



Early summer 2009
Virtual World Watch
snapshot of virtual world activity
in UK HE and FE

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“It is evident that Second Life has moved from being an interesting oddity to a place where it is taken seriously by many educators.”

- Liz Thackray, Associate Lecturer, Open University.



Executive overview

Second Life (SL) was launched on June 23rd, 2003, making it nearly six years old. Virtual worlds such as SL are therefore not 'new'. This is apparent when noticing the growing number of UK universities who are into their second or third year of teaching and learning using this technology.

Second Life remains, by far, the 'virtual world of choice' for academics in UK universities and colleges. Though OpenSim is mentioned by a minority of vocal academics, the number of non-SL uses and investigations across UK academia is still a small fraction of the SL uses. This does not mean, of course, that Linden Labs should remain confident, or that academics should focus solely/blindly on Second Life. Though well developed (and well used) in academia over the past half-decade, SL still throws up a number of technical, administrative and logistical hurdles for academic practitioners and their institutions.

Second Life in particular is being used in a very wide range of teaching and learning activities. The number of students who take part in these activities varies wildly from just a few to over a hundred in several cases.

A core of universities, most significantly the Open University, Edinburgh and Coventry, have many groups, courses and departments using virtual worlds as a central technology for teaching and learning activities, e.g.

"Virtual worlds have become a core technology for our teaching, learning, research and collaboration."¹

Other universities, such as Lancaster, Teesside, Southampton Solent, Glasgow Caledonian and Strathclyde, are also developing a significant virtual world presence, e.g.

"Lancaster University's long term plans are grand. We are laying the ground work for more courses to be taught, more students to have access and more research to be conducted."²

Some universities, such as Glasgow, Oxford and Cambridge, report little or no virtual world development, though investigation often shows more activity than is being stated in some of these institutions. Activity in further education remains difficult to quantify, locate or obtain clear information on (this is becoming a long-term problem with the snapshot series).

Trends, especially subject areas of use, are becoming clearer. The academic health and medical science sector in particular has a disproportionate number of virtual world activities. This could be because the subject matter lends itself more easily to such development, and also due to the (relative) ease of funding for such applications. For example, hands-on maternity and birthing simulations have been developed in several UK universities (Coventry, Nottingham, Teesside and Worcester). The full experience is especially difficult to convey in mere textual words, and the author of this report recommends trying one out as a good introduction to the experience of learning in virtual worlds.

Other emerging subject areas where there are several instances of virtual world use include health and safety, art and design, and computer science. However, none of these exhibit anything near the activity of the health and medical sector in its use of SL. Fewer academics are complaining about technical issues, such as equipment and SL viewer update access in universities. This reduction is most likely due to a combination of some academics giving up in 'unfertile' institutions, whilst other institutions are now more supportive of virtual world activities.

1 Fiona Littleton, Virtual Worlds Development Adviser, University of Edinburgh.

2 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

1. Background

1.1 Looking back to snapshot year zero (um, 2007)

This report is the sixth snapshot, funded by EduserV (previously, the EduserV Foundation), into the use of virtual worlds in UK higher (generally university) and further (generally college) education.

Oddly, when this series started some two years ago, there was little (identifiable) activity in virtual worlds such as Second Life in UK academia. This was despite Second Life, by that time, having been available for four years. Since then, activity has steadily increased; as with other snapshot reports, it is pleasing to receive submissions for this one from 'newbies', i.e. academic developers who have not responded before.

Why this increase in activity in 24 months? In recent discussions with the early respondents, several reasons were stated:

- Above all, it is more academically acceptable to use virtual worlds in teaching and learning. Several years of newspaper articles (good and bad), reports, case studies and anecdotes have generated persistence or longevity around the idea of using virtual worlds in academia.
- The 'kit' has improved. Many universities have upgraded their PC labs to contain equipment that has now partially, or mostly, 'caught up' with the Second Life viewer.
- Funding is easier to obtain, both internally and externally, for Second Life and other applications.
- There is a greater pool of academics who either have some virtual world skills, or are keen to develop them (or at least attempt to).

1.2 Methodology for this survey

Despite the increase in the amount of virtual world activity, data collection never gets easier.

For this particular survey, VWW tried switching to a 'continuous data collection' method, where academics could send content at any time (though reminders were still sent out as to deadlines for the report). This method was partially successful – but also partially unsuccessful.

Some correspondents sent several updates, while a few who otherwise would not have previously been included due to the timescale also submitted content that is included in this report.

However, several previous respondents sent no update of their activities. Later feedback, and the distinctly unacademic practice of 'reading between the lines' leads us to speculate that this was due to:

- Not having a one-time fixed deadline.
- Growing 'research fatigue', where academics are simply fed up of being 'pestered' (quote of one) for data.
- Several initiatives and projects that used virtual worlds not continuing due to a lack of further funding.
- Academic holiday and exam periods, which are often the least fertile in terms of receiving content.

Data collection consisted of several similar but not identical questionnaires, posted on various websites and mailing lists, and emailed to previous respondents. Consequently, this report contains content from academics submitted from the end of March to mid-June 2009.

In another attempt to obtain data, the number of questions was cut right back to between four and six and shorter responses were encouraged, which is why there are fewer footnotes in this report, despite the number of responses exceeding all but one of the previous surveys.

A small but persistent number of respondents continue just to send their CV or list of peer-reviewed publications in response to a snapshot information request, which is of limited use. Increasingly Virtual World Watch is having to verify data, due to (for example) 'Come and see our development!' submissions that turn out to be empty, un-terraformed islands or plots of land.

In addition, by request from a few respondents, survey responses are edited as little as possible, hence the differing styles throughout this report.

1.3 The next two snapshots

The next snapshot will appear online in the middle of August 2009. A different approach will be taken for this, in that no questionnaire survey will be undertaken. Instead, Virtual World Watch will obtain all the data from in-world investigation, i.e. seeing what is really being produced by UK academics in Second Life and other virtual worlds.

This approach also means that academics will not have to face another snapshot questionnaire from Virtual World Watch until September. This will be for the autumn 2009 snapshot, which will be released around the end of October, and will be the final one funded under the current Eduserv research funding allocation.

Other reports related to the snapshot series and the use of virtual worlds in UK academia will be made public by Virtual World Watch between now and the end of this funding; keep an eye on the website³ for their release.

1.4 Acknowledgements

As ever, this snapshot would consist of a blank document, were it not for the time and input of many virtual world practitioners in universities and colleges in academia. Thank you to all of you who responded.

My thanks as well to Kate for alternately supporting and twitter-nagging this report to its conclusion, Ruth at Scotproof for proofreading⁴ a draft, Lisa for useful tea at a critical time, and the enduring patience of Andy, Ed and Pete in the Eduserv research team.

3 Virtual World Watch: <http://www.virtualworldwatch.net/>

4 Scotproof proofreading: <http://www.scotproof.com/>

2. Responses to survey questions

As previously stated, the questions differed slightly across the various questionnaires. The answers are categorised as appropriate in this section.

Which virtual worlds are you using, and for what purpose? (Second Life answers)

Second Life was, as per most of the previous snapshot surveys, used for a variety of teaching and learning applications:

"The OU currently has six island spaces in the Second Life main grid. Three belong to the Deep Think project and the Fit project. We also host a number of other virtual world research projects.

The Open Life island is seeing an increasing number of staff and students for formal teaching and learning activities. We are in a beta phase with our new space booking system, meaning that anyone with an OU login can book a space on the island and receive a 'key', which they then distribute to anyone who needs to have access to the space for the booked period. We are also building a comprehensive support website behind the login portal and will shortly be opening that to the university at large, when we expect to see a surge in faculty interest towards participating in VW activity.

We anticipate that focus this year will be shifting towards more content and resource creation for more integrated VW course streams, moving from early adopters towards early majority, and the support of the Learning Innovations Office at the OU (where the project is currently housed) has been invaluable in enabling the scaffolding of a proper support structure for new users."⁵

"I am using Second Life for educational purpose in units on project management (both undergraduate and postgraduate)."⁶

"Second Life, currently for conceptualising future academic use, and for relating to potential collaborators in future projects." [Film Production (degree) students used Second Life].⁷

"Second Life – teaching Theatre Design in different media."⁸

"We are using Second Life in teaching and learning. We are running a number of learning scenarios across several subject areas within art, design, music and business students."⁹

"Second Life – mainly for simulation of situations and procedures to which students have little or no exposure in 'Real Life'. So far we have developed a molecular biology lab with a couple of 'expensive' experiments and forensic crime scene house with scenarios for students to investigate."¹⁰

"We are currently using Second Life on a few courses and have dedicated an entire module, 3D Interactive Media, to it. It's a fascinating place to study cyber culture and introduce people to

5 Anna Peachey, Eygus Ltd / Open University.

6 Dr Marc Conrad, Department of Computing and Information Systems, University of Bedfordshire.

7 Jerry Foss, Lecturer, Birmingham City University.

8 Mark Childs, Coventry University.

9 Suzie Norris-Reeves, Head of The School of Design, Southampton Solent University.

10 Rose Heaney, Learning Technology Advisor, University of East London.

the basic principles of a 3D environment. We've run a few training courses for staff and those who have an interest are free to turn up to these sessions also."¹¹

"We use Second Life for teaching and research purposes."¹²

"A handful of students have really got into Second Life as a platform for creative expression and design. One of my first year students is currently working with the counselling services and the library at Leeds Met, designing and building things for them on the Leeds Met sim. One of my third year students has just finished a placement at a design studio in Manchester where she worked on Second Life commercial builds. A modest start, but the signs are promising. It looks increasingly likely that virtual worlds will become a future graduate destination for a significant proportion of my students."¹³

"Second Life. Following a key institutional summit in April 2008 and agreement by the IS Strategy Board (ISSB), the University decided to build corporate, learning and research resources on an island in Second Life. The IS Learning Team has been working in partnership with other parts of IS and with Schools to develop this exciting environment. To support the development of Nottingham's Web Campus, a Second Life steering group has been established. Meeting on a half yearly basis with members drawn from Schools, International Office, Marketing, IS, eLeK committee and the Student Union, the group provides guidance and advice on future development activities.

