional associations such as the American Library Association have had a presence in Second Life since 2007 (Hawkins, 2009) and host a range of conferences and professional learning sessions 'inworld', while a range of librarians and LIS communities of practice have established a presence in Second Life (Bell & Trueman, 2008), including the ACRL Virtual Worlds Interest Group (ALA, 2010), the Community Virtual Library (CVL Foundation, 2006-2011) and the AASL-ISTE SIGMS Virtual Learning Community in Second Life (ISTE SIGMS, 2010).

In addition to these anecdotal views of Second Life, a number of more controlled research projects have been undertaken to assess its effectiveness in the higher education sector. Thus in Australia, Griffith University evaluated their Second Life experience, finding that it worked for some areas of art education, but not so well in others (Zagami, 2008), while

Abdellatif (2008) concluded that for architecture students, Second Life encouraged better and more communication and participation, being less stressful for students than 'real' life and reducing inhibitions. He went on to note though that the technical issues related to sufficient computing power to run Second Life effectively could be a problem for some. In a recent overview of initiatives undertaken in Europe utilising Second Life for distance education, Macedo & Morgado (2010) concluded that while transferring first-life teaching approaches into Second Life may raise challenges, the evidence is in that Second Life "can help to develop skills concerning socialization, peer and group work, critical thinking and problem solving". These findings are supported by research from five Australian institutions using virtual worlds in blended and distance learning across a range of disciplinary fields including languages, arts, science, education, commerce, librarianship, law and media (Gregory, Willems, Wood, et al, 2011).

Warburton (2009) identified a number of affordances that SL offers, two of which are of particular interest in this project: extended or rich interactions, and community presence (p. 421). A synchronous virtual learning space could help students overcome the isolation factor, develop collaborative skills, and experience creative opportunities, all of which are expected to promote greater engagement and learning. All students in the School of Information Studies at CSU study via distance education, and based on anecdotal evidence and empirical research, it appears that Second Life does offer a lot for DE students if its real potential can be realised.

RESEARCH QUESTION

Having invested considerable resources into the establishment of the CSU presence in Second Life, and developed new or revised subjects to take advantage of its possibilities, it was felt that a formal investigation into its effectiveness would be worthwhile after one year's experience in its use. And effectiveness not only for students but also for the staff involved. Had the learning curve and subsequent additional effort been worth it from their point of view?   Did the students, many of whom had also had to undergo a steep learning curve, feel they benefited from the effort involved? Thus three broad questions were determined:

- How did faculty feel about the Second Life experience?
- How did students feel about the Second Life experience? and
- Based on student and academic feedback, what recommendations can be made to improve student and staff experiences, and learning outcomes in Second Life?

DESCRIPTION OF TEACHING AND LEARNING IN CSU-SIS LEARNING CENTRE

Faculty provide students with an opportunity to attend one or more training sessions at the CSU-SIS Learning Centre as part of an orientation program before undertaking specific learning tasks or immersive activities in a subject. A standard training kit has been developed as part of the Learning Centre design to ensure all faculty and students are provided with the same training and guidance (no matter what the subject). This helps reduce the preparation for faculty in providing training sessions, and allows individual students to revisit the instructional slides and learn how to customise their avatar at their leisure.
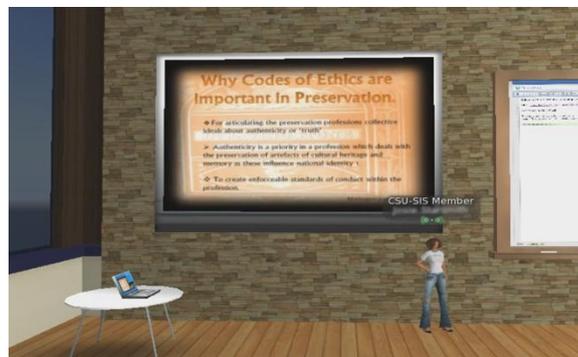
Undergraduate and postgraduate social networking subjects are offered across three teaching sessions per year. These subjects require students to complete a number of immersive learning activities as part of the curriculum, with some of these being offered in *Second Life.* Students are encouraged to attend online discussion sessions hosted by faculty and guest speakers; join a range of professional and educator groups; attend professional development activities; visit a range of libraries, university campuses, professional and education spaces (as illustrated in Figure 2); and meet with their faculty for individual consultation regarding project design/management and assessment task requirements.   All students are required to maintain an online learning journal as part of the final assessment task to demonstrate evidence of their immersive learning experiences throughout the session.

