

Pedagogical Projects Reports

Coventry University (Joff Chafer)

Introduction

I have been looking at using the Theatron spaces in Second Life in a number of ways and with varying degrees of success and apathy from my students. I first started by showing my first year students the Epidaurus amphitheatre by means of a projector on a screen and doing a fly through with my avatar. This was in the students first term and in support of their theatre history studies. For the most part the students saw this as an academic exercise rather than engaging with the notion that they themselves could go and explore, it was only later when I managed to engage some of the students on an individual basis and set up accounts with them in a computer lab that they started to see the potential, but even then they seemed to feel that it wasn't really their cup of tea.

One of the reasons for this ambivalence to the work, I feel, is the type of students that I am trying to engage. My students are primarily interested in studying theatre from a practical performance point of view and are generally more outgoing types with a busy social calendar. As such they are not nearly so computer savvy, or interested, as some of the other students that I come across in the university who have naturally taken to Second Life. They have not spent the last few years playing computer games and in particular MMORPGs like Runescape or World of Warcraft as well as being too old to have encountered Habo Hotel and Club Penguin, however they are the first year to habitually use Facebook. They may be digitally natives but they are not virtual natives. Given the steep learning curve for Second Life I think it will take a few more years (but probably within the next 5) before the virtual natives arrive with their avatars and can engage immediately with, and expect to find, virtual learning tools and environments such as the Theatron Islands in Second Life.

My second and potentially most useful way of engaging students with the Theatron spaces as an educational tool was when I gave a performance and talk with another online actor in the Theatron Globe theatre. This was for a group of High School students at The Kincaid School in Houston and was delivered remotely from Coventry, by myself, and Michigan, by MadameThespian Underhill, via a classroom projector. The technician at the school used his avatar to be in the space but I used a system whereby his avatar could sit on a seat and I could control his camera via a camera HUD, made by Prospero Frobozz, so that it was in sync with mine. We performed a scene from Twelfth Night, with set, costume, sound effects and animations and then did a walk around of the space and gave a slideshow presentation of other Second Life performances and spaces using a slideshow presenter made by Angrybeth Shortbread.

This worked for a number of reasons, though a lot of it had to do with the novelty aspect of the whole event. Firstly this was part of a course looking at Shakespeare, traditionally quite a dry subject area, so having the live visual element was a plus, then the novelty of hearing and being able to talk to real life actors in different parts of world, plus the fact that none of them had encountered Second Life before. The session lasted for about 40 minutes with some very lively discussion that could have gone on longer. The only real problem that we encountered with the whole event was the live sound and getting sound echoes from the classroom, this is an entirely local technical problem that was remedied at the time by the muting of the microphone in the classroom but could have been avoided by the rearranging the positioning of the microphone in relation to the speakers,

though given that local conditions are always going to be different a lot of it comes down to relying on the local technician.

A potential problem that we quite easily overcame was that the age group of the students was under 18 and consequently the students could not have access to the Theatron spaces and there could possibly be inappropriate language etc from other avatars if the performance/talk took place in an open space. Because we were using the Theatron space it was relatively easy to have the Island closed down so that only the three avatars involved could be present and by using slides we were able to give a bigger picture of the potential of Second Life without the need to teleport live. It would also have been possible to show video and machinima clips had we so wished. The response was very enthusiastic from the staff and students and I am now the proud owner of a Kincaid Falcons coffee mug and am sure this is an area that could be very fruitful.



Captain, Twelfth Night



Camera chair



Whiteboard for slideshow

Some comments

Joff, what a great day for my students and for me. Thank you for all your efforts! Kate Lambert (Teacher)

I never thought I would see Shakespeare via avatar – thanks for giving us this new experience! – student

Thanks a lot! It was so interesting – student

This was an eye-opening experience both in Shakespeare and Avatar. Thanks so much. –student

This was so cool! Thank you for sharing this awesome space with us! – student

Thank you so much! Second Life is so interesting and new! – student

Thank you so much! I learned a lot! – student

Thank you so much for the time and effort you put into showing us The Globe in Second Life! It was so very interesting!

Thirdly when I first started looking at the Theatron spaces I was particularly interested in exploring the possibilities of chorus work, in particular in relation to Greek chorus. I spent several sessions working with a small group of Dance and Theatre students looking at animations and synchronised choreography, we eventually came up with a short movement piece 'Avatar Dancing', recorded as a machinima by Mark Childs. (<http://www.youtube.com/watch?v=v4z-LCFt0M0>)

For this we used a mixture of found and bespoke animations, some looped others simple gestures that could be turned on and off. The animations that were made for the piece were made in a free program, Qavimator. We also found a shop in Second Life that had a range of free super hero outfits which we wore so that the avatars had some dress similarity, in particular we all had flexi-prim cloaks which emphasized the movements. We were all together in one computer lab with a separate avatar acting as camera projected onto the front screen. We had the different animations loaded onto our screens and chose our own viewing angle on our screen. We originally were going to perform in the Epidaurus space but when we tried to rezz it there were some problems (parts of the stage would not move into the correct position leaving it impossible to use the orchestra space) so we used a Roman Theatre instead. This had the advantage of having a checked floor pattern making it very easy to align ourselves and be equally spaced. We tried several versions and cued ourselves verbally and visually. This was only really possible because we were all in the same physical space and could see the same screen for reference and hear cues live without having to use mics. One of the biggest problems with choreography and synchronicity in Second Life is lag, latency, and the fact that no two computers will ever see or hear exactly the same (with signals being sent to and from San Francisco and not being able to travel faster than the speed of light.) The version that we ended up with had a mixture of synchronised animations and animations in cannon coupled with some gestures that could be played on top randomly.

One of the reasons that this worked is partly because the group was quite small (it varied between 3 and 6) the students had time to see what each other were doing and share experiences and help each other, and that the students had time to explore and play, one of the things that they most enjoyed was finding the costumes. Also on one of our first visits we met some other avatars in the Theatron Globe and swapped animations with them, the main flying animation in the final piece was one of these. Because the students all had a particular interest in dance they were intrigued to see how the choreography could work and got frustrated when it didn't.

Some thoughts on the Theatron3 project as a whole, what works and some suggestions.

I think having the spaces in Second Life is an excellent idea both as educational spaces but also as possible performance spaces (there is a growing and regular theatre/performance community in Second Life). The HUDs and packs are an excellent idea and a well thought through expandable tool for self learning and investigation. The audience HUD is a good idea, I particularly like the apple throwing animation, as it is an area that is often overlooked at present in Second Life; people in Second Life do like to react but not everyone wants to type all the time. I do think though that there needs to be some way of customising the HUD, having personal variations either by being able to add one's own animations or sound files, or adapting the ones that are there. Having the ability to

book the space and not be interrupted I feel is very important but so far I have found the system quite difficult to use and more often than not asked Mark to book space for me.

I've not had a chance to look properly at the Directors tool but feel this could be very useful particular for stage managing performance rather than directing as such. Have one person controlling the timer live and give cues out as a rl DSM would do running the book, cueing actors and technicians.

For giving remote talks/performances/guided tours etc I think a camera system could be invaluable, Angrybeth Shortbread , Annabeth Robinson who teaches media at Leeds, has been working on some very interesting systems as has Prospero Frobozz, Rob Knopp in Nashville. I would recommend commissioning them to create or adapt a system for Theatron. Similarly it would be beneficial to have a slide viewer that anyone can upload to (but maybe gets automatically wiped at the end of a session).

One way to increase the use and awareness of the Theatron islands would be to host performances, make the space available to companies and performers already in Second Life, and/or invite people to talk in and about the spaces. There is a music academy space that has regular weekly(I think) hosted interviews, that have a regular in world audience but then the recordings are broadcast via their website.

If it is decided to host performances what would be most attractive to potential performers would be the possibility of a space that straddles 2 sims, having the performers on one sim with the stage running up to the edge and the audience on the other sim. This increases the potential size of the audience and reduces lag for the performers.

I think the Theatron 3 builds are an excellent potential resource both for the Second Life community and for theatre students and academics but feel it may take a few years before the potential users/audience catch up with the technology.

Middlesbrough College (Gordon Duffy-McGhie) The Fools' Zanni

Objective 1

To enable learners to identify and explain the dynamic nature of performance and its content.

Several lectures, in preparation for students' discussion and analysis of the unique performance context of Second Life, have been designed and delivered. The lectures have ranged from identifying key historical developments in performance spaces, to exploring major shifts in the relationship between audience and performer.