It is still early days, but interest in Nottingham's Web Campus to date has been very positive and the Web Campus has already been used to support teaching and research by the Business School, School of Geography (JISC funded DELVE project) and the LSRI, with further projects derived from the recent e-learning support call."¹⁴

"We are using Second Life, mainly for project work."¹⁵

"We are using Second Life in education and training."¹⁶

"I use Second Life, for teaching & professional development & networking.

I am continuing to organise discussion/presentation sessions on Infolit iSchool on the theme of information literacy and learning. There was a gap of a few months due to illness, so we are now taking more of a team approach so that the discussions are not so dependent on me being there to chair them. The team consists of people I have worked with in SL (and presented with in RL); apart from one person they are from outside Sheffield University. There are also builds of the '7 Pillars of information literacy' and of the research process. See also the Wiki¹⁷.

They have a seminar series in SL for people in the School of Education. Jackie Marsh and her colleague were already involved in a virtual worlds project¹⁸ based at University of South Australia, with the Sheffield input being to develop guidelines for educators on pedagogical and

11 Andrew Marunchak, 3D Developer, University of Hertfordshire.

12 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

13 Ian Truelove, Principal Lecturer, The Leeds School of Contemporary Art & Graphic Design, Leeds Metropolitan University.

14 Andy Beggan, IS Learning Team manager, University of Nottingham.

15 Dr Shirley Williams, Senior Lecturer School of Systems Engineering, University of Reading.

16 Stuart Frankland, Second Life Administrator, Rotherham College of Arts and Technology.

17 Sheffield Infolit School Wiki: <http://infolitschool.pbwiki.com/>

18 Accessible 3D Virtual Learning Environment: <http://www.unisanet.unisa.edu.au/3DVLE/default.htm>

assessment approaches using 3D worlds. I have been invited into the project, so one benefit of SL has been to form better partnerships with a cognate Department which is based in another building in Real Life but is in a shared building in Second Life."¹⁹

"In Semester one I ran for the second time my class 'Virtual Worlds for Design', exploring the use of Second Life as a design environment. Group projects produced included a virtual student union, a virtual studio/learning space, and an exhibition building created by a team of French architecture exchange students showcasing their Erasmus experience in Scotland. Over the past year I have supervised several individual MSc/MEng virtual worlds projects, including 'Storytelling Environments in Virtual Worlds'."²⁰

"I use Second Life, but have had a brief look at some other virtual worlds, but couldn't face the learning curve! I am very interested in the potential of OpenSim, especially if the interface with SL can be sorted out properly as that would seem to resolve a lot of the present challenges of main grid/teen grid/backing up work/intellectual property rights etc – though I guess some of those may be resolved with the currently mooted changes to the adult grid. In the OU, I use SL for tutorials with students on a level 1 ICT course. These are students who have opted to attend to tutorials in SL instead of f-t-f and, because of the nature of the OU, have few opportunities for f-t-f contact with other learners. The basic format is 5 tutorials related to the point in the course we are at, replicating f-t-f activities in terms of some workshop activities and discussion, but we also use the virtual world to suggest relevant places to visit. A colleague is developing specific activities relating to each study block so that students have an opportunity to see some technologies in use, even if there is an element of suspending the imagination in the virtual environment.

Also in the OU, I mentor colleagues who are interested in becoming involved in using SL and I will be running some basic skill workshops later this year as part of my COLMSCT fellowship."²¹

"We have used SL to support student learning by simulating real life events. We have developed simulations in environmental health and social work so far, which we are piloting this summer. Plans are being developed for a second sim to support health case studies and simulations and we have received funding to develop immersive language (Spanish) simulated experiences to help students prepare for a year abroad."²²

"We use Second Life. There are currently two islands as part of the University; these are used for creative practice, and for teaching and learning. This year I have worked with 2 groups: 1 group of undergraduate photography students – 28 in number. We are currently organising an inWorld exhibition. They enjoyed setting up their avatars and posing for group photos. 1 group of games and interactive media students – 34 in number. Following an introduction session we conducted an inWorld seminar. This produced mixed results, with some students treating the space anarchically."²³

"We use Second Life predominantly, although our Games Design department obviously looks at others, and one of our digital enterprise companies isn't tied to Second Life."²⁴

"A few small groups now, beginning to teach more concentratedly in April [2009].

Some of the students have been in and explored just from following the link to the island from the VLE, which has been quite interesting. Their main motivation was curiosity – some were

19 Sheila Webber, Senior Lecturer, Department of Information Studies, University of Sheffield.

20 Dr Scott Chase, Dept. of Design, Manufacture & Engineering Management, University of Strathclyde.

21 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

22 Liz Falconer, Manager, E-learning Development Unit, University of the West of England.

23 Denise Doyle, University of Wolverhampton.

24 Kate Boardman, University of Teesside.

gamers, some not; some in computing, some not; some who'd heard a bit of hype about SL and joined to see what it was (perhaps the University advertising our space to them was a safe liminal place to start out from), some who had accounts already but not really used them for quite a while or done much with them because they hadn't really got the point. A few of them got quite into it at first as individuals but they weren't in subjects that were picked up by the staff I notice they've not logged in for a while – their activity has tailed off a little.

The students I've directly held orientation/induction sessions with this term have been, in some respects, similar in their views to the way that students often respond to the VLE – they don't quite see the point unless you show them something really useful and then they see the potential. They haven't really seen the potential directly. Or they have been used to key proprietary software in their own discipline and a little dumbfounded that SL is so inferior – for example, design students familiar with 3dsmax were somewhat confused that they couldn't create curvy sleek kitchens for their project or import their designs from other softwares, but they did after they got over this instant negative really appreciate the concept of being able to walk around the kitchens they were building and navigate them for usability from real eye-level experience.

I've been quite surprised – not sure why – at how different the first responses to getting in has been between staff and students. Teaching the same basic intro to two separate groups in 48 hours was quite an eye-opener. The staff (all IT-savvy from Library and Information Services) were very open to the potential and happy to be guided into exploring, while the students were much more instant in their curiosity, diving in clicking things without waiting to be told. Trial and error, and a confidence had them moving around and being a lot more active much more quickly, but they didn't actually get to the tasks we were planning any faster because they then got totally caught up in their appearance, and stopped to edit, comparing with each other and commenting, then adjusting.

Only when they were happy-ish with themselves as avatars did they turn back to what we were supposed to be doing. I think both groups bonded with the avatar self very quickly, all considering it an extension of them. The staff didn't feel the need to do some customisation to make it them in the same way the students did, although they did have a little play with how they looked later.

The really exciting group will begin in April [2009], with a pilot of a block delivery programme taking place in SL – I'm quite excited about that, as well as a little nervous – as a pre-cursor to using SL as the main focus space for these off-campus students. We'll be collating information on their experience very carefully."²⁵

Virtual worlds are used in several computer science courses:

"We use Second Life, but have just started looking at Open Sim." [Third year computer science undergraduates].²⁶

"Second Life, teaching computer science."²⁷

"Finalists. Computer games module. 8–10 of them, if they are not sweating over their dissertation hand-in date. We're playing Primtionary on a private island – they have been told to go through the Ivory Tower of Prims building stuff, and use the sandpit there to get basically competent. Primtionary gets them to build 'words' using prims, and I'm using it see whether

25 Kate Boardman, University of Teesside.

26 Tony Ackroyd, Digital Media Programme Leader, University of Greenwich.

27 Judy Robertson and Nicole Cargill-Kipar, Heriot-Watt University.

gameplay in building is more useful than me saying 'make sure you can build a bar stool, using only one prim (or else)'.²⁸

"I make formal use of SL as part of my course delivery. The task that I had set my students was to create a wind turbine in SL, whose blades would turn in the wind."²⁹

A noticeable trend, over the past few snapshots, is in the use of Second Life for health, medical and bioscience applications:

"We are using Second Life for a multitude of teaching and learning purposes, most notably:

- Simulations – nursing decision making processes; ward admissions, heart murmurs; student research in Law and Psychology; practice replication for novices (x-ray machine).
- Demonstrations (mathematical algorithms: waypoint finding and flocking behaviour).
- Student support (Academic development help; student mentors; BASE staff).³⁰

"All projects are Second Life, though some of our team are looking at the open source alternatives. I have four main projects:

- A care-prioritisation/decision-making project for 3rd year (pre-reg) nurses. We've had a small cohort of students already do the trial, and hope to publish this spring. Each trial involves the student's avatar interacting with 6 patient avatars and a trained nurse's avatar in a ward situation.
- A heart-rhythm OSCE/assessment project. I'm using 'chat-bot' technology to enable the student to 'verbally' assess the patient-avatar's prior history and make a differential diagnosis. The student gets feedback on correct position of the stethoscope, and hears pre-recorded heart sounds from various auscultatory points on the patient-avatar's chest. For post-registration nurses, similar to an OSCE. Ready for student testing by end of May 2009.
- Recreating, in real time, the assessment and care of a newborn premature baby as it arrives in a Paediatric Intensive Care Unit [PICU]. For child-branch nursing, post-registration. Trials: Summer/Autumn 2009.
- Developing networked copies of patient monitoring systems. The first working example is a replica of the Phillips 'intellivue' 10-lead diagnostic patient monitor, which is controllable by a number of different external web-based methods. For use in modelling operating theatres and post-op ICU/ITU/recovery areas & scenarios.³¹

"We have been developing game-based learning for the delivery of virtual patients in Second Life.

The Faculty of Medicine at Imperial College London has developed a Virtual Hospital in Second Life that aims to design game-based learning activities for the delivery of virtual patients that can drive experiential, diagnostic, and role-play learning activities supporting patients' diagnosis, investigation and treatment.

Phase I of this project focused on the delivery of a virtual patient in the area of Respiratory Medicine following a game-based learning model in Second Life. A pilot was carried out in

28 Dr James Dearnley, Department of Information Science, Loughborough University.

29 Barry Spencer, Bromley College.

30 Kathryn Trinder and Ferdinand Francino, Caledonian Academy, Glasgow Caledonian University.

31 Andrew Whiteford, School of Nursing, Midwifery and Community Health, Glasgow Caledonian University.

March 2008 with 43 students. The feedback received has informed the development of Phase II which incorporates a multi-patient approach."³²

"Second Life – a virtual nutritional clinic using avatar case studies for students in Sports Nutrition. We are using a full sim for students to plan and organise a virtual iSports event. This allows students to work with scale and space and consider all the factors as a practice to organising a real sports event later in the course. This is linked to a wiki as a means of communication with the marketing and suppliers team who are the virtual developers that realise the students plans."³³

"We are using Second life in order to simulate the demands of a hospital pathology laboratory (which is difficult to access in real life). In particular, we are developing a virtual lab based on the real newly refurbished haematology / clinical biochemistry lab at Darlington Memorial Hospital (County Durham & Darlington NHS Foundation Trust or CDDFT Pathology). I was encouraged to go ahead with the project by one of my colleagues (a 3D web developer) and there are a number of other projects in other parts of the University (e.g. Art & Design, Media, Computing, Psychology)."³⁴

"Three of us here in the nursing and midwifery unit are working on using Second Life for problem based learning for pre-registration students. I'm trying to use David Burden's PIVOTE to produce the pbl scenarios. I have an MSc in Health Informatics but I'm just writing my dissertation for an MA in Education. This is purely theoretical research and is about learning theories used by lectures in profession's and the convergence of these with possible theories applicable to teaching in Second Life.

We haven't used the PIVOTE pbl with any students yet; we are just starting. However, some colleagues from other universities and I have formed a group in SL called UK Nurse and Midwife Education. We'd love more nurses and midwives or technicians or anyone who works with nurses and midwives to join. Some of the current members are way ahead in SL and very organised; others of us are just starting."³⁵

Some respondents are making preparations to use Second Life:

"I am investigating the use of Second Life as an adjunct to other media and face to face teaching. I wish to use it to teach post-registration nurses' patient history taking for diagnostic purposes and physical examination. I wish to develop teaching and learning that can be done on an individual basis, within a group and be tutor led. I am at the very early stages of this development. However, I aim to use this with my next cohort in September."³⁶

"No teaching activity at present, still at the demonstration stage. Will (hopefully!) be used to support student project work in a variety of subject areas in a mixed reality mode – part real world, part virtual world – applied to business and social enterprise, language/linguistics learning, landform visualisation, environmental impact assessment. Scope also for exhibition of student work – art, design, fashion, etc; and opportunities for learning curatorial practice – exhibition design/management. Distinct opportunity identified for supporting distance learning."³⁷

32 Maria Toro-Troconis, Faculty of Medicine, Imperial College London.

33 David Jukes, School of Animal, Rural and Environmental Sciences, Nottingham Trent University.

34 Dr Anne Cunningham, Faculty of Applied Sciences, University of Sunderland.

35 Tim (Karen) Johnson, Senior Lecturer, IHS, University of Worcester.

36 Evelyn McElhinney, Lecturer in post-registration nursing, Glasgow Caledonian University.

37 Geoff Barker-Read, Head of Academic Quality and Standards Team, University of Leeds.

"In January of this year my department was lucky enough to have been given some funding to buy and maintain an island on Second life grid for the next two years, and I was asked to be the caretaker for Cornwall College Island. I am still very much at the start of the planning and development stage (the island is still only 4 weeks old), but along with a very enthusiastic and capable colleague am designing an island that fits in with the spirit of the college.

We would like to use the island as a meeting and teaching space; meeting and collaborating with educators around the world and teaching HE level students and trainee teachers using imaginative, interactive and dynamic methods. However, what those methods will be is still a subject for discussion. A small group of staff members with avatars will soon start meeting regularly in world to look at how the island can grow, and what we can offer."³⁸

"We use Second Life. We are working on a project to create a new part-time MPhil for distance students to be delivered online. The programme will be offered by the Computing Department of the Open University starting from October 2009. We have developed a virtual learning environment consisting of a Moodle site coupled with a Second Life virtual campus, called deep|think, plus a number of synchronous Web 2.0 tools."³⁹

Second Life was also reported as being used for more abstract applications, not central to teaching and learning, in UK higher education:

"We are developing a Student Guidance Resource in Second Life. This is to explore the area of anonymity in sensitive SG issues, and how SL may provide this."⁴⁰

"We are using Second Life in marketing and recruitment to provide general information (for student recruitment, potential transition from FH, and for international students)."⁴¹

"We developed the new OU social island, Open Life Village, where students can rent houses, hang out in the village pub (The Open Arms), party or play on the village green, explore the harbour, chill out at Sholokhov Tor, engage with the history of the community in the permanent exhibition room at 'Open Minds' and propose and run exhibitions in the main Open Minds space. Student response has been good and there is a regular baseline of casual activity on the island.

We anticipate a short period of adjustment before community-organised activities are back to previous levels, and then this should increase as the Second Life community presence is publicised beyond niche groups. To date the community has received minimum publicity within the university, enabling us to work with a restricted user group while we investigate how virtual worlds can be useful to us – this is a very 'managed' development."⁴²

Using virtual worlds for research, or researching the use of virtual worlds, are academic applications that have appeared in most snapshots:

"I am using Second Life as the field of study for my PhD – in which I measure the interpersonal network of account holders and assess influence (attitudes/behaviours) between them as it flows through the social setting."⁴³

38 Bex Ferriday, School of Education and Training, Cornwall College St Austell.

39 Dr Lucia Rapanotti, Department of Computing, The Open University.

40 Garfield Southall, Director of the New Technology Initiative, University of Chester.

41 Kathryn Trinder and Ferdinand Francino, Caledonian Academy, Glasgow Caledonian University.

42 Anna Peachey, Eygus Ltd / Open University.

43 Aleks Krotoski, PhD candidate, University of Surrey.

"At Sussex, my DPhil research is focused on aspects of using Second Life (or any other appropriate virtual world) as a platform for learning and teaching. This has centred around a final year U/G and Masters course in interactive learning environments where students have developed learning experiences for clients drawn either from outside the university or from other faculties.