Figure 2: Group of Social Networking Students Meet For a Virtual Tour

In 2010 a number of students included critical evaluations and reflections on their Second Life experiences in contributing to their development as a Librarian 2.0, or the development of their professional learning network (PLN). Some students also elected to complete their project-based assignment in Second Life; for example, one student explored the provision of reference services by academic librarians in Second Life for students and staff.

Students in an undergraduate and postgraduate preservation subject were required to present a slideshow on an issue regarding the preservation of information and documentation within an organisation followed by a question and answer/feedback style (Q&A) session. Student presentations were hosted over a period of 3 weeks and students were required to act as an audience participant as well as presenter. Students were required to submit their presentation as a set of Powerpoint slides which a faculty member then converted as graphics files and uploaded onto a 'virtual' laptop object in a CSU-SIS Learning Centre classroom in preparation for student presentations. This approach was taken in an effort to reduce the 'technological load' on the students as relative newcomers to SL, as this process of uploading a presentation requires some basic building knowledge and skills in SL, which was not one of the learning objectives of these subjects.

Figure 3: Preservation Student Using Laptop and Screen in Classroom Presentation

While the undergraduate and postgraduate class presentations were conducted separately, students from both cohorts were invited to combine later in the teaching session to attend a lecture at the CSU-SIS Learning Centre presented by a guest speaker from a national organisation. Overall feedback from the students who attended this guest lecture was that they wanted to see more of these being hosted as part of their subject experience.

METHODS

As a case study, the researchers set out to gather a range of quantitative and qualitative data via end-of-session subject surveys; dialogue captured on subject forums, and SL chat logs; and interviews with subject coordinators and other teaching staff.;.

All subjects at SIS utilise the CSU-wide online subject evaluation system, whereby faculty are able to customise some questions to be included on the end-of-session subject surveys. Students who had undertaken the subjects using Second Life were invited to provide feedback about their Second Life experiences as part of the end-of-session subject survey using the open comment boxes provided in the final section. This survey was completed by students after the teaching session had finished. They were thus in a position to comment with the benefit of hindsight and in the light of their result in each subject. All students were encouraged to complete the survey due to anonymity provisions, however it was possible for the researchers to determine whether respondents were either undergraduate or postgraduate students.

Again, drawing data from forum discussions and chat logs was done after results had been distributed. These sources had not specifically sought students' feedback on Second Life activities, but did contain comments and feedback as part of students' usual online comments, discussion and questioning. As the authorship of comments was identifiable, participants' approval was sought to use these in the research. Due to the small number involved, no effort was made to try and identify differences between postgraduate and undergraduate perspectives.

In total, around 70 students were involved via the surveys and the forum/chat sessions. Twenty five provided useful feedback and input, none of which was highly negative.

Three academic staff members and one support staff member provided feedback.

Data from these approaches was used to try and identify what worked well and what didn't, and to clearly identify the pedagogical benefits (if any) that arose from using Second Life as learning environment.

The results will help inform further learning activities and teaching strategies within Second Life. In addition, for students, a consequential outcome is exposure to a tool that may well have relevance to their own work place practice and professional learning in the future.

RESULTS AND DISCUSSION

For this first year, participation in second life was limited to a small number of subjects. Although these covered the diverse areas of social networking and a more traditional subject, preservation, there was a general consensus across the feedback from both students and faculty that the provision of teaching and learning experiences in second life was very worthwhile.

Teaching Staff

Firstly, in interviews with faculty, four broad outcomes were highlighted. These included preparation time, communication and engagement, immersive learning experiences, and scalability in terms of class size.

Preparation Time

The time taken to establish working avatars, and have everyone connected with functioning audio and voice to be able to participate effectively, was considerable. Some students needed hand-holding and considerable assistance to feel comfortable in their virtual classroom, while others adjusted to 'life as an avatar' quite quickly. Interestingly, very few students had problems with connectivity and bandwidth speeds, however some of the social networking students who were using netbook-style laptops with basic graphics cards found it took considerable time for graphics within the sl interface to load on their screen.

In addition, the need to allow more time than might be anticipated to get a tutorial or presentation underway and to allow for the questions it stimulated later was noted. This time pressure has to be a consideration given the heavy workloads and demands placed upon faculty, but may become less of an issue as faculty become more familiar with the second life interface and world, and students (familiar with this and other web 2.0 tools) come to classes already established in second life as residents.