Throughout the duration of the project our students have engaged in a number of live performance projects including;

- The Pie and the Tart - a medieval pageant play
- The Blessed Apple Tree – a medieval pageant play

- Pantalone Goes A-Wooing – a one-act play based on the Drottningholm painting (c.1580)
- Home from the Wars – early sketch in the style of Angelo Beolco
- Fool’s Gold – early one-act play with *fin de siècle* influence

Most of the above pieces are available in Barry Grantham’s book ‘Commedia Plays’ (2006) published by Nick Hern Books, London

The early focus of these early performances was on identifying the key performance elements of commedia plays. These included:

- Costume
- Make-Up
- Mask
- Setting
- Audience Profile
- Time of performance
- Location of performance
- Audience configuration
- Lighting (where applicable)
- Sound and Music

The inter-relationship (and inter-dependence) of each of the identified elements formed the basis of classroom study. Students, working in small groups, began to explore and analyse a specific element with the aim of replicating the element’s contribution to the performance within Second Life. Each aspect identified was translated into students’ skills action plan within Second Life.

After this process it became clear that the following techniques/skills needed to be mastered as part of our SL Orientation process:

- Basic Avatar movements
- Teleporting to and from locations
- Communication between Avatars
- Changing the Avatar’s appearance
- Changing the environment settings
- Joining a ‘group’
- Understanding the SL currency

All of the above points formed our action plan for further training sessions with expert staff from University of Teesside.

Objective 2

To enable learners to undertake, evaluate and implement performance research from a range of sources.

Several learners are currently managing research activities into this area as part of a level three 20 credit module: Major Research Project. The topic and scope of these projects are currently under negotiation but cover aspects of ‘performer identity’; ‘gender portrayal’ and ‘performer globalization’.

Alongside the performances staged (as stated above under **Objective 1**) small groups of students conducted independent research into the following topics:

Key characters

Key features of each mask

Key movement qualities

Key figures in Commedia's development

Patronage

Regional variations

Grammelot – a 'nonsense' language

The students' research was presented as PowerPoint presentations; an example can be found by following this link: <http://thefoolszanni.wikispaces.com/Student+Research>

Objective 3

To enable learners to identify, describe and analyse the processes by which performance is created. Much of the work towards meeting this outcome has been included in the activities designed for outcome 1.

Once objectives 1 and 2 had been carried out, students were set the task of 'transferring' this *new knowledge* into performance opportunities within SL. To enable students to achieve this we scheduled weekly 'lessons' at University of Teesside's LRC Training Rooms. The main obstacle students encountered was a conceptual one. It became increasingly difficult for them to express performance intentions within SL in the same language as that used in the *real* world. Early frustrations were inevitable as students tried to 'replicate' real world processes within the SL context.

The guiding principles of each attempted performance were so different that many weeks were spent answering the question: '*Why would we want to perform in SL anyway?*' In order to answer this question the students began to explore SL and its influences on education, entertainment, social networking, gaming and many other contemporary issues. Only when the group had redefined the purpose of a performance within SL did they feel confident enough to proceed further.

Working again in small groups the students came up with the following principles, in order to focus their performance intentions;

- Clearly identify one specific aspect of commedia to focus on
- Use a central avatar figure as the prime audience focus – where possible recreate accurate costume for this figure
- Avoid too much complicated dialogue
- Keep the movements simple
- The final point on the list above, proved to be the most difficult for students to master and provided the focus for further training and experiment. See objective 4 below.

Objective 4

To enable learners to identify and develop the skills required to carry out academic enquiry into a range of areas pertinent to performance and events production.

Several training sessions have taken place with the University of Teesside's Institute of Digital Innovation (IDI). The IDI team has helped instruct and guide participants through the orientation activities within SL and with the design and modification of the specific avatar characters to be used in our performance activities. The Italian actor Antonio Venturino will attend a number of training and development sessions with the team, who will explore the use of Motion Capture data within the SL environment. Discussions are ongoing as to how best to incorporate these data into SL 'performance' activities.

One of our prime motivations for joining the *Theatron* project was to explore the ways SL could help us communicate the Commedia characters specific movements. As students attempted to recreate their own performances within SL (as described above) they found it increasingly difficult to obtain satisfactory results because;

- Their own skill level was insufficient
- The basic avatar movements were inappropriate
- Their anatomical and physiological understanding of Commedia movements were insufficient

In order to address this final point we hired the Italian actor, and Commedia expert, Antonio Venturino. Our plan was to invite Antonio the University of Teesside's Institute of Digital Innovation Motion Capture studios and 'capture' a series of characters' movements. We would then try and find ways of interpreting and translating that raw data into file types supported by SL (i.e. .bvh file extension)

Further information (images, footage etc...) can be found in the next section

Objective 5

To enable learners to analyse and evaluate a range of data and research evidence

Much of the work towards meeting this outcome has been included in the activities designed for outcome 4.

As a result of the Motion Capture training day, we had a large number of data to study and convert into information for animators/3D modelers to use in order to 'import' a new and specific set of movements, based on commedia movements, for our avatars. We immediately found it difficult to work with the original raw data produced by the MoCap studio – which produced files with the .trc extension.

Small groups of students worked for many weeks with the freeware programme 'QAvimator' in order to master the skills of the 3D modeler. This proved more difficult than planned as, within our department we had no staff with existing skills in this area, and also, commercial expertise proved enormously expensive to procure.

Students produced a number of pod casts and on-line videos of this process, some of which can be found here: <http://thefoolszanni.wikispaces.com/Student+Research>

Objective 6

To enable learners to question contemporary perceptions and traditional orthodoxies within performance and events production using balanced, logical and supported argument.

Much of the work planned for this objective will emerge through our ongoing work on the other objectives. It is primarily evaluative in nature and will include a number of 'end destination' products and reflections based on the whole range of prior activities.

The majority of work on this objective was carried out by third year BA (Hons) Performance & Events Production students.

One student, Angela Breckon, chose the project as the topic for her final dissertation

Another group of students made a series of videos for You Tube, documenting various aspects of the project for use by others interested in different aspects of the project.

The videos can be viewed here:

Episode 1: <http://www.youtube.com/watch?v=9B5cICTiR1E>

Episode 2: <http://www.youtube.com/watch?v=crOAKcV87Ds>

Episode 3: <http://www.youtube.com/watch?v=gE-iqnKEkt8>

Episode 4: <http://www.youtube.com/watch?v=Z9xnDmCXzDU>

Episode 5: <http://www.youtube.com/watch?v=18LVNKrq790>

Episode 6: in production

A copy of Gordon Duffy-McGhie's presentation to the Learning in Virtual Worlds Conference at University of Sunderland, outlining the project can be found at:

<http://thefoolszanni.wikispaces.com/%27Learning+in+Virtual+Worlds%27+Conference>

Northumbria University (Chris Wiggington) Virtual Poesies

Project Background

The project was designed to examine the potential of using virtual worlds – in this case Second Life (SL) – as a teaching aid. The backdrop to the project was the theatre spaces that have been developed by Theatron. These are fully 'working' virtual models of historically significant theatres ranging from the ancient to the modern. There are 15 in total but in this instance the project focused on three. There were three interdependent teaching sessions and a technical session as well as an evaluation exercise conceived to increase students understanding of both the cultural and theoretical aspects of performance in a virtual world and to extend their capabilities by exploring the possibilities of SL. The sessions explored aspects of the historic and social theories of identity construction through the design and implementation of avatars as well as looking at the relationship of environment to the ways in which the perception and conception of self takes place. The teaching sessions were focused on real learning outcomes and were not simply an opportunity to engage the virtual world. The theoretical sessions informed the development of new creative work which utilised the unique qualities of SL as a starting point. These included choreographies and performances.

It was intended that these projects rather than mimicking the sort of performances that took place within the historical theatre spaces would emerge from the qualities of Theatron's virtual theatre environments as they actually are. Participants in the project were asked to assist in providing an insight into how virtual environments might be put to use in the development of innovative teaching

practices. Evaluation, therefore, was also intended to consider the potential of Virtual Worlds in general as well as Theatron's spaces in particular for the delivery of the teaching of creative arts across the School

Reflections on the experience of the project

After an initial School wide call for expressions of interest failed to produce a significant response in recruiting to the project it was decided to incentivise participation by using part of the project funding to provide vouchers to students. This produced a stable core of c. 15 student participants who came from a variety of programmes across the School and did not all have a creative background.

The limited recruitment to the project meant that the scope for exploring a wide variety of potential creative engagements was restricted. It had been intended to look at models of communicative interaction beyond performance such as role plays and poetry but this proved to be of limited interest to the participants.

The project was also hampered by a reticence from staff to commit to providing and producing the materials necessary to support the project. This was largely identified as relating to a lack of experience with the SL authoring processes and a lack of available training. All staff participants had a general interest in the use of SL but no particularly sophisticated IT related skills or experience. The lack of a properly targeted and developed training package would clearly be a hindrance in the wider application of SL as a pedagogic tool. A resistance to new technologies in general also characterises some staff attitudes which again could further hinder the full implementation of a pedagogical approach based on the use of virtual environments.

IT and institutional barriers

Initial trials with SL on standing IT resources proved unsuccessful. The standard classroom IT package furnished by the University did not have the capacity to provide a smooth interface with SL world. This unsatisfactory experience was characterised by control lag, slow avatar response and long delays in rendering background. As the point of the Northumbria project was to examine the capabilities of the SL world as a place for the investigation of learning experiences around creative movement this represented a considerable barrier.

