Chapter 12: Future Directions for Learning in Virtual Worlds

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Chapter Overview: Some may claim that this book has been a showcase of case studies, without common thread. However, the common goal that runs through each of these cases is the focus on learning and the roles of learners and educators in learning activities. Do virtual worlds assist learning and do they create new opportunities? The answer from these analyses is “Yes” and this book demonstrates “how” to make use of the affordances of the virtual word of Second Life as it exists today. Yet, many questions remain both for practitioners and researchers. To give some examples: On what principles should learners’ tasks be designed, who are doing research on education in virtual worlds and what is the future of virtual worlds in a learning context? In this chapter we attempt to address some of these issues.

1 The Learner’s Task

Throughout this book we have advocated that new ways of learning and teaching should be applied in a new learning environment, such as 3D virtual worlds. The prior chapters of Action Learning and Active Learning show that new opportunities clearly exist in Second Life. This leads to the question of how to design learning spaces that build on these opportunities? The pedagogic goals are clear. Learners must actively engage with the content of the learning tasks and get a sense of shared accountability in the learning process. A design methodology for learning tasks has been developed by Jane Vella (2001) with these goals in mind. She advocates that the learners’ tasks be designed with open questions that invite inductive and creative reasoning, and that collaboration and experienced based reflection and
review are needed in any effective learning program. She emphasises the role of the “open question” as most important in the learning process:

“We set a learning task to engage learners in the active learning of substantive, new material. We respect their life experience and their unique context and offer the task as an open question, inviting their reflective response. Some learning takes place in the mind (cognitive), some in the heart (affective) and some in the muscles (psychomotor) (Vella 2001:8).

Vella (2001:33) defines four types of learning tasks: (1) inductive tasks that connect learners and what they already know with their context; (2) input tasks that invite learners to consider new content such as concepts, skills and attitude; (3) implementation tasks that get learners to do something directly themselves with the new content; and (4) integration tasks that incorporate what they have learned into their lives. While not directly stated, such tasks involve learners in Action Learning and these definitions give direction on how to design tasks in virtual worlds.

While it is believed that all of these types of learning tasks could be implemented effectively within Second Life, some work has begun to design and actually test their implementation in SL. One example is “Access to Virtual and Action Learning live Online” (AVALON), funded for 2 years (2009-10) within the EU program on lifelong learning. The project, with which the authors of this chapter are participating, has as one of its aims to design learning tasks and artifacts together with learners and educators. The outcome will result in shared resource repositories and teaching programs for educators who would like to extend their e-learning skills to include virtual teaching worlds. The project has a number of set goals which include: the creation of case studies which will include field-tested communicative scenarios and the guidance on how utilise them; the provision of the necessary skills for language teaching professionals to work in these new online environments through a targeted training course; the facilitation of easier access in cases where there are limited computer resources; and the promotion of general awareness in mainstream educational contexts of the potential of these environments.

2 Recognising Other Wordly Projects

Various research and practical education are taking place through numerous projects in Second Life. In the limited scope of this book can in no way give recognition to all such activities. However, we wish to highlight some examples in particular.

The SLENZ project is currently investigating the potential of Second Life education in New Zealand (SLENZ, available at http://slenz.wordpress.com). This project has been built on the former experiences of Nelson Marlborough Institute of Technology with Koru Island as was outlined in Chapter 5 by Atkins and Caukill. As part of SLENZ, a process for the methodical construction of SL ‘builds’ is being developed and will provide the framework within which two major pilot education projects will be created. The SLENZ team have identified that all work undertaken in this area is of an experimental nature and they position that there are no clear guidelines or best practices.
Jarmon, Traphagan & Mayrath (2008) report on an interdisciplinary project to create a virtual presence for two green, sustainable, urban housing designs called the Alley Flats. Using team approach, the pedagogy focused on enhancing communication between researchers and students. The project also tried to involve existing communities in SL and other groups of interest. The participants took so-called “field trips” in order to engage other SL communities, as well as architects, educators and others interested parties. This all culminated with a formal ribbon-cutting ceremony in SL in which guests from all over the world participated in a virtual presentation and walk-through of the two Alley Flat virtual homes.

The projects presented in this book have mainly addressed the learning needs of adults in higher education, but there are examples of ongoing projects where the target audience are primary and secondary school children. One such project aimed a school children is “Skoolaborate” (http://www.skoolaborate.com/), which uses Teen Life grid to bring together learners from various parts of Australasia in order to practice their listening and communication skills. Skoolaborate is organized around various projects which encourage cross-cultural collaboration. These do not stop with mere communication and contact, but include the joint constructions of buildings, such as shops and commerce. The project makes full use of many of the affordances of SL such as voice and text communication as well as the building tools available in the environment.

The Second Life in Education wiki (http://sleducation.wikispaces.com/educationaluses) is a good resource for locating former and new educational projects in distance education, training and skills developments, and self-work tutorials. They make reference to one of the early teaching experiences in SL that was lead by Harvard™ Berkman Center for Internet and Society that featured the course “Cyber One: Law in the Court of Public Opinion”. Another rich resource is The New Media Consortium (NMC: http://slurl.com/secondlife/NMC%20Campus/138/225/43) Campus in SL, which hosts educational events including classes, demonstrations, art exhibits and other learning materials. Teachers Buzz (http://sl.nmc.org/wiki/Teachers_Buzz_Session) is the NMC wiki that reports on the various experience stories and activities of the NMC Campus.