Communication and engagement

Faculty were impressed with the increased potential for communication and engagement with their DE students. Second Life really did provide the opportunity to relate in a 'real' manner; converse, ask and answer questions; stimulate ideas and learning; and to generally 'connect' far more directly with students than is generally possible in the traditional DE online environment of asynchronous forums or synchronous chat rooms. In the social networking subjects, one faculty member offered consultation hours in Second Life, as well as phone or Skype consultation sessions for individual students. Interestingly, a number of students nominated Second Life as their preferred meeting place over a phone or Skype call. This suggests some DE students' preference to 'be in the same room' with their teacher, thus maximising the affordance of 'presence' a 3D virtual campus provides. Overall, faculty noted the capacity to build a greater feeling of community and 'intimacy' between themselves and the students when conducting classes in Second Life.

Immersive learning experiences

Faculty agreed that Second Life provided immersive learning experiences for themselves as well as their students. For example, DE faculty could experience the sensation of 'standing in front of their class' (via their avatars) in the same way that a faculty member who teaches an on-campus class, or they could organise their class into discussion groups, and 'walk among' and talk with each group in a similar fashion to an on-campus classroom set up. Faculty also noted the ability to devise immersive and engaging assessment tasks, such as student visual and oral presentations to the class, or a debate, or virtual field trips to libraries, education campuses, galleries and exhibits, which would not normally be possible for students studying in distance mode.

Overall, faculty has been impressed with the quality of student presentations inworld, and the depth of student engagement with concepts discussed as part of the Q&A discussions after presentations and lectures. As stated by one faculty member upon completion of his students' presentations for the first time in Second Life, "This has far surpassed my expectations".

Class size (scalability)

Faculty found that small numbers work well in a Second Life class. Many more than 10-15 students inworld at the same time can makes things complicated, especially if the majority of students are new to functioning in a virtual world environment, or are participating as presenters, or are travelling to different places inworld on a tour led by a faculty member. Individual classrooms in the CSU-SIS Learning Centre are designed to 'seat' 12 people with a couple of people standing as presenters. The discussion circle classroom is designed to accommodate 16 people, while the lecture style rezz in the main hall seats 40 (as illustrated in Figure 4).

Figure 4: Lecture hall in CSU-SIS Learning Centre

When hosting a larger group, faculty found this could slow down individual avatar's connections and make conversations difficult at times, especially when a lot of people were trying to speak to others at the same time. Faculty new to teaching in Second Life must develop a set of 'class rules' or protocols for themselves and their students to adopt in terms of managing public and private conversations, and the expectations of basic behaviour when participating 'in class' versus times of social interaction. The larger the class size the more demanding this can be for faculty to effectively maintain and manage. When expecting larger class sizes, it is recommended that a faculty member employs an assistant or seeks a team teaching arrangement with another faculty member to reduce the challenges created with multi-tasking inworld.

From an educator's perspective, SIS faculty agree the level of immersion, engagement and feeling of "connectedness" with both the environment and people are affordances that make Second Life an attractive learning environment for them to teach and learn with students, other educators and Second Life residents. Faculty have been impressed with the quality of student presentations inworld, and the depth of student engagement with the concepts in Q&A discussions after each presentation, as stated by one faculty member new to teaching in Second Life, "The students' level of engagement has been impressive and I must admit to being surprised by their enthusiasm inworld".

As a result of their experiences in Second Life, faculty will continue using Second Life as part of the curriculum for the social networking and preservation subjects and are already planning new ways the CSU-SIS Learning Centre can be utilised to support teaching and learning in other SIS subjects.

Students

Student feedback could be classified into three major groupings: sense of presence and belonging; technology issues; and enhanced access to faculty and subject matter experts. In reporting the perspective of students, the authors have included a range of comments and quotes by students to illustrate each of the main findings of the study.

Sense of presence and belonging

The ability of Second Life to enable interaction and create a feeling of being in a 'real' classroom was the strongest sentiment expressed by the majority of students in the social networking and preservation classes (in subject evaluations and personal reflective statements), with the following comments typical:

 "The Second Life component of the subject was highly beneficial, especially for the opportunity to interact with fellow students and academic staff beyond the forum and chat room."

"I actually enjoy that aspect of it because I enjoy being able to see myself sitting there with the other people".

"... to compare SL with other social network tools I would say that SL offers more sense of 'presence". Second life can provide a home for off campus students that normally wouldn't have any physical contacts with their educational institutions."