After negotiation and the investment of the bulk of the supporting budget new hardware platforms were configured by central IT services that supported a smooth and accelerated interface with the SL world which allowed the exploration the original concepts of the project in a more appropriate manner.

One other issue with the Theatron provision itself involved the removal of the HUDs from the launch space which prevented the production of a integrated supportive text platform which had been intended to furnish students with theoretical material around which to build their projects as they negotiated the Theatron spaces. This was raised with the Project Manager and the response was positive but the HUD was not restored (it was undergoing maintenance) and this limited the capacity to deliver in world information.

Second Life as a medium

SL itself did not produce any particular problems for student participants once they had grasped a basic understanding of the control interface. There were issues relating to the original capability of the IT platforms on which the project was to be delivered but these were resolved through a technology upgrade.

Students reported that the deployment of different camera positions often led to disorientation and a difficulty in relating in world performance to the project plans that they had produced and a working through of these to an integrated final version. This was largely put down to unfamiliarity with operating an avatar and the fact that the mouse as an input device did not allow the particular finesse that they had hoped to achieve.

Stages

- Project design and production of teaching materials
- Recruitment of student participants
- Execution of initial teaching sessions
- Ongoing evaluation

The achievements of the project

Students did get as far as producing project proposals staging rehearsals but a shifting timeline with regard to the delivery of teaching sessions (interrupted by staff illness and other commitments) meant that these were not fully resolved.

A paper on the project was delivered by Dr Chris Wigginton and Mark Little at the English Subject Centre's Assessment conference CETL (Assessment for Learning) in December.

The development of a number of potential pilot schemes using new technologies including virtual worlds.

A clear sense that SL teaching of the type and content under consideration by the project would be improved by inclusion within the curriculum. In sitting outside, students (understandably) lacked some motivation.

Original Aims and Objectives

The original aims of the project were to evaluate the potential of SL and the Theatron theatre simulations as a space for the teaching and learning of writing, performance and media. This would be achieved through the trialling of a range of teaching, learning and assessment methods to allow consideration of the value of virtual worlds for teaching across a) theory and practice and b) critical and creative work. Ultimately it was hoped that this pilot of teaching within SL maybe extended within the curriculum of the School of Arts and Social Sciences at Northumbria and more widely across the Sector.

The aim of evaluating the usefulness of SL as a teaching tool did produce some conclusions relating to:

- The provision of appropriate staff and student training in the use of SL or other virtual spaces.
- The provision of an adequate IT platform on which to stage projects of this kind
- Targeting of teaching at appropriate module or programme cohorts to ensure engagement with the process

In the final analysis budgetary restraints which limited the scope of the project. It was not possible to free staff from other commitments as most of the budget was spent on upgrading IT facilities. This meant that an appropriate amount of staff time was not available as had been hoped to support the development of adequate teaching materials, undertake appropriate training etc. The constraints on time in terms of student engagement similarly meant that they were unable to commit sufficiently to properly resolve their projects or to spend the time necessary using SL to gain familiarity with the operation of the interface and to explore the creative opportunities it provides. In retrospect, with more established resources embedding the project and its approach in a module would probably be more productive as credit bearing activity would be more attractive to students.

University of Wolverhampton (Paul Brownbill) Seeing Space

The Theatron *Seeing Space* project has been difficult, worrying and stressful for many reasons.

Project rationale

It is important to recognise that in terms of the process of engagement with Second Life and with the Theatron project my initial decision to take part was considered, thought-through and genuine. My initial enthusiasm for the project was driven by the excitement of entering a new medium and the passion I have for the teaching of scenography. It also allowed me to focus on the historical perspective of scenography and the development of performance environments in a way that previously had been restricted to lectures and PowerPoint presentations. It is worth noting that many of the images presented in the PowerPoint were taken from good old-fashioned 35mm photographic slides. The opportunity to engage with a digital medium that effectively immersed one in the environment that previously I had been only able to demonstrate, to project, with poor images, seemed to be one not to miss. However, was this project too much at the cutting edge for both myself and to those students who would be involved? I did question this very carefully and approached the entry into this project from several perspectives in order to ensure that I was embarking upon a project that was interesting and developmental from my own teaching perspective and one that was viable and promised tangible outcomes from the student point of view.

I reasoned thus:

Given the recent explosion in digital technologies, online communication tools and social media it follows that teaching strategies and methodologies should make use of these emerging channels of communication. Social digital media has become a very real and active part of our contemporary culture; courtesy of these new tools and the immediacy and interconnectedness of the communities they facilitate, our world is now structured by a new architecture of participation. Institutions and individuals alike have a Facebook presence, part of our teaching would be lost if we were not able to show clips from UTube, iPod and other mobile devices are used not only for Podcasting lectures but also for tutorial and assignment delivery. If the digital world was making such an impact in the communication with students, and Second Life provided a state-of-the-computer way of doing so, why opt out of it?

Why wouldn't I want to engage with it or even better from a teaching perspective, engage people via it? If, as lecturers in higher education, we see ourselves as key players in the contemporary cultural sector and if social digital media is a significant and constant part of our student's and colleague's lives, if it is increasingly becoming the way they talk, think argue, research and share ideas, then why wouldn't we want to be part of that?

I reasoned that Second Life offered me the chance to reach more people, the chance to bring, in a teaching and learning context, a transformative power to students who might not have had the opportunity to engage in a dynamic scenographic process otherwise. As lecturers with limited time, timetable constraints and other commitments it has to be recognised that we have groups of students from whom we are unavoidably absent for a lot of the time. Using Second Life technology seemed to provide a social medium that had the potential to enable us to be visible more frequently – to have a greater presence. It offered a way of communicating and sharing that fits with our way of working and offers a range of opportunities to better engage with our students, more frequently and more creatively.

This therefore laid the foundation for what I perceived at the time to be a great way forward in the teaching of scenography and more.

Initial experiences

My enthusiasm, however, was somewhat lessened as I went in-world. I found the virtual world difficult to engage with and, in a way that is probably inconceivable to those immersed in the medium, very threatening. The more times I went in, the worse I felt. I am not a confident typist, and so found communication difficult. I felt threatened by the presence of others in-world and frankly never really got beyond the stage of being a newby. Of course, this made the delivery of the sessions in the classroom difficult, especially as the experience I was having was shared by those students on the project – more of which later.

I acknowledge that barriers such as this have to be climbed and that such problems will be encountered when embarking on new projects. The exposure one has in-world is frightening but this level of openness requires an adjustment in attitude to exposure; to sharing. For an engagement with Second Life as a teaching medium to be meaningful and valuable we need to dare to share. I understood and expected to encounter the negatives as well as the positives of working through this medium.

Like any experiment, some of what we set out to do in this new area will fail, or may not succeed as well as hoped. The cost of failure in the digital media world in a social context is minimal, if a little embarrassing at times, however the cost of failure in the educational context is high. The failure of the project means the failure to teach, and therefore the failure to deliver learning. This amounts to the potential to waste an education for students. Students are now, sadly but genuinely, grade-driven and they are more than conscious of the fact that they are now paying for their education. They frequently exercise their right to complain, as consumers of education. Therefore, anything that gets in the way of them achieving that much coveted 1st Class Honours Degree is open to close scrutiny in terms of value for money. "We're paying for this" is often put to us by students who feel they have a grievance. Their right to learn should not be compromised. The Second Life project became a huge risk.

You only know where you are by making a mess. Apply this theory to your exploration of social media: play with it, make a mess, and learn.

So said *Mediasnakers* at a recent Shift Happens conference. However, this theory cannot be applied in the classroom situation; at least it cannot be applied to *my* classroom situation. There is a problem when it is the content of the experiment that is the subject of the learning and not the medium through which it is delivered. IT students, digital media students and so forth can benefit from engaging with Second Life and making mistakes. It could be clearly argued that in that way they learn about their own subject. By the same token, scenography students can learn by making set models that do not reflect a viable performance environment, by hanging lanterns that point in the wrong direction and so on. However, these scenography students, for whom their lecture time is limited and therefore precious, cannot afford to lose the opportunity to learn about their subject by experimental learning in how to deal with the medium through which it is delivered.

Here, I have to acknowledge that the placing of this project in a Level 1, fifteen -credit module, was badly judged: The Scenography 1 module aims to provide students with a basic vocabulary in theatre design methodology and uses an historical context in which to do that. The work in the virtual world is perhaps, in retrospect better suited to a higher level course, rather than being situated in the first semester of the student's first year at university and also better suited to those students who are dedicated to theatre design and not sampling it as one single module over a whole degree programme. The scope for the work in-world is far greater than the vehicle in which it was placed.