Some of these learning experiences will be in use in the coming months, involving students and teaching staff from other faculties. One of the issues is the extent to which it is appropriate to use SL as a tool to support other learning and the extent to which it should take centre stage and the learning activity flow from SL activities."⁴⁴

"We are using Second Life to evaluate its uses for teaching and learning. We are just about to start working with students on a project with the Department of Archaeology. Examples of architectural fragments (pillars, bases, arches etc) have been created as a reference point for first year students doing fieldwork. This is to help them remember the forms and relate them to the relevant time period. We will do pre- and post-evaluation surveys and students can include feedback as part of their formative assessment on the entire fieldwork project."⁴⁵

Which virtual worlds are you using, and for what purpose? (non-SL answers)

As in recent snapshot surveys, a minority of respondents declared an education-based interest in virtual worlds other than Second Life:

"We're using Second Life & OpenSim as virtual studios for art & design students. These virtual worlds help them to learn how to be creative. Students also learn how to create and share content in virtual worlds."⁴⁶

"Looking at Metaplace (medical teaching) and SIMPLE (inter-professional education between medical and nursing / other healthcare students). Very early stages and no scripting done."⁴⁷

"We use Second Life, OpenSim, There and Active Worlds for the purpose of learning, teaching, research and collaboration. Virtual worlds are used as a simulation tool, as an exhibition space, as a learning space, an assessment space, for PhD projects, for MSc projects and for collaboration across disciplines, schools and colleges."⁴⁸

"We are currently working on our own which uses a special browser-based plugin allowing people to view 3D content from inside Internet Explorer/Firefox. This is not designed to replace SL but to make certain tasks (architectural visualisation being one) easier for us. We have our eyes on a lot of promising technology and Google's browser based 3D engine is also being considered (depending on who establishes the standard for 3D on the web first)."⁴⁹

"Our Sexual Health SIM experiment in OpenSim is growing well, now that our host grid in France (New World Grid) has relocated to more reliable Windows servers, introduced SLVoice and Groups functionalities, and has become part of the Hypergrid."⁵⁰

44 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

45 Kriss Fearon, Web Coordinator, University of York.

46 Ian Truelove, Principal Lecturer, The Leeds School of Contemporary Art & Graphic Design, Leeds Metropolitan University.

47 Dr Neil M Hamilton, Director of the Medi-CAL Unit, Medical School, University of Aberdeen.

48 Fiona Littleton, Virtual Worlds Development Adviser, University of Edinburgh.

49 Andrew Marunchak, 3D Developer, University of Hertfordshire.

50 Dr Maged N. Kamel Boulos, Senior Lecturer in Health Informatics, University of Plymouth.

"Within the university, doctoral research is being undertaken in virtual worlds as a useful design tool."⁵¹

"We are using SIMPLE. The SIMPLE (SIMulated Professional Learning Environment) Environment is an open-source software platform for developing and running "professional" simulations."⁵²

"We are hoping to participate in the IBM virtual world instead of taking students to visit their site but that is in its early stages at the moment."⁵³

How many students (if applicable) have used your particular virtual world application?

This particular question has limited value, as it is asking for just one quantitative (as opposed to qualitative) measurement. In addition, the word 'used' is open to wide interpretation. However, we thought we'd ask it this time around to get an idea of the numbers of students involved, in some way, with virtual world developments in UK academia. The responses to this question were of a wide numerical range.

"Around 100."⁵⁴

"This year we have 800 students on MSc level and 100 students on BSc level that are meant to have avatars on Second Life."⁵⁵

"There are around 20 in all."⁵⁶

"15."⁵⁷

"About 100."⁵⁸

"About 10."⁵⁹

"138 students this academic year, 70 last academic year."⁶⁰

"This academic year we put 120 students through an OpenSim induction, and ran a pilot study with 10 students as part of the JISC Open Habitat project."⁶¹

51 Suzie Norris-Reeves, Head of The School of Design, Southampton Solent University.

52 Professor Paul Maharg, Glasgow Graduate School of Law, University of Strathclyde.

53 Sandra Taylor, Ashton Sixth Form College.

54 Garfield Southall, Director of the New Technology Initiative, University of Chester.

55 Dr Marc Conrad, Department of Computing and Information Systems, University of Bedfordshire.

56 Barry Spencer, Bromley College.

57 Mark Childs, Coventry University.

58 Rose Heaney, Learning Technology Advisor, University of East London.

59 Tony Ackroyd, Digital Media Programme Leader, University of Greenwich.

60 Judy Robertson and Nicole Cargill-Kipar, Heriot-Watt University.

61 Ian Truelove, Principal Lecturer, The Leeds School of Contemporary Art & Graphic Design, Leeds Metropolitan University.

"8-10 of them."⁶²

"60 in Nutrition Clinic 2007/2008 (restarts again 2009/2010). 12 for iSports event 2008/2009."⁶³

"25 1st year undergraduates, BSc Information Management, in a core module 'Information Literacy'. 10 Masters students in an optional module 'Educational Informatics'"⁶⁴

"Over 100 students."⁶⁵

"Approximately 18."⁶⁶

"We are just about to start working with students on a project with the Department of Archaeology. This will run later in the summer term and potentially could be accessed by up to 90 students."⁶⁷

"For tutorial activities at the OU this year, I am working with another Associate Lecturer and 30 students, but there are a large number of students who come to optional tutorials which are not part of the tutorial provision, but act as tasters of what SL is like. At Sussex, I have worked with nearly 70 students over the 2 years."⁶⁸

"A few small groups now."⁶⁹

"Ten – for a project into the use of Second Life for collaborative working."⁷⁰

"I think now we have around 150 people in the GCU Group. This includes staff as well as students. There are 40 students for the AI simulation, as well as 2 scholar students who built it. 14 student mentors volunteered to explore SL as an additional environment in which to carry out their duties as mentors. Around 40 students went through induction for law activities."⁷¹

"1 group of undergraduate photography students – 28 in number. 1 group of games and interactive media students – 34 in number."⁷²

"16 upper level (years 4/5 & Postgraduate) architecture and engineering students participated."⁷³

62 Dr James Dearnley, Department of Information Science, Loughborough University.

63 David Jukes, School of Animal, Rural and Environmental Sciences, Nottingham Trent University.

64 Sheila Webber, Senior Lecturer, Department of Information Studies, University of Sheffield.

65 Suzie Norris-Reeves, Head of The School of Design, Southampton Solent University.

66 Barry Spencer, Bromley College.

67 Kriss Fearon, Web Coordinator, University of York.

68 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

69 Kate Boardman, University of Teesside.

70 Jerry Foss, Lecturer, Birmingham City University.

71 Kathryn Trinder and Ferdinand Francino, Caledonian Academy, Glasgow Caledonian University.

72 Denise Doyle, University of Wolverhampton.

73 Dr Scott Chase, Dept. of Design, Manufacture & Engineering Management, University of Strathclyde.

"Phase I of this project focused on the delivery of a virtual patient in the area of Respiratory Medicine following a game-based learning model in Second Life. A pilot was carried out in March 2008 with 43 students."⁷⁴

"Early days with student numbers in the 10s."⁷⁵

"80+ "⁷⁶

"130 students and 10 staff in MSc in E-learning. 40 in Management School; management science simulation. 10 in MSc in Management of Training and Development; role play appraisal training. 10 in Medicine Education Centre; health care simulation and 'A Virtual Bugs Life' project as part of the national cleanliness champions programme. 12 in TESOL, online language learning. 60 on the PGCert in University Teaching programme. A number of students in Informatics; PhD projects and collaboration. A number of students in Arts, Culture and Environment; design, investigation, researching Virtual Worlds potential. 5 PhD student projects."⁷⁷

"I anticipate using it with 50+ 2nd year Biomedical Science students from September 2009. In addition, I also hope to use it for interprofessional education with our MPharm Programme (~180 students)."⁷⁸

Some responses were less precise, or non-quantifiable:

"We've had a small cohort of students already do the trial."⁷⁹

"Research cohorts only."⁸⁰

"Probably less than 100 students and teachers use our island regularly."⁸¹

"It is early days for us, but 6 schools have so far used or plan to use SL on modules within their courses."⁸²

"Potentially, around 200 people may make use of this facility in the near future, although it is hard to be come up with precise numbers at this point in time."⁸³

"No specific numbers of students."⁸⁴

74 Maria Toro-Troconis, Faculty of Medicine, Imperial College London.

75 Liz Falconer, Manager, E-learning Development Unit, University of the West of England.

76 Stuart Frankland, Second Life Administrator, Rotherham College of Arts and Technology.

77 Fiona Littleton, Virtual Worlds Development Adviser, University of Edinburgh.

78 Dr Anne Cunningham, Faculty of Applied Sciences, University of Sunderland.

79 Andrew Whiteford, School of Nursing, Midwifery and Community Health, Glasgow Caledonian University.

80 Dave Taylor, Department of Biosurgery and Surgical Technology, Imperial College London.

81 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

82 Andy Beggan, IS Learning Team manager, University of Nottingham.

83 Dr Lucia Rapanotti, Department of Computing, The Open University.

84 Dr Maged N. Kamel Boulos, Senior Lecturer in Health Informatics, University of Plymouth.

"With others around Europe we are participating in the Muvenation⁸⁵ (www.muvenation.org) project helping over 100 teachers discover the potential of virtual worlds."⁸⁶

"Well over 1,000."⁸⁷

Some responses indicated a number of visitors to their installation:

"In Second Life, our total number of visitors is in the thousands. It's difficult to tell how many of those are students but I can say with confidence (due to what records we have) that around 350 of those have been unique students."⁸⁸

"Currently we have an average of about 200 unique visitors a week to the Open Life island group."⁸⁹

What has been the experience inside your institution, and the attitude of your peers, towards your virtual world usage?