One striking feature of almost all the above projects is their innovative nature. Another common feature is the general tendency to accommodate ‘freedom’ of direction. It is very often the participants, be they school children, university students, educators or researchers, that decide on the direction and content of the projects. Finally, it is also encouraging to see how many of such projects are interdisciplinary, breaking up the traditional boundaries creating new focuses of learning.

3 The Near Future of Virtual Worlds

In recent years, various consulting groups are recognizing the current impact of virtual worlds and trying to predict their future significance. The Gartner Group, for example, in April 2007 predicts, “80 percent of active Internet users will have a “Second Life” in a Virtual World by the End of 2111.” While we do not intend to project in percentages, we briefly summarize the present landscape and try to summarise some of the indications of where things are heading in the near future.
At the start of 2009 Second Life® will be one of the most prominent virtual worlds in education. Other 3D worlds have existed longer, such as Traveler® (since 1994) and Active Worlds® (since 1995), but relatively speaking, membership and activity indicate a stronger and growing interest in SL. Recent statistics from Linden Lab show 16 million resident accounts with approximately 500 000 member logins within a 7 day period. The SL economy is also booming with 400 000 residents having made a total of 22 million transactions amounting to $ Linden dollars (SL 2008). In the area of education, Linden Lab has reported 200 educational institutions to be members of SL in 2008, and the Chronicle of Higher Education (Young 2008) indicates an even larger figure. According to this source, 25 percent of the US campuses have reported a presence in SL in 2008 compared to 16 percent in 2007. This does not account for the fact that over 60% of the residents of SL are from outside of the US. What lends SL to growing acceptance? We think the primary factor is an easy learning curve for both learners and educators to participate in the world in general, and to control the learning activities in particular. It is possible for both students and teachers to create 3D objects and information content, to build learning artifacts including custom interfaces for learning management systems (such as SLoodle with Moodle), or to establish and administer in-world groups. It is an environment that allows for self-governed activities of the learner (Molka-Danielsen 2008). In brief, a key factor to Second Life’s adoption is that it is conducive to all members (residents) being able to create content, and not just those responsible for courses within educational institutions.

Several see the dominant interface of the Internet within the next 5-10 years to be a 3D-Web or “Metaverse” that will seamlessly integrate the applications of the 2D-Web. Progress will be made in the factors of virtual worlds supporting: Physics (full Newtonian, chemical processes, hydro, aerodynamics, electromagnetic spectrum, etc); document and applications management; real “eye” 3D rendering; lifelike avatar appearances; sense based avatar interactions (based on sight, voice, and touch); virtual agents (virtual touring, negotiations), and broader variety of user interfaces (including tactile, augmented reality, neuro-controlled and neuro-feedback interfaces) (Daden 2007). Since January 2007, Second Life has allowed for open source on the client side, encouraging development of interesting viewers such as “Windlight” and better in-world atmospheric rendering, thus enabling the creation of ever more immersive learning spaces. The developers of Second Life, Linden Lab, do not see other virtual worlds to be a threat to the ongoing adoption of SL (Wagner 2008). Rather they see worlds such as Google’s Lively (www.lively.com) or OpenSim (http://opensimulator.org/wiki/), an open source platform based on SL and in part on reverse-engineering SL published APIs and portions of open source code, as increasing the interest in and applications of virtual worlds. Indeed, developers of SL work with the open source community and with OpenSim with IBM work to find ways of integrating virtual worlds, to allow for the movement of avatars between worlds and for the sharing of objects between worlds (Gonsalves 2008). When this is achieved we will be taking great steps towards a 3D-Web.

4 No Simple Roadmap or Grid

In his article on SL in education Stevens (2006) asks what SL has to do with education and points out that no matter where we believe that SL is heading, the answer to the question has
to be “a lot”. He, and many other with him, point to the fact that SL is revolutionising the way we view education, opening “doors to creativity and imagination”. SL is in other words making an impact on education. Whether SL will survive or should be seen as a “prototype for some future form of learning” as Graham Stanley puts it, remains to be seen, but it is clear that SL is making an impact here and now, having caught the imagination of thousands who “see in the depths of their computer screens how their work can be made more enjoyable, productive, and interactive in the course of encountering others attracted to 3D virtual spaces” (Stevens 2006).

“Why?” one asks. What makes it so special? Patrik Svensson (2003) perhaps puts his finger on a key issue when he claims that “paradoxically, virtual simulations often turn out more ‘real’ than ones that are carried out in the classroom”. The key element here is, according to Svensson not the technology, the simulations or the effects per se, but the fact that SL and worlds like it allow for meetings with “real people (‘playing’ themselves or having alternate personas) and working collaboratively with remote participants” and create a “place and a unified spatial interface” for such meetings. While specific softwares may come and go two aspects fundamental to human nature remain that make us predict that we have only seen the beginning of the development of 3D virtual environments in e-learning contexts: we are social creatures that have evolved in a *three dimensional* world.

**References**