Implementation barriers: timetabling

There have been problems with timetabling. I had to deliver the underpinning knowledge that is required and set out in the Module Specification Template for the Scenography module. This was a requirement for the entire cohort of scenography students and so an amount of up-front teaching to the whole group was needed. Funding for the Theatron project bought me time to plan and prepare but not for my teaching to be substituted on this module. This meant that discrete delivery of in-world teaching was not possible until teaching week five. The front-loading of the subject matter meant that as the Second Life group encountered problems with their engagement with the subject matter, they could see that their peers were getting a different, and what they perceived to be normal, delivery where the learning of the subject matter was being clearly evidenced. Through out-of-session conversations the enthusiasm for the digital approach to teaching waned and as is often

the case when the student voice is aired the negatives became the dominant feature and as a result more and more students requested to return to the “proper” class.

Implementation barriers: student reactions

Students were clearly very intimidated and scared of being in-world. There is, I am sure, an erroneous assumption that all young people will embrace technology in any way shape or form. Not only are they assumed to be prepared to embrace it but also expect to be immersed in popular technology at any available opportunity. This is not the case. Albeit a generalization, I would say that young people are either reluctant to go into areas of technology that take them beyond their comfort zone – so, iPods are cool, Second Life is edgy – or that they do not want education to impinge on their technological social life.

So, here we have the impossible chemistry of a tutor who has little confidence in his own ability and interface with Second Life, working with a group of students who feel the same way; both parties enthused by the subject area but disheartened by the teaching and learning medium.

Implementation barriers: discipline-based

In the interim report I mentioned the following:

In the preparation period before the teaching started I was involved in a real-world scenography project designing for a site-specific performance. This involved hands-on working, first designing in 2d and then rendered these designs as 3d models to then be made into a real performance environment for a professional theatre company. Designing in the real world made me question the validity of exploring design in the virtual world; it was a period of reflection and reaffirmation for me and made me realize that actually, getting my hands dirty, being covered in paint and glue and not only physically constructing performance environments, but transforming real empty spaces into other worlds that whilst being unreal were still tangible, not virtual, was the world I was rally interested in and in fact have some skills and ability in, whereas the virtual world, and more so the world of technology is something I have limited ability in and increasingly less affiliation to. This real world methodology is the one that previously in the delivery of the principals and methodologies of scenography I had espoused and enthused over and as the one that will provide the comparative working model to the Second Life mode of study, the one that I felt not only more comfortable with but the one that I believed in as the tangible necessity for all designers. You can't get your hands virtually dirty. I realised that I had, in fact, lost some of the engagement with Second Life that I started with and increasingly found that I was intimidated, and personally challenged the more I went in-world. Real things and real people are for me and for an educator that deals with real emotions, real people and real people's responses that are the very stuff of theatre life (and again I recognize it is in itself a false reality – isn't that interesting?) the trouble with my own ability to navigate and negotiate in-world and to articulate to my students this method of study is bound to have problems and a negative effect.

Barriers to implementation: institutional

Institutionally, the implementation of the project has been difficult for many reasons. There was initial scepticism and concern from the School and the department. It is true that as a department we had for the preceding academic year a poor National Student Survey result, the reasons for which are not in the scope of this report except to say that the NSS is being held up by the institution as the greatest measure of student satisfaction and therefore the measure of the department's

efficiency and efficacy. Poor results meant that remedial measures had to be taken and so the teaching and associated peripheral student engagement for the academic year in which the project took place had to be sound. There was grave concern about putting anything that was other than safe and trouble-free in front of students. Therefore as students became disenfranchised with the Theatron project there was little alternative other than to allow them to drift off the project and redress the balance in the normal teaching sessions.

Barriers to implementation: technological

Access to computers was a further barrier. We have at Wolverhampton a large and extremely well equipped IT building, newly built and at the cutting edge – all well and good if one is an IT lecturer or student. Outside of that subject-specific cohort, access to this accommodation and its computers is nigh-on impossible. Frustrating, as there is clear evidence that rooms remain unused and machines untouched, but access is denied. We were resigned to using the drama department's three, tired old Macs. Again, the student voice prevailed and they rightly complained of the lack of equipment to support the project. In the planning phase of this project I had negotiated with the IT department for appropriate rooming and access to equipment to enable this project to be delivered on occasion, not on a weekly basis, in an environment that was conducive to the activity being undertaken and I had the assurance that this would be the case. It was not. Access was denied on the basis that an increase in the demands from IT students and staff had led to a re-rooming exercise that has to give priority to those for whom the accommodation was designed.

Barriers to implementation: ethical

A further institutional stumbling block came in the initial planning phase: As this project fell under the umbrella of research, I had to submit the project proposal to the University Ethics Committee,. This proved to be problematic, yet another barrier to climb. The committee was worried that any student entering Second Life was then free to engage with any of the associated virtual social worlds that were available. Their understanding of Second Life was that the freedom students would have once in-world would allow them to not only detract from their studies. How was I to monitor them whilst in-world and prevent them from engaging with activities that may be considered ethically undesirable? Essentially they saw the project as offering the opportunity for students to create an avatar that would allow them to engage in immoral or socially unacceptable activities under the auspices of university research activity. Recent press coverage regarding virtual sexual promiscuity no doubt fuelled this debate. Assurances that whilst engaged in the project students were under strict control and that there was nothing stopping students entering Second Life of their own accord, eventually pacified the committee and the project was passed.

Conclusions

The Theatron project was halted before its due completion date. I deem it a failure on my behalf not to have fully ensured that the necessary planning and preparation had been implemented and that the infrastructure through institutional resources was guaranteed but also in my personal preparation and ability to cope with the medium of Second Life. I feel personally responsible for the lack of engagement from my own perspective and the fact that as an educator I need to be enthused and confident with my material if I am to successfully engage students in learning. Added to this it is the subject and not the medium that is the driver for me and I felt that I was sacrificing one for the other. Despite my initial enthusiasm for the potential for this teaching methodology.

I do recognise the potential for work of the kind I first proposed and I see a place for it but I struggle to fully engage in the delivery of my subject through this medium and find the threat and intimidation of Second Life not only a barrier to my work but also completely the opposite to my expectations at the commencement of the project.

This, I am sure, sounds an unreasonable and unfathomable attitude to adopt but I can only liken it to someone who is immersed in the virtual world, completely confident with the operation, technology and let's be honest, rules of virtual world etiquette, being put on a stage in front of an audience, with the spotlight on them and not knowing how to act, how to move on stage, handle props and having forgotten their lines and so on.....

In the right hands, with a person skilled and confident in the use of digital media as a teaching tool, and with an understanding of how the medium works, students could be enthused, engaged and encouraged to learn through the use of Second Life. I think the potential for the teaching of scenography using this medium is great. I remain convinced that this is the case. I do think with the increased use in the professional world of design of programs such as Vector Works and Wysiwyg, it is the future for stage design and I fear that lecturers such as I who cannot shake off the hands-on, Blue Peter approach, will eventually be consigned to the museum.

My work in the drama department and for my PhD, which looks at the creation of performance environments from a devised perspective, with the scenography growing from the development and making of the performance, an organic process dependent on the human creation of performance, reinforces this thinking further. I am, in a strange way, grateful for the negative experience of the Theatron project; it has sharpened my focus on the real world and the need for me to work with people and materials.

York St John University (Gweno Williams) 'Insubstantial Pageants': learning about Renaissance drama in *Second Life*

Overview

This one-year funded pedagogic research project at York St John University, run by Project Director Professor Gweno Williams, supported by Student Research Assistant Toby Gordon has offered a mix of innovative creative opportunity and technical frustration for staff and students alike.

Linden Labs Second Life virtual interactive environment is initially appealing as a physical and meeting space but the technical and avatar functionality constraints mean that much less can currently be achieved in terms of developing virtual pedagogic strategies for teaching and learning about Renaissance Drama, than originally envisaged.

Consistent strengths of the Project

The splendid detailed environment of the Second Life Globe Theatre has been unfailingly appealing to project participants, staff and students. They have enjoyed the aesthetic elements and proportions of the theatre and have actively wanted to inhabit and work in this environment. Staff can glimpse the equal access potential of SL, though current barriers make this difficult to explore.

The Project required and benefitted from a high level of collaborative problem-solving, creating strong and purposeful team dynamics and effective and resilient working relationships.

Consistent problems for the Project

Confusion and misdirections relating to the existence of more than one Globe Theatre in Second Life
Frustrations around the slowness and perceived unreliability of SL (Linden Lab upgrades, Rezz on demand drawbacks, lack of institutional capacity to provide fast enough computers on demand)
Immature state of VOICE in SL, a crucial drawback to performance activity

Student perceptions that SL cannot currently offer sufficient learning for undergraduate level
IT and institutional barriers

Second Life's current marginal educational status, together with perceptions of it as a game, meant it was not an institutional priority to support SL technically. Individual IT staff were personally helpful however, and through trial and error a workable set up has been evolved by the end of the project. I am assured that this pilot experience of SL and the level of staff interest in the project will ensure greater IT support for SL pedagogic activity in future.

Second Life as a medium

Visually exciting, but clumsy and inconsistent in terms of motion and mobility (this is most serious in relation to performance props - and staying dead).