"This was a great way to interact with fellow students and with [faculty] as well as expanding my knowledge of virtual worlds."

"I think it has the ability and the potential to make … study really, much more rewarding and engaging, and I would love to be experimenting with it in further subjects."

While this sense of belonging as a CSU student and feeling 'more connected' with faculty and classmates was reported in subject evaluation survey data, a large number of students in

the social networking subjects shared reflections of their Second Life experiences in their online learning journals, as illustrated below:

"Studying via distance education can feel quite isolated, the sessions held in Second Life made the other students on the class and the lecturer 'real'."

"It enables students to interact and connect with one another, creating a sense of community and closes the isolation gap that many distance education students experience, thereby enhancing the learning experiences."

"I shared a classroom experience with people all over Australia and... the world. As the classroom is the major aspect of study I miss about Distance Education. Studying without it is much harder for me personally, I need the human contact to make it all worthwhile. Second life is the only way that DE students can get that sort of personal interaction that makes learning…fun."

When using Second Life with students, faculty need to be mindful that some technology issues and the challenge of 'getting set up for Second Life' can cause a level of stress for some students that does need to be dealt with as efficiently and effectively as possible. Examples of students' problems or concerns with technology include:

"I'm still unable to download the second life software but I am trying to organise to borrow a friend's laptop/pc…"

"I had a great deal of difficulty with the use of second life; to put it honestly I had no Idea what I was doing, or what I was meant to do. It took me some time before I worked out the controls."

"Despite delays and lower quality imaging, setting up the avatar was easy and fun, but choosing looks and outfits can be time-consuming. Considerable practice is required to get used to handling the movements of the avatar."

"Had some problems last night with the training session- my connection kept timing out"

"Unfortunately, my laptop is not as compatible with Second Life as I would like, however I did manage to navigate my way to several places"

For some students, it is the fear of the unknown and not feeling confident as technology users, for others it is lack of conceptual understanding of the phenomenon of 'inhabiting' a virtual world, and it is important that faculty are aware of the affective needs of their DE students and build in the time required to support these needs. The following student quotes illustrates the range of needs experienced by LIS students:

"I have to admit trepidation when I first joined Second Life, but choosing an avatar, clothing and learning how to walk, talk and interact with others in the virtual world was a bit like being a toddler again, finding my feet so to speak… but I really enjoyed it and by the end of the session I really felt like I had achieved something".

"I struggled to learn the key strokes, and teleported into strange places… but I met my first ever class mate in my university career… SL gave me the opportunity to interact with students and teachers in a way that I never imagined… I still found SL distracting and frustrating, I spent hours wandering around just trying to touch items to see what would happen and I continually lost track of time."

"When going into a virtual world it can be very daunting, having the training session made it a more comfortable experience and not so overwhelming."

"I required a lot of hand holding and was completely at lost in the virtual world when not monitored by [faculty]"

Access to faculty and experts

Students attending classes in the CSU-SIS Learning Centre articulated their appreciation in gaining greater access to faculty in real time and the use of guest lecturers to provide alternative viewpoints from 'experts in the field'. This was viewed as value-adding to the existing subject experience, as expressed by these students:

"The Second Life presentations and guest lectures enabled real time discussion with students and academic staff"

The benefit of being in a location with others with a shared purpose meant that being able to share perspectives, benefit from their questions & answers, added tremendously to the experience.
"I think you can get clarification on a lot of issues too ... sometimes its very difficult to actually work out what you're doing, as a DE student ... To be able to talk that over with your lecturer or with your fellow students is a huge bonus".
Students also showed an interest in expanding their professional learning network in Second Life. As stated by one postgraduate student, "*Second Life provides the opportunity for librarians, and libraries, to communicate, network, and compare best practices with others*."

As information practitioners or information professionals-in-training, students realised the opportunities gained by professionally networking with leaders in the profession, and many students were proactive in seeking out avatars of key individuals within the profession and joining professional interest groups within the Second Life community, as explained by one undergraduate student in the social networking subject:
I also used the search function and found some groups that interested me. I joined the Librarians of Second Life, ALA SL-events and Second Life Library 2.0. These groups seem to hold events in SL and I can't wait to check them out.
Librarians can use these groups as part of their professional learning networks, they can keep in contact with other librarians and attend professional development activities without having to leave their home.

The latter point made by this student also highlights the benefits of Second Life in supporting professional learning by distance.