A minority of comments indicated a wholly positive experience:

"Very positive."⁹⁰

"Overall, positive."⁹¹

"There is a growing enthusiastic SL community within the Open University, and the institution is looking very seriously at how this technology can be deployed to the best advantage of our students and academics."⁹²

"Excellent and encouraging."⁹³

"Most of my colleagues have been tremendously interested in, and supportive of, the idea."⁹⁴

"Generally I have been encouraged, even by colleagues who 'don't get it' or regard me as slightly eccentric. I am aware of active interest in seeing what is going on from colleagues in both institutions [Sussex and the Open University], and requests for mentoring especially from OU colleagues."⁹⁵

85 Muvenation project: <http://muvenation.org/>

86 Dr Shirley Williams, Senior Lecturer School of Systems Engineering, University of Reading.

87 Professor Paul Maharg, Glasgow Graduate School of Law, University of Strathclyde.

88 Andrew Marunchak, 3D Developer, University of Hertfordshire.

89 Anna Peachey, Eygus Ltd / Open University.

90 Dave Taylor, Department of Biosurgery and Surgical Technology, Imperial College London.

91 Ian Truelove, Principal Lecturer, The Leeds School of Contemporary Art & Graphic Design, Leeds Metropolitan University.

92 Dr Lucia Rapanotti, Department of Computing, The Open University.

93 Dr Maged N. Kamel Boulos, Senior Lecturer in Health Informatics, University of Plymouth.

94 Dr Anne Cunningham, Faculty of Applied Sciences, University of Sunderland.

95 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

"All round supportive."⁹⁶

"Noticeably increasingly positive. Two years ago it was a novelty, and many were sceptical. Now it's generally seen as inevitable (for a number of applications), but still needs careful planning for educational applications."⁹⁷

"It has been very positive. Other faculties are already planning the development of other game-based learning activities within their disciplines."⁹⁸

"Now really taking off. We have moved on from the view of virtual worlds as being geeky and slightly weird to a real recognition of their potential in bridging the theory/practice gap in a wide range of subject areas."⁹⁹

"Supportive. Very supportive. Through seminars and real life Second Life labs (on getting started) interest has grown and attitudes are changing especially once the potential is highlighted and positive student feedback is presented."¹⁰⁰

However, the bulk of the responses on peer attitudes tended to be mixed. This has been a consistent pattern for all of the snapshot surveys to date:

"Fascination in a novelty sense generally with little thought given to the pedagogy that surrounds the projects."¹⁰¹

"Most seem to be interested, some fascinated. There are a few who think it's bizarre or just not technically robust enough to use."¹⁰²

"Within the school of Health & Bioscience, where the work is based, there is a general acceptance possibly because they have greater understanding of the underlying rationale and also have respect for our team's work in general. Amongst those outside the school, views cover the full gamut from curiosity to complete scepticism."¹⁰³

"A mixture of interest and bemusement. I did win a teaching best practice award at my university for work which included this, so I guess they see some good in it."¹⁰⁴

"When I first started, in a part time capacity as the only one on the project, there was some skepticism. However, many were enthusiastic and seeing familiar locations in 3D seemed to garner a lot of interest. Of course, things needed to go beyond mere aesthetics and in order to put it to use, we needed to cooperate with staff members and run some introductory sessions."¹⁰⁵

96 Denise Doyle, University of Wolverhampton.

97 Jerry Foss, Lecturer, Birmingham City University.

98 Maria Toro-Troconis, Faculty of Medicine, Imperial College London.

99 Liz Falconer, Manager, E-learning Development Unit, University of the West of England.

100 Fiona Littleton, Virtual Worlds Development Adviser, University of Edinburgh.

101 David Jukes, School of Animal, Rural and Environmental Sciences, Nottingham Trent University.

102 Mark Childs, Coventry University.

103 Rose Heaney, Learning Technology Advisor, University of East London.

104 Judy Robertson, Heriot-Watt University.

105 Andrew Marunchak, 3D Developer, University of Hertfordshire.

"The perceived 'value' of my peers seems to be decreasing. As more people become aware of virtual worlds the perception of potential usage declines. In part, I think, because the mystery is leaving. The novelty is wearing off. Previously, when people did not know exactly what it was, the expectation was high. Of course, these are all people who have not spent much time inside a virtual world. Those that have (which has definitely increased) are excited and working creatively to use them in their teaching and learning."¹⁰⁶

"Use of Second Life remains very much in the early stages of development – predominantly a personal experience with no firm direction of travel determined as yet. Potential applications are beginning to crystallise and there is some interest from academics in becoming involved with these, although there remains a significant degree of skepticism regarding the benefits that may accrue and the investment of time required to make it work."¹⁰⁷

"There's some interest from the very top down but it's not something we're currently prioritising."¹⁰⁸

"Attitudes are understandably mixed. Scepticism is the usual first reaction followed by curiosity and then hopefully acceptance and understanding. We have a number of projects in development which we hope will exploit the unique advantages of SL (experiential learning) which will act as a catalyst for wider adoption as others begin to realise the potential."¹⁰⁹

"We have run some internal sessions and the attitude is varied."¹¹⁰

"I have given presentations, including to the Vice Chancellor, and people in a few Departments have expressed interest but there have not been many concrete developments so far."¹¹¹

"Intrigue / suspicious / support / novel / innovative."¹¹²

"Attitudes toward using Second Life as an educational resource have been mixed, though interest is beginning to grow. Many members of staff currently see it as nothing more than a game or, at worst, a playground for 'dirty old men'. "¹¹³

"Cautious."¹¹⁴

"At first, in 2004, there was general confusion and a little bemusement. Now, some colleagues are extremely interested, using the virtual world for their own lines of enquiry (particularly in the social sciences) while others pooh pooh the findings that have emerged from the research as not generalisable to the non-online population."¹¹⁵

106 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

107 Geoff Barker-Read, Head of Academic Quality and Standards Team, University of Leeds.

108 Joss Winn, Technology Officer, Centre for Educational Research and Development, University of Lincoln.

109 Andy Beggan, IS Learning Team manager, University of Nottingham.

110 Dr Shirley Williams, Senior Lecturer School of Systems Engineering, University of Reading.

111 Sheila Webber, Senior Lecturer, Department of Information Studies, University of Sheffield.

112 Suzie Norris-Reeves, Head of The School of Design, Southampton Solent University.

113 Bex Ferriday, School of Education and Training, Cornwall College St Austell.

114 Professor Paul Maharg, Glasgow Graduate School of Law, University of Strathclyde.

115 Aleks Krotoski, PhD candidate, University of Surrey.

"Varied. Apart from a couple of blog entries and a link in ad farm on the Blackboard login page, we've not shouted too much about it . There are plenty of people who 'don't get it', and we're not about to start trying to convert them for the sake of it – there's enough to do with those who are already on board!"¹¹⁶

"Mixed reactions! Still. We still get folk worrying so much as all they know is what they've heard from the press, and generally all they hear from the press is 'bad' (divorces and porn). A lot of cynicism, and a lot of 'lack of time'. Still a lack of understanding of what the environment actually is. But that's okay to some extent (though frustrating!), it gives us time to explore, find out problems, sort them, and find out what works well, *before* we get the mad rush in a couple of years time...

We are however beginning to see a small but perfectly formed trickle of additional interest happening. Some from people who saw some of our early presentations and demonstrations; some who heard on the grapevine what other colleagues are doing; and some from people I didn't know – not the usual 'early adopters' (I think I've said this before...?).

As mentioned before, GCU's Second Life activity is very much a 'top down' project, initiated by the Principal and executive. The GCU is lacking 'grass root' development most other educational initiatives are based on and it's hard to close the gap. We do sometimes feel as if we're struggling upstream in a Kafka novel, but, as we say, we are doing this an unusual way around."¹¹⁷

"The university is supportive of SL. However, I have had some colleagues who are sceptical and do not see the benefit of virtual worlds compared to other media. However, recent use of SL by my colleagues may change this. Certainly there has been more interest since they completed the first stage of their project."¹¹⁸

"Still not available across whole college, some peers cannot see the point while other are itching to have a go. Think college will be reluctant to pay fees after this year."¹¹⁹

"Mixed. Some staff are sceptical but willing to look at it. Our main experience is that the barriers to access are high and the few who are interested don't have the time or skill to explore further."¹²⁰

"Mixed. Some think it is going nowhere – too much trouble to create learning objects that can be created elsewhere on more accessible platforms. Specific system requirements (graphics card etc.) is also prohibitive."¹²¹

"Some people are really keen but they are very few and far between. Most people think it is hilarious or a waste of time."¹²²

Some responses were specifically about students:

116 Kate Boardman, University of Teesside.

117 Kathryn Trinder and Ferdinand Francino, Caledonian Academy, Glasgow Caledonian University.

118 Evelyn McElhinney, Lecturer in post-registration nursing, Glasgow Caledonian University.

119 Stuart Frankland, Second Life Administrator, Rotherham College of Arts and Technology.

120 Kriss Fearon, Web Coordinator, University of York.

121 Remy Olasoji, University of East London.

122 Tim (Karen) Johnson, Senior Lecturer, IHS, University of Worcester.

"General mystification! Students are very keen to get involved, but most staff are not interested. These are the same people who thought email would never catch on and cannot see what all the fuss about Web 2.0 is all about!"¹²³

"Student response has been good and there is a regular baseline of casual activity on the island."¹²⁴

"Most students are interested but dubious about SL initially and then tend to get very involved, especially those who are involved in creating stuff. However, it is notable that Sussex students do not seem to return to SL once their course is finished, but many OU students do return and have formed a vibrant community of learners."¹²⁵

"They were generally positive, but being Film Production (degree) students they were a bit dismissive of the realism of the environment (which is what they are interested in); however, they do see the potential benefits for many other instances of collaborative working."¹²⁶

Do you have any future plans for virtual world usage, especially in teaching and learning, inside your institution?