The lack of integrated VOICE is the most crucial, and embarrassing, impediment to evolving pedagogy for performance, or even making the activity credible for students.

What were the stages you went through?

1. Considerable frustration and disappointment about the multiple technical problems
2. Embarrassment in relation to students and colleagues who had shown willingness to participate but were exposed to failures in the technology.
3. Scaled down aims of project pragmatically whilst maintaining contact with IT & Theatron colleagues
4. A tiny flame of hope that SL may still have good pedagogic possibilities at a more advanced stage of its development

Key moments (high and low)

Semester 1 frustrations as outlined above. Semester 2 very positive interest from colleagues and from an external IT professional who attended my E-Learning conference presentation and e-mailed as follows:

Thanks again for the opportunity to understand more about your work engaging learners with technology and, in particular, Second Life.

I have been involved in and aware of Second Life for a number of years now and have always been a little puzzled about how it could be used effectively in education. There were a number of things that got me really excited about your project:

The creative use of subject materials – allowing learners to explore and experience environments really plays on the strengths of the technology and keeps the overall principle simple and straight forward.

The level of student engagement – this was really promising. I enjoyed hearing the views of students who have been involved in the whole lifecycle of the project and their experiences and enthusiasm were incredibly promising.

The approach to collaborative experience – using Second Life as part of a blended program sounds interesting, allowing students to meet in “real space” before engaging in their “virtual space”.

*The sense of ownership – everyone who spoke about the project expressed a strong sense of pride and ownership in **their** virtual space.*

I hope this feedback is useful and I look forward to learning more about your project, and how it progresses.

The achievements of the project

I am very glad to have had the privilege of working in the virtual Globe Theatre and I will miss it (a little)

High level creative and collaborative problem-solving has necessarily been central to this project

Progress with pedagogic development has been very disappointing, and much less than anticipated, in relation to the time spent on the project.

If you didn't answer your original research questions, what happened to prevent getting the answers?

Too much time wasted on navigating different obstacles and solving new problems meant the project took far more time than anticipated and there was still insufficient time to pursue the pedagogic goals in depth.

What precautions would you adopt if you were to try another project in a virtual world

I would never again work in a Rezz on demand environment, it seems too impermanent and temporary. Working with a Research Assistant and with supportive colleagues is essential

Evaluation questions raised by the project at YSJU

Where a direct comparison with a live equivalent is possible, what comparisons can be made between live and virtual learning strategies / experiences / plays?

It was difficult to address this question fully as it took so long, in real time, to get anywhere near performance. The May *Hamlet* workshop exposed 4 areas of difficulty. 1. Time needed to find acceptable costumes for individual avatars. 2. Lack of VOICE 3. Problems picking up and manipulating props 4. Avatars maintaining a fixed position for sufficient time e.g. standing still, remaining dead

The identity barrier

Were there issues with the nature of Second Life (anxieties around interlopers, griefters, constructing identity, alienated by technology)

Yes, several female students asked questions or brought newspaper articles about SL as a game or a sexually disruptive activity.

The culture barrier

Were there issues with Second Life having its own set of codes, norms and etiquette and reading these?

Not particularly. Some incidental surprise at non-human avatars

Did Second Life feel destabilising for participants: outside of the 'safety zone' - a place of no limits, no boundaries, no restrictions on behaviour?

No, it felt more like an awkward and inefficient environment

The time barrier

Did the activities in Second Life take a long time to set up? For example designing, validating and running teaching activities

Yes, a depressingly disproportionate amount of time was required for set-up & trouble-shooting even the simplest pedagogic activities

Were there issues such as IPR, permissions and access?

Yes in relation to multiple log-ins-see above

The economic barrier

Did you find economic costs that you didn't anticipate?

Yes, above all Project Director time. Also cost of a dedicated lap-top (essential but not allowed in budget guidelines)

Reports on workshops

60+ students (Level 3 BA Hons, Level 2 BA with Qualified Teacher Status) offered SL opportunities-3 workshops scheduled in Semester 1. SL opportunities a new addition to a raft of established module enhancement activities including visit to RSC production with talkback, comparative performance review opportunities, film screenings, full day performance workshop in C17 Manor House etc. Module enhancement activities are voluntary (however, only 4 out of 60+ students have not participated in any to date)

SL workshops were initially difficult to schedule due to institutional IT issues including Timetable staff incomprehension when IT room requested for Shakespeare class. This barrier eventually overcome but IT suite where SL installed too slow, wasted class and staff time.

Workshop 1 postponed due to Linden Labs SL update (helpfully pre-notified notified by Theatron colleagues)

2 Level 3 students attended & discussed general issues with Research Assistant

Workshop 2 attended by 9 students (2 Level 3; 7 Level 2). Majority could not log on for technical reasons to do with LL limits on multiple log-ins. (Also sub-projects have low level user status with Linden Labs-results in less access to help & support) This was embarrassing for staff and irritating for students. Session perceived as time-wasting and a failure.

Workshop 3 had to be postponed due to poor student feedback re SL to date and closeness of assessment deadlines (marks contribute towards individual students' degree classifications). Issue of SL 'Globe duplication'. Students could not understand why there is more than one, and why the Theatron Globe is not always there.

Scaled down *Hamlet* performance activity took place in May, with Project Manager present Project Director & Research Assistant continue to pro-actively explore transferability of live theatre benefits to SL enhancement activities. E.g. current 3D staging experiments in real world Globe, RSC support activities for productions etc

Considerable gap between project's pedagogic vision and technical capacity to explore these issues. IT colleagues supportive; this pilot SL experience will be taken into account in forthcoming institutional IT review and redesign.

Academic and Knowledge Transfer colleagues keen to hear & learn more about SL & project experience so far. To address at annual institutional L&T conference January 2009 and E-Learning conference April 2009.

Summary

'Insubstantial Pageants' was a remarkable learning experience for YSJU staff and students, generating technical frustrations as well as rewarding pedagogic insights. Online access, virtual operating principles and cumbersome technical scripts all produced unexpected obstacles to staging and acting. However, the elegance and harmony of the Theatron Globe as a performance environment also inspired and delighted participants. *Second Life* is developing rapidly as an educational, creative and game-playing environment; there was a real sense of excitement at participation in piloting new approaches to studying Shakespeare, as well as great frustration when learning was unexpectedly interrupted by technical challenges.

Student opinions about the experience were strongly polarised. Some students were enthusiastic: 'I think *Second Life* holds much potential for being a valuable learning experience in schools'. Others found the idea of an unregulated virtual environment troubling and unappealing. Staff were

generally very enthusiastic about the rich educational potential of virtual worlds, whilst cautious about practicalities. The 'Insubstantial Pageants' project's end of year high point was a rich (and slightly chaotic) multi-dimensional performance of Act 5 of *Hamlet* by a volunteer cast of students and staff, where all agreed that they had developed new insights into Shakespeare's drama.

The great pedagogic potential of virtual theatre environments seems to be the provision for students of equality of access and opportunity, cutting out the time, practical and cost constraints of live theatre activities such as practical drama sessions, theatre visits or master-classes with theatre practitioners. In the longer term, virtual worlds such as *Second Life* would seem to collapse real world boundaries, offering creative opportunities for students from different universities or different international communities to collaborate and learn together.

Second Life Trials, Tribulations and points for learning (Pieter Smit)

We have an install in IT10, it's not great. The machines warn that they don't meet the minimum specification for SL every time the client is started. With graphics on the minimum preset, maximum frame rate was around 7 or 8 frames per second with the graphics set on the lowest (fidelity), it goes as low as 2fps which is unusable even if you know what's going on and you know your way around. By changing settings it's possible to get 10fps and upwards, again with the preset minimum graphics settings. This is just useable but is not a good experience.

The PCs aren't designed to do 3d.

If we want to avoid putting people off by delivering a bad experience, we need, ideally, a lab of PCs with better graphics capabilities than the standard Office PC. This is gradually coming to the desktop market by default because manufacturers want their PCs to handle, say, Windows Vista.

There is a cost: to upgrade a set of PCs to give a good level of performance would today, cost about £40 per PC.

The newer Optiplex 740s that is our latest standard PC performs much better with its own graphics card. It comfortably fits into the low end of the 'useable' range of performance.

The Network

Proxies. The original client did not support working through a web proxy at all. If you're not already aware, all our web traffic goes through a proxy in order that we can do some caching and filtering of content

Proxy whitelisting. Linden Labs in common with other service providers that allow on-line sign-up use a mechanism to limit the number of accounts that can be created from a single ip address, that's to prevent automated account creation and so, sign-up stopped working after a few accounts had been set up. It's easy to get your proxy servers whitelisted but it's time consuming, and the information about how to go about it and indeed, the limit on number of accounts was hidden away. It's sorted now.

Network bandwidth. It's a 3d environment that's all streamed from Linden Labs data centres. There is no content permanently stored in the client. So it's possible to dramatically improve the client performance by setting some parameters to make use of our available bandwidth.