Importance of Social Interaction for DE Students

The CSU-SIS Learning Centre has a number of social spaces throughout, including a barbeque area, skybox gardens, comfortable lounge areas, coffee cart, and bar and disco rezz (as illustrated in Figure 5), to encourage DE students to 'chat' with their classmates. This kind of social interaction can be limiting for DE students, especially if faculty do not provide an asynchronous discussion forum or chat channel that is dedicated to supporting casual conversation (as opposed to 'on-task' discussion or learning activities), and a number of students appreciated this level of contact with the cohort, as suggested by the following comments:

"... it was great to interact with classmates and in real time also, previously when I used second life I was alone and exploring this new world was somewhat daunting and confusing. Simple things like sharing a cup of virtual coffee together made the experience even more worthwhile."

"I... attended... an Australia Day celebration that other librarians were attending. I danced and chatted with everyone at the same time, not something you can do at parties in real life!"

Figure 5: Social interaction is important for DE students in Second Life

Although all SIS students are distance learners, while the majority live in Australia, an increasing number 'attend classes' from many countries around the world, many of whom have only studied as an 'on-campus' student, and in many subjects they are not afforded opportunities for social interaction with fellow students. For these students, meeting with their classmates in Second Life provides an enhanced learning experience and a greater connection with their DE university, as illustrated by this postgraduate international student:

"Second Life has been a unique and an unforgettable learning experience: going places virtually, meeting people, socializing, flying, dancing was indeed a unique experience."

RECOMMENDATION

This first year of using Web 2.0 tools such as Second Life was always seen as being an experimental time where technologies would be tried, and their effectiveness assessed. In this particular case, the use of Second Life has proven more successful than the researchers had expected with the positives of a far greater feeling of engagement, connectedness with others and ability to provide a wider educational experience, clearly outweighing any downsides. Specifically, arising from this research, a number of recommendations can be made that would build on this initial success in using Second Life. These recommendations evolve around:

For Staff

the need to further promote Second Life possibilities with faculty and to engage a support staff member in developing their Second Life skills in order to have a central 'help' point, available to both staff and students to assist in the setup and running of Second Life activities. In addition, to work with staff in identifying subjects and/or activities that would work well 'inworld' (eg. small classes, guest lectures, assessment tasks, etc.).

For Students

To demystify Second Life in a general way by introducing students to its potential early on in their academic career. This would be in an environment where there were no assessable tasks but purely for them to gain expertise in 'working' within the virtual world. Encouraging students to join Second Life and gain a level of maturity there prior to embarking on their educational

journey within the virtual space would help reduce their anxiety when faced with assessable tasks based on a Second Life activity.

For Distance Learning

Second Life provides real opportunities to improve the distance learning experience, decreasing some of the negative aspects associated with this mode of study. It is recommended that regular social events as well as learning activities be established in Second Life for an increasing number of subjects being offered in DE mode. These activities are aimed at building familiarity with Second Life and its functionality in order to undertake more advanced tasks later in the courses and also, to encourage that tutorial discussion mode of interaction so useful in developing graduates as a creative and critical thinkers, who are also skilled communicators and collaborators in both face-to-face and online work environments.

CONCLUSION

Feedback from some students who have not previously experienced a 3D virtual environment highlight the concern that it "takes quite a lot of time" to become familiar with the Second Life client, and as a DE learner, if one cannot dedicate the time required to "play around with it, then you really… use it on a fairly superficial level". From a student experience perspective, this highlights the need for educators to ensure the use of a virtual world is carefully considered and integrated part of a subject, rather than merely using it as an "add on". Overall students agreed the benefits of being connected and "sharing" the same "space" is worth the effort within the social networking and preservation subjects at CSU.

Students often compare their Second Life experience with those on CSU web forums (which is the principle asynchronous tool used for discussion in most SIS subjects), with the latter paling in comparison, "you really don't get that intimate sort of learning experience". The desire to receive one-on-one guidance with faculty or in a small group is also powerful motivator for DE students to 'visit' a 3D virtual campus.

As a result of our experiences in Second Life, we are convinced that it offers a powerful tool to improve the DE experience for all students. The technology is mature enough, most students in developed countries have access to sufficient bandwidth and growing familiarity with Web 2.0 type tools means that, for many students, it is becoming less of an unfamiliar experience. For faculty, there is a significant time commitment required to establish the initial activities but, with growing familiarity and use, this time commitment will fall and the benefits in the shape of improved pedagogies and learning outcomes seems to us clear. It is a commitment well worth making.

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