"Yes – we are currently positively exploring the use of Second Life for the Film and TV production degree courses. We are also looking at healthcare applications both within the University and for healthcare organisations.

The main work at the moment is that we are putting together a major project with a large construction company for a bid for funding on Intelligent Building construction and Building Information Models. More of this as/if it becomes successful. (This also relates to our academic courses, particularly with our Planning and Construction faculty). I'm also investigating virtual world/interactive TV services."¹²⁷

"About to start a new exercise in collaborative games design."¹²⁸

"I have run a few modules which allow for SL projects to be developed."¹²⁹

"I plan to repeat the sessions on Theatre Design. At Coventry I'm working with a group using SL to teach disaster management communication. I am also working with a lecturer at the University of Warwick and plan to use SL to explore social attitudes to disease."¹³⁰

"Yes – we are in process of buying an island for Health & Bioscience, separate from the main university one, which will house existing projects and provide for several new ones, including a Polyclinic for use by students on clinical programmes such as Herbal Medicine and Physiotherapy. In addition to specific learning focused activities, the new island will provide scope for students to socialise and contribute to developments."¹³¹

123 Garfield Southall, Director of the New Technology Initiative, University of Chester.

124 Anna Peachey, Eygus Ltd / Open University.

125 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

126 Jerry Foss, Lecturer, Birmingham City University.

127 Jerry Foss, Lecturer, Birmingham City University.

128 Barry Spencer, Bromley College.

129 Garfield Southall, Director of the New Technology Initiative, University of Chester.

130 Mark Childs, Coventry University.

131 Rose Heaney, Learning Technology Advisor, University of East London.

"One of our schools have purchased an island – so effectively, we've now got 2 islands on Second Life – and they are planning to create a polyclinic and crime scene investigation on this island."¹³²

"Continued use, definitely. Virtual worlds have become a core technology for our teaching, learning, research and collaboration."¹³³

"Yep! Continuing the aforementioned activity, and progressing requests that come in. We have many schools currently undergoing their 5 year redesign and validation of modules, so this is a good time for enquiries. Plus we have some initiatives lined up (a virtual eye combined with BBC content for not just academic but also general public use; psychology teaching, etc.). We are also experimenting with (but not yet using) Open Simulator for something as of yet undisclosed that you will hear more about shortly :-D"¹³⁴

"We are looking at introducing Second Life in more courses."¹³⁵

"We will keep teaching the first year module. Also, teaching a summer school for pupils between school and university."¹³⁶

"In short, yes. Although, it does depend on how complimentary the research is when it comes to teaching. So far it's looking rather positive (especially for courses dealing with digital art and programming) but there's a standard which needs to be established and an old way of thinking to be brought up to date."¹³⁷

"We have a growing programme of research on virtual worlds use for teaching and learning."¹³⁸

"We have been working with other institutions in the development of game-based learning for Inter Professional development."¹³⁹

"Lancaster University's long term plans are grand. We are laying the ground work for more courses to be taught, more students to have access and more research to be conducted. Our SL island has an e-learning center under construction and we are trying to upgrade our computer labs so students have more powerful machines in which to access the grid."¹⁴⁰

"We are investing in an island of our own; in fact, we are assuming ownership of the Education UK sim. No plans to radically redevelop the island – just tidy it up and utilise the existing structures as bases for staff and students to experiment and exhibit their work."¹⁴¹

132 Remy Olasoji, University of East London.

133 Fiona Littleton, Virtual Worlds Development Adviser, University of Edinburgh.

134 Kathryn Trinder and Ferdinand Francino, Caledonian Academy, Glasgow Caledonian University.

135 Tony Ackroyd, Digital Media Programme Leader, University of Greenwich.

136 Judy Robertson, Heriot-Watt University.

137 Andrew Marunchak, 3D Developer, University of Hertfordshire.

138 Dave Taylor, Department of Biosurgery and Surgical Technology, Imperial College London.

139 Maria Toro-Troconis, Faculty of Medicine, Imperial College London.

140 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

141 Geoff Barker-Read, Head of Academic Quality and Standards Team, University of Leeds.

"Following the success of the Open Habitat project, large scale OpenSim inductions followed by smaller scale introductions to Second Life will become integrated into the curriculum. We now offer virtual worlds as an additional form of creative practice for our students.

I still hope to offer a closed, multi-user OpenSim based virtual world for all of my students. I'd like to shortcut the Second Life sign-up and identity crisis stuff by pre-configuring a networked instance of OpenSim with students' University user-IDs, enabling instant log-ins. This will provide a safe play-space to aid familiarisation, socialisation and collaboration, with a focus on supporting course-specific local interactions. We'll then support those who want to venture out and benefit from the vast riches of Second Life."¹⁴²

"Yes continuation with our current two projects. I have tried to engage Geography in doing a real-time disaster management simulation over a week but they seem a little reluctant to give it a bash at the moment."¹⁴³

"Yes, we have a number of ongoing projects within the school of English (interactive performance spaces), Pharmacy (within the Pharmatopia project) and Midwifery (exploring a role play space with a virtual maternity ward). The Vet School are also interested in exploring Second Life for student group work and feedback."¹⁴⁴

"We intend to use SL as one of the enabling technologies on a new research degree programme from October 2009."¹⁴⁵

"Yes, pending the results of a number of grant applications we have submitted to external bodies."¹⁴⁶

"The project has been funded by TQEF and will culminate this year. However, we are looking forward to developing the project next year."¹⁴⁷

"Lots. We intend to expand usage by other professions, other disciplines, and internationally; and are already engaged in this."¹⁴⁸

"The Business School has had a separate Second Life island in which online seminars have been held. Over the summer, these activities will be moved to the main Strathclyde island (currently in use primarily for my activities) in an effort to consolidate and collaborate."¹⁴⁹

"Yes – offering the learning experiences that have been developed to colleagues in other areas of the institution. It is evident that Second Life has moved from being an interesting oddity to a place where it is taken seriously by many educators and I feel those of us who are involved should be ensuring we disseminate our experiences and research findings in whatever ways are open to us so that we really can begin to learn from each other and explore the potential of the virtual world more fully without every individual re-inventing stuff. I'll be off in a few

142 Ian Truelove, Principal Lecturer, The Leeds School of Contemporary Art & Graphic Design, Leeds Metropolitan University.

143 David Jukes, School of Animal, Rural and Environmental Sciences, Nottingham Trent University.

144 Andy Beggan, IS Learning Team manager, University of Nottingham.

145 Dr Lucia Rapanotti, Department of Computing, The Open University.

146 Dr Maged N. Kamel Boulos, Senior Lecturer in Health Informatics, University of Plymouth.

147 Suzie Norris-Reeves, Head of The School of Design, Southampton Solent University.

148 Professor Paul Maharg, Glasgow Graduate School of Law, University of Strathclyde.

149 Dr Scott Chase, Dept. of Design, Manufacture & Engineering Management, University of Strathclyde.

minutes to the Best Practices conference being held in SL this weekend to spend time learning and sharing.”¹⁵⁰

“Yes, I fear a small explosion relatively soon. On the one hand, I often still log in and the island is empty, but then if I think about the things which are in pilot to run in September it is actually quite exciting. Some of the space we have deliberately laid aside as passive space for the hanging of student art work and hosting of digital galleries. This passes as a large portion of our digital and creative media programmes, so it’s great for the students to see their work available for longer than a two day exhibition. Then we’ve made progress on the food factory build¹⁵¹ that we’ve mentioned before which will be ready to teach next term.

We have three postgraduate students setting up their project work at the moment, in sociology, psychology and computing and two separate programmes developing their virtual homes for cohorts of off campus students. Interactive exercises for one of these is currently being finished to run later at the end of April, and then to be expanded as the main teaching and learning space and activities from September. A summary of some of the learning spaces is available on YouTube.¹⁵²

Library and Information Services are exploring how they want to present themselves in SL, how they can support the programmes running online with their ‘physical’ presence as the TeesLife island and how the tutorials and materials that they offer on induction programmes can be accessible in a different way in SL to on the web.

I’ve also got engaged in my own build on the island, setting up a museum exhibition which has helped me to develop a really useful tool that we’ll be sharing after Easter. I have searched for many months for a solution to the limitations of audio and video constrained by parcels and 10 second clips. Bucky Barkley got in touch and said one of his products might be the kind of thing I was looking for, and it was. I did some mock-ups of the changes I wanted to it, and now it’s almost perfect.