Voice chat. Initially, it took me quite a bit of time to get this working. Ironically it's not working today.

Platform Evolution

Over time, the Server code changes and the client (or viewer) code changes to incorporate new features and tools. That means that the world reboots to apply new server code, and the clients need updating, this is a problem in our environment where we build a new image for the desktop once a year.

Nowadays, it's quite rare to have a required viewer update. Updates are optional for the most part, except where there is a security problem, or some fundamental change to the way that something works, such as the upcoming adult content segregation system.

Deployment Issues

We didn't configure the client properly. We should write an optimised configuration file for the client and deploy this.

We should consider using an alternative viewer (other than the official Linden Labs one) In limited testing of some alternatives, we have decided that the 'Cool SL' viewer delivers far better framerate on our hardware. It also has some 'cool' features, for example being able to set higher maximum values for the bandwidth that the client uses, this doesn't really affect the server performance, as the bandwidth used by each client is distributed by the simulator anyway and is dynamically tuned by parameters outside our control.

Appendices

A1: Director System Documentation

The director system may be used to synchronize the actions of props and actors on stage. It is composed of a director controller, and one or more props and/or actor attachments.

Starting a play:

Touching the director controller will present a dialog with all the names of the notecards in the director controller's inventory. Selecting one of these notecards will cause the controller to ask whether you want to start the play from the beginning (press the Start button), or from some specific time (press the "Start at..." button).

Starting a play at a certain time:

When the "Start at..." button is pressed, the controller will ask you to say a time in the [MM:SS] format on channel 1. Doing so will start the play at that time. **Note:** any commands that occur from the start of the play to the point you specify will be completely ignored. If a lamp prop starts out off, and is turned on by a command that occurs in the time before you specify, it will not be on when the play continues from that point.

Stopping and Restarting a play:

If a play is currently being executed by the director controller, it may be stopped by clicking on the director controller, and pressing the "Stop" button in the dialog that opens. It may be restarted, by pressing the "Restart" button instead.

Play Notecard Format:

Play notecards are in this format:

```
[MM:SS] <Name>: <command>  
[MM:SS] <Name>: <command>  
[MM:SS] <Name>: <command>
```

Where <Name> is the name of a prop or the name of an actor HUD, and <command> is a command that is executed by the prop or actor at the time specified by [MM:SS], MM minutes, SS seconds.

These lines must be in chronological order; the system may not behave properly if a command on line 2 occurs before the command on line 1.

Example Notecard:

```
[00:00] red_light: turn on  
[00:01] actor1: anim stand1  
[00:05] bubbles: sound on  
[00:12] red_light: turn off  
[00:13] central_light: turn on  
[00:14] actor2: anim declamation5
```

[00:24] bubbles_burst: particles on
[00:32] bubbles: sound off
[01:12] actor1: position <12, 34, 12>
[01:12] bubbles_burst: position <17, 46, 12>
[01:17] bubbles_burst: rez fish

In this example, at 1 minute, 12 seconds into the play, the user wearing the actor1 attachment will receive a message asking him or her to move to <12,34,12>. At the same time, the bubbles_burst prop will move to <17,46,12>.

Creating a Prop:

There are a few things to keep in mind when creating a prop. All props that are manipulated by the director controller must have a Prop Controller script in them. A prop with just a Prop Controller script will not respond to any commands, however. To do so, it needs one or more command scripts. Each command script is responsible for handling one command.

Currently Available Command Scripts:

position <pos>
music <url>
rez <name>
sound on/off
particles on/off
turn on/off # light
turn on/off # invis

If you insert a command script into a prop, the prop will respond to the command. Inserting the "position <pos>" script into a prop will allow you to control its position using the director controller. If the prop is named "Foo", you can tell it to move to <10, 5, 20> in the sim at 12 minutes, 5 seconds into the play, by adding the line:

[12:05] Foo: position <10, 5, 20>

In the appropriate place in your play notecard. There is no limit to how many command scripts the prop can have in its inventory, however, if you use both the "turn on/off # invis" and the "turn on/off # light" in the same prop, giving the prop the command "turn on" will cause it to become opaque (0% transparent) **and** turn its lighting feature on, at the same time; both scripts react to the same command.

Actors & Actor HUDs:

Actors are handled by the director controller by using a scripted attachment. Actor HUDs work just like props, in fact, they need the "Prop Controller" script in them as well as command scripts:

Currently Available Command Scripts for HUD:

cue <message>
anim <name>

In the play notecard, actors are treated just like props. The prop name you use is the name of the actor's attachment; if the avatar named "Christopher Omega" is wearing the attachment named "actor1", the actor is referred to as "actor1" in the play notecard. This is done so that the role can be changed easily - the role of actor1 can be given to another avatar simply by detaching and reattaching the attachment, nothing needs to change in the play notecard.

Example:

[10:05] actor1: anim dance1

Will animate the avatar wearing the actor1 attachment with the animation dance1 at 10 minutes and 5 seconds into the play. It will relay an error message if the animation is not found in the attachment's inventory.

Customizing the HUD:

The Actor HUD allows the actor to trigger any action that the master controller can trigger, including, but not limited to, actions on him/herself. Customizing the HUD, setting which buttons trigger which actions, is very simple. A button is defined as any child primitive linked to the HUD that has a colon in its name. The child primitive's name is the command that is executed when it is pressed. For example: if I name my child primitive "actor1: anim sit" (without quotes) touching the prim will cause the actor1 HUD to start the sit animation on the avatar it is attached to. Likewise, if I name my child primitive "red_light: turn on", it will issue the "turn on" command to the prop named "red_light" when it is touched.

Buttons themselves do not need scripts. The "Button Script" in the parent prim handles all button presses.

Commands:

position <pos>

This script moves the object, if it hears "position" followed by an <x, y, z> vector in region coordinates to move to.

music <url>

This script allows the prop to change the parcel music URL, when it hears the "music" command, followed by a URL to play.

rez <name>

This script allows the prop to rez an object, when it hears the "rez" command, followed by the name of an object.

sound on/off

This script plays the first sound in the object's inventory when it hears "sound on" and stops it when it hears "sound off". It does not loop the sound.

particles on/off

This script causes the object to emit particles when it hears "particles on" and to stop when it hears "particles off".

The particle system that it emits is hard-coded in state_entry.

turn on/off # light

This script causes the object to become lighted when it hears "turn on" and unlighted when it hears "turn off". It will use the light properties set in the editor mode Features tab, under Light.

IMPORTANT: This script must be reset when the light parameters are edited or the changes will be lost! (Automatic update of the light parameters does not work due to jira: SVC-1824)

IMPORTANT: If the script is reset while the light is off, parameters will be lost! (Bug filed under jira: SVC-858)

turn on/off # invis

This script makes the whole object (all linked parts) invisible when the prop hears "turn off", and visible if it hears "turn on".

WARNING: All primitives will be set to 0% transparent (opaque) when the object is turned on.

cue <message>

Sends a message privately to the actor wearing the HUD.

anim <name>

Animates the actor currently wearing the HUD. The specified animation must either be one of the built-in animations (see <http://wiki.Second Life.com/wiki/Internal_Animations> for a list of these) or in the HUD's inventory.

Creating a Command Script

Command scripts are simply scripts that respond to a link_message event with "runcommand" in its key parameter. A command script should execute its command as soon as the event is raised. The link message will send with it 0 in the integer parameter and the command string in the string parameter. The command string will **not** include the name of the object.

Example Script:

default

```
{
link_message(integer sender, integer iparam, string sparam, key k)
{
if (k == "runcommand")
{
if (sparam == "say hello")
{
llSay(0, "Hello world!");
}
}
}
}
```

This example command script will cause the object to say "Hello world!" in public chat when the command "say hello" is issued on the object. "say hello" can either be issued from an Actor HUD or by the Director Controller; command scripts are oblivious to where the command came from. If the object containing this command script was named "example", to issue the command from the director controller, we would have this line:

```
[00:00] example: say hello
```

In one of the play notecards in the director controller's inventory.

A2: Theatron Reservation System Manual

This document describes how to use the Theatron Reservation System. The reservation system allows users to rez their choice of theatre on demand for use during lectures, presentations, and other events.

There are two ways to access the reservation system:

- **Via an in-world control panel object in Second Life.** This method allows you to rez a theatre without a reservation, so long as no one else has made a reservation at that time.
- **Via the web site.** This method allows you to reserve a time slot in advance, and to restrict access to the main theatre area to keep out unwanted visitors.

Choose the method which best suits your needs.

The In-World Control Panel

Teleporting to the Landing Zone

The control panel is located in the landing zone at [Theatron \(8,8\)](#) in Second Life.

Who Can Use the Control Panel?

When there is an ongoing reservation, the control panel can only be used by:

- the user who made the reservation,
- avatars who are marked on the web site as being administrators for the group the reservation is under, and/or
- system administrators for the reservation system.

During unreserved times, anyone can use the control panel to rez a theatre and/or P-Package. (The sim is open access to everyone when there is no ongoing reservation, so the guest list features are not active during those times.)

Rezzing a Theatre

When a reservation is made online, the user selects a theatre to be rezzed (loaded) in the world. You can change theatres at any time via the control panel, or rez a theatre when there is no ongoing reservation.

To rez or change theatres, first select the theatre you wish to use by clicking the left and right arrows on the control panel. The selected theatre is displayed in the screen in the center of the control panel.

When you have selected the theatre you wish to use, press the "Rez Theatre" button on the control panel. The control panel will display a blue dialog in the upper right corner of the screen asking you to confirm the action; select "Yes" to begin the process.

- **Note:** The process of changing theatres takes approximately 6 minutes to complete.

Rezzing a P-Package

P-Packages (short for Pedagogical Packages) are supplementary objects which add signs, kiosks, or other educational materials to the theatre and surrounding environment. When a reservation is made online, the user can choose an optional P-Package to be rezzed (loaded) in the world. You can change the P-Package at any time via the control panel, or rez a p-package when there is no ongoing reservation.

· **Note:** As of this writing, no P-Packages are available yet for any theatre.

To rez or change P-Package, use the left and right arrow buttons on the control panel select the theatre you wish to rez a P-Package for, then press the "Rez P-Package" button. The control panel will display a blue dialog in the upper right corner of the screen asking you to confirm the action; select "Yes". The control panel will then display a second blue dialog listing the P-Packages that are available for the selected theatre. To begin rezzing, click on the button for the P-Package you wish to rez.

· **Note:** The "Rez P-Package" button is inactive (faded out and non-responsive) if there are no P-Packages available for the currently selected theatre.

Adding and Removing Guests

When a reservation is made online, the user can provide a "guest list", a list of avatars who are allowed to enter the main portion of the sim. The guest list can be adjusted during the reservation by using the "Add Guest" and "Remove Guest" buttons on the control panel.

To add a guest, click the "Add Guest" button, then type the avatar name of the guest to add, using chat channel 1. For example, to add Joe Avatar to the guest list, you would type this into chat:

```
/1 Joe Avatar
```

You can type as many names as you like. When you're done entering names, press the "Done" button in the blue dialog in the upper right corner of the screen.

To remove a guest, click the "Remove Guest" button, then type either the avatar name or the list number, again using chat channel 1. The list number is displayed in the blue dialog in the upper right corner of the screen. For example, it might display:

```
1: Jane Avatar
```

```
2: Joe Avatar
```

In this case, you could remove Joe Avatar from the guest list by typing **either** of these lines into chat; they both have the same effect:

```
/1 2
```

```
/1 Joe Avatar
```

If there are very many avatars on the guest list, the dialog in the upper right corner of the screen will show a ">>" button. You can use button this to page through the full avatar list.

When you are done removing names from the guest list, press the "Done" button in the blue dialog in the upper right corner of the screen.

The Web Site

Accessing the Web Site

The reservation system can be accessed online at: <http://theatron.betatechnologies.info/>

Who Can Use the Web Site?

Only users who have registered an account and had it approved by an administrator can use the reservation system from the web. From the login screen, follow the "Register an Account" link to begin registering. You will need to provide the first and last names of your Second Life avatar, and a password for logging in to the reservation system. You will be able to change your avatar name, password, and/or email address later, if you wish.

- **Note:** The password should be different from the one you use to log in to Second Life.
- **Note:** Although you're not required to provide your email address, it is a good idea to do so.

Once you have registered, the system administrator will be notified so that he or she can activate your account. After your account has been activated, you will be able to log in to the system.

Logging In

To log in, enter your avatar name and your reservation system password at the prompt, and press the "Login" button.

- **Note:** If your web browser has cookies enabled, you will be able to return to the site later without needing to log in.

Viewing Upcoming Reservations

The list of upcoming reservations can be viewed on the "Listing" page of the web site. This page is opened by default when accessing the web site; you can change to it from another page by clicking the "Listing" link on the navigation bar along the top of the page.

The Listing page displays all the upcoming reservations that have been made on behalf of any group you belong to. Each reservation displays the times and dates when it begins and ends, the theatre that was selected, the P-Package that was selected (if any), and the group the reservation was made under. On the left side of the reservation is an "X" link, used to cancel the reservation. On the far right is an "Access" link, used to adjust the access list (guest list) for the reservation at any time.

- **Note:** Be aware that there may be reservations that are not displayed, if they were made by a group of which you are not a member.

Making a Reservation

In the top right part of the Listing page is an "Add Reservation" link. Click this link to start making a reservation. This process has two steps, each on its own page:

1. Setting various details of the reservation
2. Setting the access list

On the first page, you can set:

- The time and date of the start of the reservation
- The duration of the reservation, in hours

- The theatre you would like prepared (rezzed) for you
- The P-Package you would like prepared for you
- The group to which the reservation belongs

Please note that if there is another reservation immediately after yours, the last 15 minutes of your reservation time may be used to clean up and prepare for the next session. You should keep this in mind, and increase the duration of your reservation by an hour if you will need the extra time.

On the second page, you can:

- Select any number of Second Life groups whose members should be granted access to the parcel
- Select any number of the pre-made lists of avatars to add to the guest list
- Type in the names of any other avatars to add to the guest list

Note: You can select multiple groups or pre-made name lists by holding the Ctrl key and clicking each item to select it (or deselect it, if it is already selected).

Cancelling a Reservation

On the Listing page, you can cancel a reservation by clicking the "X" link on the left side of the reservation. A small dialog window will appear asking you to confirm this action. Please be aware that you cannot undo the cancellation after you have confirmed it. However, you can make a new reservation in its place.

Changing Reservation Details

Unfortunately, it's not currently possible to changing the details (time and date, theatre selection, etc.) of your reservation after it is made. However, you can cancel the existing reservation and make a new one in its place.

Changing your Password and Other Account Details

To change your password, email address, or avatar name, click on the "User Admin" link in the navigation bar at the top of the page. Then, click on the "U" (for Update) link to the left of your avatar name. You can then enter the new details into the text boxes. Press "Save Changes" when you are done.

Administering the Web Site

Who Can Administer the Web Site?

Only users who have been made admins through the User Admin page can administer the web site. Current admins can promote a normal user to an admin, or demote an admin to a normal user, by clicking on the "Make Admin" or "Make User" link in the Level column of the User Admin page.

- **Caution:** Because of the potential for users with admin powers to abuse or damage the system, only trusted users should be made admins.

What Can Admins Do?

Admins have the following abilities:

- Manage user accounts
- Manage pre-set lists of users
- Manage groups
- Manage theatres
- Manage P-Packages

These abilities are described in the sections below.

User Admin

The User Admin page allows admins to view and edit information about all user accounts on the web site.

Admins can perform these actions on this page:

- **Delete User:** Click the "X" link on the far left of the user's entry in the table to delete the user's account.
- **Update User Details:** Click the "U" link to the left of the user's entry in the table to update the user's name, email, and/or password.
- **Manage Groups:** Click the "Manage Groups" link for the user to add or remove the user from reservation system groups.
- **Make Admin / User:** Click the "Make Admin" link to promote a normal user to admin level, or "Make User" to demote an admin to normal user level.
- **Activate / Deactivate:** Click the "Activate" or "Deactivate" links to enable or disable that user's access to the web site. **Note:** new users start as inactive; their accounts will need to be activated before they can use the web site.
- **Receive Signup Email:** Click the "Notify" or "No More" links to enable or disable sending notification emails to this admin when a new users signs up for an account. Only admins can have this option enabled.

List Admin

The List Admin page allows admins to view and edit the avatar lists. These lists are used when creating a reservation to allow users to easily add frequently-used avatar names to the guest list.

Admins can perform these actions on this page:

- **Add Avatar List:** Click the "Add Avatar List" link to create a new avatar list. Select the group with which the list is associated (only users in that group will be able to use the list), a short but descriptive name for the list, and the avatar names to include in the list (put one name per line).
- **Delete Avatar List:** Click the "X" link to the far left of an existing list to delete that list.
- **Update Avatar List:** Click the "U" link on the left of an existing list to update that list, for example to add or remove avatars from the list. The process for updating a list is the same as for adding a new one.

Group Admin

The Group Admin page allows admins to view, create, and edit groups, and add or remove users

from them.

In general, each group in the web system should correspond to a group with the same name in SL. When a reservation is made for a group, members of that SL group will automatically be granted access to the sim, even if they are not directly added to the guest list. Also, avatars who are listed as admins for that group will be permitted to access the control panel during the reservation period.

You can create web system groups that have no corresponding SL group, but in such a case group members cannot be automatically granted access to the sim. Rather, they would need to be added directly to the guest list.

Admins can perform these actions on the Group Admin page:

- **Add Group:** Click the "Add Group" link to create a new group. Enter the name of the group, and a list of admins for the group. Admins are allowed to operate the control panel in SL during reservations made by that group.
- **Delete Group:** Click the "X" link to the far left of an existing group to delete it from the web system.
- **Update Group:** Click the "U" link to the left of an existing group to update its name or add or remove avatars from the admin list.