I have a HUD tool which calls audio from out of world. This has numerous possibilities and I’ll be putting out some public news about it real soon. I’ve created it as an audio guide in the museum, so that you can sit and use your camera rather than need to move into the next sound parcel or wait until a browser-based mp3 loads. This of course means that we can also supply audio and/or video direct on demand to students, so that, for example in the food factory scenarios, if a student wants to get extra help they can do without that being audible/visible to the other students. It also means that we can preload informational materials for learning activities themselves, perhaps for problem-based learning. Really quite exciting. Quite a large number of our staff are interested in using this.

Also, we’ve signed up with Daden for a hosted trial of the PREVIEW project so we can explore replicating the results St George’s have seen with their paramedic training in any of the many PBL cases in our School of Health and Social Care, so the next few months will be busy, not least building out a second island to support the extra users.”¹⁵³

“Yes, we have been developing the SHE (Simulations in Higher Education) initiative this year, which utilises a range of technologies. Virtual worlds are an important part of this. I really do feel that we have a clear view of the potential of virtual worlds now, and that we can begin to develop them effectively for learning in Higher Education.”¹⁵⁴

150 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

151 Teesside Food Factory build: <http://www.youtube.com/watch?v=HUnDraTCSac>

152 Teesside Learning Spaces: <http://www.youtube.com/watch?v=cv1CL5uUEho>

153 Kate Boardman, University of Teesside.

154 Liz Falconer, Manager, E-learning Development Unit, University of the West of England.

"Yes. Monies have been gained to support the development of an online course for the University of the Third Age."¹⁵⁵

Some respondents are keen to continue, if the right initiative or funding comes along:

"I am extremely positive and excited by the opportunities virtual worlds offer. I am continually thinking of other teaching and learning strategies to use within this area. What also excite me is the potential to improve access to a more engaging and constructive media for distance learners, busy professionals and SLs ability to internationalise curriculum. I can also see the potential for networking with local and international colleagues and international interdisciplinary learning."¹⁵⁶

"Due to lack of resources I won't be able to devote much of my time to those people who have expressed a tentative interest, but I keep an eye on ways of working with them, perhaps by pointing them into the right external direction, to colleagues who are using SL in their discipline. As for Judy's module, I am looking forward to that, for purely selfish research reasons. :-) I will definitely be part of that again, because I feel that we are still just scratching at the surface of virtual worlds' potential in some areas of learning."¹⁵⁷

"Not sure. I have my own space and will continue to use it as part of my teaching and learning."¹⁵⁸

"Further developments in my Department depend on access to SL in computers outside the Department and colleagues' further interest in using SL. I hope to extend use of SL if we increase our options for distance learning. The School of Education has plans to use it more extensively."¹⁵⁹

"Yes, I think virtual worlds offer great potential for simulations, particularly in clinical areas and it provides an opportunity for problem based learning. I envisage scenarios where students can enter the virtual pathology lab looking for information to solve a problem, and that this can be very content rich environment (providing access to authentic 'standard operating procedures', texts, health & safety as well as lab results etc...)"¹⁶⁰

"Not in the short-term, but perhaps in a few years' time."¹⁶¹

"Yes, there are a couple of projects in discussion; this largely depends on whether teaching staff who are currently interested are able to take it further."¹⁶²

"We are actively considering our long term strategy in virtual worlds generally, and will be producing a report later in the year with a detailed assessment of our requirements against the key affordances of various platforms. Interoperability is important and we may be looking at a combination of systems to best meet our needs.

155 Denise Doyle, University of Wolverhampton.

156 Evelyn McElhinney, Lecturer in post-registration nursing, Glasgow Caledonian University.

157 Nicole Cargill-Kipar, Heriot-Watt University.

158 Stuart Frankland, Second Life Administrator, Rotherham College of Arts and Technology.

159 Sheila Webber, Senior Lecturer, Department of Information Studies, University of Sheffield.

160 Dr Anne Cunningham, Faculty of Applied Sciences, University of Sunderland.

161 Aleks Krotoski, PhD candidate, University of Surrey.

162 Kriss Fearon, Web Coordinator, University of York.

As our Second Life facilities are opening up to more use we are particularly aware of the need to support users who are not enthusiasts. For long term credibility it must be possible to use a VW as a tool in the same way that we now use websites such as our VLE as a tool. We have established regular newbie drop-in sessions so that tutors wishing to use the environment with their students can direct them to these sessions to acquire basic skills, thus removing this responsibility from the tutor. We are also considering what sort of inworld tools might have generic applicability across subjects, so that a tutor can plan a session that takes advantage of the immersibility of the environment without the need to have building or scripting skills him/herself."¹⁶³

"I hope that we will do lots more with virtual worlds but at present, like many other universities, there are lots of changes that need to be made before we can use virtual worlds in any large scale."¹⁶⁴

163 Anna Peachey, Eygus Ltd / Open University.

164 Tim (Karen) Johnson, Senior Lecturer, IHS, University of Worcester.

3. Issues

The obstacles and issues that hinder academic practice within virtual worlds were generally the same as those reported in previous surveys.

3.1 Time resource

The amount of time required not only to develop a resource within a virtual world, but also to maintain it, is an ongoing issue for many academics. In addition, time for orientation of students, and getting them to the point where they are 'doing' something of quantifiable value, is mentioned on a regular basis.

"Interest is slowly growing and there is a lot of concern about the time it takes to set up and create. There is a problem with the control and admin of students within Second Life."¹⁶⁵

"You can't do three things at once (full time development, administration and liaising with people), your focus is spread too thinly."¹⁶⁶

"In an endeavor to cater to staff, we tend to give them whatever time they need as well as the virtual facilities they require although, recently, we have come to realize that things have to go beyond ideas and that ensuring use is being made out of what we create is a priority."¹⁶⁷

3.2 Equipment

The early snapshot surveys resulted in significant numbers of frustrated academics complaining about inadequate equipment. This particular complaint has declined of late, though the situation in some universities and many colleges is still that of staff having inadequate equipment to use virtual worlds such as Second Life efficiently.

In addition, anecdotal evidence points to many staff developing within virtual worlds using their own laptops, especially from home, thus circumventing equipment issues in their institution – though this doesn't solve the problem of a group of students at that institution being unable to use the virtual development.

"As someone who works in the centre, I speak to staff across all schools and disciplines, and there is clearly interest, especially in areas such as textiles and built environment, and even in languages, but a hurdle regarding skills, equipment, and even administrator rights on machines. Our library is also expressing interest, possible to use Second Life for a virtual library and information desk, but such thoughts are at an early stage."¹⁶⁸

"On top of this my computer in my office is completely locked down by UICS and I can do nothing, I am not allowed to have Skype...I cannot use Elluminate, I cannot use virtual classrooms, and so on. My research into virtual worlds (Second Life) is done at home and I had to buy a new computer for there because my work one has no access, is far too slow...and it is not allowed anyway."¹⁶⁹

165 Tony Ackroyd, Digital Media Programme Leader, University of Greenwich.

166 Andrew Marunchak, 3D Developer, University of Hertfordshire.

167 Andrew Marunchak, 3D Developer, University of Hertfordshire.

168 Nicole Cargill-Kipar, Heriot-Watt University.

169 Second Life developer, UK university (anonymity requested).

3.3 Proof of concept before funding

The statement below suggests the institution would like 'proof of concept' before funding Second Life developments; however, there is arguably more than enough evidence in the form of case studies, examples and several years of teaching and learning to indicate that such an investment is low-risk.

"Our institution has been curious and emotionally supportive, although not as financially supportive as we need them to be. I think they are eager to see what 'purpose' it serves before supporting it financially."¹⁷⁰

3.4 Accessibility aspects of Second Life

The issue of using a virtual world when you have a sight or hearing impairment has occasionally arisen before. One obvious solution with respect to users with hearing impairments is not to use voice – a policy which would be popular with many users anyway.

"Unfortunately, the nature of SL means it is only accessible to those students with appropriate hardware meaning not everybody can take advantage of the optional activities offered. There are also accessibility problems for visually impaired users and, if voice is used, for people with hearing disabilities. This means SL cannot be made a compulsory part of any course."¹⁷¹

3.5 IT support

Along with time resource, IT support (which overlaps with 3.2) in academic institutions is still the most frequently described obstacle. However, the source of the problem or hindrance differs from case to case. It is perhaps surprising, given the high prominence of Second Life use within education for several years now, that some university IT departments are still unaware of its potential, or use, in academia.

"Our IT department has been helpful but they still cannot do a lot of things until the institution puts its full weight behind it."¹⁷²

"Further discussions with our central computing department have still not led to installation of the SL browser on the managed desktop; this is a barrier to further use."¹⁷³

"Worryingly there has also been resistance from within the IT Management and Development teams who do not see any value in using Second Life for education. Indeed, the college network does not allow access to SL. However, slowly but surely attitudes are beginning to change to the extent where we are in talks with the corporation's IT technicians and management to change the network so that it finally allow access to students and staff at HE level."¹⁷⁴

"My local IT support has been somewhat non-plussed by my requests for SL on student computers and my own desktop is not really up to the job (however they did upgrade my graphics card!). I think that the staff support for SL is there, but not quite joined up yet."¹⁷⁵

170 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

171 Liz Thackray, Associate Lecturer, Open University and DPhil student, University of Sussex.

172 Michele Ryan, Department of Management Learning & Leadership, Lancaster University.

173 Sheila Webber, Senior Lecturer, Department of Information Studies, University of Sheffield.

174 Bex Ferriday, School of Education and Training, Cornwall College St Austell.

175 Dr Anne Cunningham, Faculty of Applied Sciences, University of Sunderland.

"Belligerence from the ITC sector who seem to think that general non de plume lecturers shouldn't be working in this domain and that they have all the answers."¹⁷⁶

3.6 Expectations of the PS3 generation

An interesting response came from the University of Lincoln:

"We have used OpenSim, hosted at the university. We looked at OpenSim as a possible space for students to interact with, among other things, our VLE (Blackboard). We have a small internal project which is trying to get art and design students and staff to engage more with Blackboard. We initially wondered whether a virtual world, where students created their own avatars and designed their own virtual spaces, might appeal to them. We imagined being able to browse the VLE from within the virtual world. i.e. clicking on a notice board opened up an in-world browser where the student could view the noticeboard in Bb. The same for teaching and learning materials.

In practice, it was way too clunky. Authentication got in the way and the functionality we expected in both second life and OpenSim just wasn't there. Our test case is with animation students and staff. The course leader quickly went off SL and OpenSim. The graphics don't appeal to people used to working with game engines. They're just too crude. There's also the other problem of accessibility. Running the SL client effectively on university desktops is impossible."¹⁷⁷

The response touches on several issues, such as authentication, that are mentioned periodically by other respondents. However, the comment that "graphics don't appeal to people used to working with game engines" has been made by other academics, especially those who teach courses where a high number of students are game-players (Computer Science courses, stereotypically perhaps, fall into this category). Different methods of countering this 'graphical disappointment' have been suggested, such as:

- Ensuring students have a specific goal within Second Life.
- Using the peer to peer communication tools within Second Life to best effect from an early stage.
- Encouraging students to be not just passive observers, but to develop actual content within Second Life.

176 David Jukes, School of Animal, Rural and Environmental Sciences, Nottingham Trent University.

177 Joss Winn, University of Lincoln, Centre for Educational Research and Development.

4. Getting started

4.1 Some questions to ask

The issue of 'where' an academic should develop within Second Life is regularly brought up in correspondence, on lists and in forums. This is a non-trivial issue, and sometimes it can go wrong in terms of finance, logistics or developments disappearing. For example:

"We no longer have a pilot presence in Second Life after the financial collapse of the company we 'rented' the 'land' from – and currently have no plans to restart."¹⁷⁸

Should you buy a plot of land, or your own island? Should you look for an organisation which will host your development, or 'go it alone'? Factors to be considered include:

- (The bottom line) How much funding have you got for this?
- What level of ownership, authorisation and controls do you want over your development and the area around it?
- How much time do you have for the terraforming of your area, and the development of your installation? And also how much time do you have to learn how to do these things?
- Are you bothered about who your (virtual) neighbours are?
- Is your academic institution okay with purchases of 'virtual land'? (Most, but not all, UK HE institutions can do this; the situation with UK FE colleges is less clear.)
- What is your long-term plan? Do you need to upgrade the development over years, or will you delete it after a fixed period, or will you abandon it?
- How confident are you of all your figures for the previous questions? Have you estimated e.g. time needed/available accurately?

In addition to decisions about the land, there are (related) decisions about the development. During the two years of the snapshot reports, a supporting industry of virtual world developers (predominantly in Second Life) has rapidly emerged. Some of these developers work in universities; others are businesses with university connections, or in several cases individuals previously working in academia who are now self-employed.

Finding developers is not that difficult; one starting point is to wander around UK academic developments in Second Life, see what you like (that matches your considered needs), and find out who did it. Joining Twitter and becoming immersed in the academic SL sector also helps; a high proportion¹⁷⁹ of academic Second Life developers appear to be regular users of, and contributors to, Twitter.

4.2 The JISC RSCs, and Education island

Two options for 'cheap' land are the JISC RSCs¹⁸⁰ (who also offer other kinds of support) and the UK Education Island, which is undergoing a change of ownership.

The first of these, and other related services provided by the RSCs, are summarised by Shri Footring¹⁸¹:

"The RSCs' mission is to stimulate and support innovation in learning. The network of 13 JISC Regional Support Centres across the UK operates as a national service to advise the learning

¹⁷⁸ Martin Harmer, York College.

¹⁷⁹ Sunderland Virtual Worlds conference (speakers who 'tweet'): <http://tinyurl.com/cleknj>

¹⁸⁰ JISC Regional Support Centres: http://www.jisc.ac.uk/whatwedo/services/as_rsc/rsc_home.aspx

¹⁸¹ Shri Footring: <http://twitter.com/shrifooting>

providers of designated sectors to realise their ambitions in deployment of technology to achieve their organisational mission. All RSCs deliver the core remit¹⁸² in a way that is appropriate to regional needs.

Support for learning providers exploring the use of virtual worlds is one of a spectrum of services offered. A key way in which we can provide support is by facilitating conversations among researchers and practitioners looking for ideas to support innovation in learning and teaching. We do this in a number of ways. For example, we are able to distribute copies of publications such as the JISC funded Open Habitat magazine¹⁸³ at our events and conferences. This academic year has also seen a number of JISC RSC events, conferences and forum meetings specifically focussed on virtual worlds. For example:

- The Reality of Virtual Worlds Conference¹⁸⁴ in the Eastern Region.
- The Learning in Virtual Worlds event¹⁸⁵ in Northern Region.
- Virtual Worlds 2008¹⁸⁶ in Scotland.
- A series of forum meetings¹⁸⁷ in the West Midlands.

These events provide an excellent way for leading researchers and pioneers to reach a wide audience as well as providing an opportunity for all to share experiences, ideas and examples of good practice. RSCs have worked in collaboration with the Higher Education Academy, Eduserv, Universities and other organisations.

Individual RSCs have taken different approaches, with some purchasing islands for use with their learning providers, for example RSC Northern and RSC West Midlands. In the latter of this, and facilitated by Jane Edwards¹⁸⁸ at the JISC RSC West Midlands, learning providers will be able to experiment, develop skills, and test with learners on a short term basis. Individual RSC staff have also undertaken various virtual world related activities; for example Kevin Brace of RSC West Midlands has produced a Second Life Webquest.¹⁸⁹

At national level, RSCs are exploring the potential of virtual worlds for internal staff development, collaboration and support activities. We have recently purchased an RSC UK island in Second Life for this.”

Dr Geoff Barker-Read from Leeds University gave an update on the Education UK Second Life island¹⁹⁰ in early May. This island provided free development space to UK academics, an offer that was taken up by a large number of individuals and groups from HE and FE. Geoff explains the future of this particular facility:

“You may recall that Education UK ran a land grants programme in 2007 which gave educational institutions free access to a small plot of land so they could develop applications. The outfit was run by Chris Swaine and Susan Easton, who met the full cost of the land

182 JISC RSC core remit: http://www.jisc.ac.uk/whatwedo/services/as_rsc.aspx

183 Open Habitat (Learning in virtual worlds): <http://magazine.openhabitat.org>

184 The Reality of Virtual Worlds conference: http://info.rsc-eastern.ac.uk/events/event_details.asp?eid=621

185 Learning in Virtual Worlds event: http://info.rsc-northern.ac.uk/events/event_details.asp?eid=590

186 Virtual Worlds 2008 event: <http://www.rsc-ne-scotland.ac.uk/archive.php#vw08>

187 Forum meetings in the West Midlands: http://info.rsc-wm.ac.uk/events/event_details.asp?eid=451

188 Contact details for JISC RSC West Midlands: <http://www.rsc-westmidlands.ac.uk/default.asp?/Contact%20Us>

189 Second Life webquest: <http://wiki.rscwmsystems.org.uk/index.php/Webquests>

190 Education UK Second Life island: <http://slurl.com/secondlife/Education%20UK/189/143/22>

themselves. Late in 2007, if I remember rightly, Education UK2 island appeared adjacent to the original island and the land grants programme was extended. NIACE established a significant presence on this second sim, as did a number of other HE institutions including Leeds University (we rented a small parcel).

I was in the market for a private island sim and approached Chris and Susan with the offer to take over Education UK region complete with inventory. They had no further use for the region and it saved me having to pay an island set-up fee to Linden Labs and investing the time/expense to develop the infrastructure. We're waiting for the deal to go through now.

I don't anticipate making many changes; I'll probably clear out some of the content and speak to the owners of the viable installations - such as Plymouth's Sexual Health display - to see if they want to keep them intact for the time being until we need the land. But for the most part the island will stay as it is now and members of the Education UK group are welcome to continue to visit and use the sandbox. Once I get sorted out I'll send a message via the group to that effect."¹⁹¹

191 Dr. Geoff R Barker-Read, Head of Academic Quality and Standards, University of Leeds.