Note: When adding a new group to the web system, you should also set up a corresponding Group Access Sensor in SL. Send an IM to Jacek Antonelli to receive the sensor object if you don't have it already. To set up the sensor:

- Activate the group tag of the group the sensor should belong to. (You can do this via the "Edit > Groups" window in SL).
- Rez the sensor object in the tiny parcel in the far south-west corner of the sim.
- Name the sensor object with the same name as the group. The object name **must exactly match** the name of the group as it is entered in the web system.

Theater Admin

The Theater Admin page allows admins to add or remove theatres to the list of available theatres, from which the user chooses when creating a reservation.

Admins can perform these actions on the Theater Admin page:

- **Add Theatre:** Click the "Add Theater" link to add a theatre to the list. Enter the short name of the theatre, which should match the name used by the rezzer system in SL, and the regular name, which is displayed to the user on the web site.
- **Delete Theatre:** Click the "X" link to the far left of an existing theatre to delete it from the web system.
- **Update Theatre:** Click the "U" link to the left of an existing theatre to update its short and long names.

Note: Before you add a theatre to the web site, you should coordinate with Beta Technologies to make sure that the theatre is packaged and set up in the rezzer system in SL.

P-Package Admin

The P-Package Admin page allows admins to add or remove P-Packages to the list of available packages, from which the user chooses when creating a reservation.

Operation of the P-Package Admin page is nearly identical to that of the Theater Admin page.

B1: Barrier Questionnaire

The following questionnaire is based around Steve Warburton's Six Barriers to innovation (presented at the LYICT conference, Kuala Lumpur, 7th – 12th July, 2008) <http://www.slideshare.net/stevenw/six-barriers-to-innovation-in-muvebased-teaching?src=embed>

1. the technical barrier

What technical difficulties did you face at the institution? (bandwidth, hardware, firewalls)

What technical difficulties did you face due to Second Life? (downtime, lag)

What were the issues with the in-world activities or events (managing the client interface – developing basic in-world competences such as navigation, creating objects and manipulating ones avatar – developing a 3D visual grammar)

2. the identity barrier

Were there issues with the nature of Second Life (anxieties around interlopers, griefers, constructing identity, alienated by technology)

3. the culture barrier

Were there issues with Second Life having its own set of codes, norms and etiquette and reading these?

Did Second Life feel destabilising for participants: outside of the 'safety zone' - a place of no limits, no boundaries, no restrictions on behaviour?

4. the collaboration barrier

Were collaborative activities conducted? If so, were these successful?

5. the time barrier

Did the activities in Second Life take a long time to set up? For example designing, validating and running teaching activities

Were there issues such as IPR, permissions and access?

6. the economic barrier

Did you find economic costs that you didn't anticipate?

B2: Pedagogical projects' research questions

Technical/media/representation

What are effective ways of documenting the process? (cov)

Is the creation of machinima a practicable means of recording student performances? (cov)

Can SL be effectively integrated with other media? (cov)

How can students use virtual worlds for developing their own resources/texts? (mbro/unn)

Learning strategies and opportunities

What new learning strategies are enabled by virtual worlds? (mbro)

How do students reflect on their own work within virtual worlds (wlv)?

How do learners reflect on and conceptualise their own learning in virtual worlds? (mbro/wlv)

To what extent do the virtual representations of space convey an understanding of actual theatre spaces? (unn/wlv)

Where a direct comparison with a live equivalent is possible, what comparisons can be made between live and virtual learning strategies / experiences / plays? (ysj)

Collaboration

What opportunities do virtual worlds present for collaborating on performance (mbro)?

How effectively do virtual worlds support learning, teaching and assessment within virtual communities? (unn)

Creativity and identity

How does SL enable the creation of identity? (unn)

How does SL enable the creation of resources/texts? (mbro/unn)

How do the parallel creations of identity and text inform and influence each other? (MC)

C: Types of learning activities defined by their required degree of immersion

Salmon's five-stage model (2004) establishes a sequence for learning in online communication, each stage developing skills that are prerequisites for following stages, each only effectively supporting a specific range of activities and each requiring particular technical and teacher support. These stages are:

- Access and motivation
- Online socialisation
- Information exchange
- Knowledge construction
- Development

Warburton (2008) presents stages in the development of empathy with one's avatar. These describe different levels of immersion within the virtual world; passing from one stage to the next requires either acquiring a particular skill set, or redefining one's relationship with the virtual world. The stages are:

- Prior to technological and competency threshold
- Technological and competency threshold passed
- Avatar as extension of one's self
- Avatar has own identity (with social and cultural capital)

The observations of the activities engaged in by the students and the various barriers encountered and transitions encountered, suggest the following skills and awareness need to be acquired by students before subsequent tasks can be attempted, in a staged sequence of activities synthesising those suggested by Salmon and Warburton.

Preparatory stage

These elements are the initial ones required to get students to the place where the learning is to take place and are the minimal practical requirements for all the remaining learning activities to begin. This equates with Salmon's access stage. These are simply knowledge of basic technical requirements and are:

- Avatar name and password
- How to log on
- How to accept teleport requests, use SLURLs or find and use landmarks stored in the inventory.
- Recognising initial error reports and knowing how to respond to these.
- Recovering from a crash.

These items can be distributed through handouts, but are essential prerequisites for activity inworld. Knowing these is also useful for situations where machines may crash and rebooting is required.

Technology as foreground.

This is a stage where the students are focused on learning the skills to engage with the environment itself and are not concerned with the curriculum content.

a. Interacting with the world

These are also purely technical skills and involve:

- Motion
- Manoeuvring
- Wayfinding
- Changing camera positions
- Using mouselook

b. Interacting with others

Once the above are learnt additional technical skills are

- Using local chat
- Using private chat
- Using manoeuvring skills to apply proxemics

These equate to Salmon's online socialisation stage. These are important to accomplish early on, since it is the sense of copresence with other users that is the element that more participants respond to than the other features of immersive virtual worlds.

c. Interacting with their avatar

Once these are accomplished students can then experiment with:

- changing the appearance of their avatar
- animating their avatar

These elements give the participants a sense of themselves within the space, and also provides a means for them to feel ownership over an aspect of the world.

d. Reflecting on experience

Once these technical skills have been mastered, (Warburton's technological threshold) then students are in a position to reflect on their experiences of the environment, identifying areas which may create problems for a new user, or identifying immediate responses to their feelings about the environment. For example, our question "what would be the challenges for actors and designers working in the virtual theatre in Second Life?" is appropriate for this stage and was effectively answered by the students.

Acclimatising stage

An oversight of the learning process can be the step between acquiring the basic technical skills required, which took between 15 and 30 minutes in the case here, and the level of experience inworld that needs to be accrued to reach the point at which the medium itself becomes unobtrusive and the students are ready to focus on the curriculum-focused learning tasks (Warburton's competency threshold). This playing accomplishes two aspects:

- The students make the transition from conscious competency to unconscious competency with the various technical skills required to navigate and communicate,
- The novelty wears off.

Giving students an extended period of play with the technology means that issues such as struggling with the mechanisms for moving and manoeuvring or students being distracted by dancing or each

others' avatars' appearance have been worked through (to a large extent). Estimating the length of time required for this phase would require further trial and error, but in the experience of this trial could be another 15 to 30 minutes. From our observation of this session, only a proportion of the students were ready to move beyond this phase towards the end of their 40 minutes inworld.

A useful task to set students at this stage is shopping. This requires many of these basic skills to accomplish, exposes the student to the larger world of Second Life and also enables the process of personalisation of the avatar, which aids identification with the avatar and hence greater degrees of presence.

Technology as background

Once the technical skills have been acquired then students can engage with a range of activities that take these skills for granted, and where students will not be distracted by the features and functionality of the environment. These equates to Salmon's information exchange, knowledge construction and development. Activities such as discussion and exploration can be conducted, and students are more likely to stay on task, and be able to find their way around. Our question "how do these theatres/ auditoria differ from real life theatrical spaces?" could have been asked at this stage, since students are not focusing on the technology itself, but on the spaces that are represented in these stages. We found that some, but not all, of the students had reached this level of engagement within the time we had allocated.

Approprioception

The neologism *approprioception* is a compound word, implying a combination of two processes; that of appropriation, in which the use of a tool becomes internalised (the 'making the tool one's own' described by Littleton, Toates, and Braisby [2007; 203]), and proprioception. This latter is a characteristic identified as being an important stage in students' engagement with virtual worlds (Katherine Rowe, 2009, personal communication). Before a student feels comfortable with being able to easily move their avatar, being able to manoeuvre without colliding with objects and other users, and being able to manipulate objects easily, then they can feel anxious about interaction. The ability to experience proprioception of their extended body, being able to judge the position of their avatar and how they inhabit the space, may be part of becoming accustomed to the use of the tools. Part of this stage is learning the social conventions of the space (McVey, 2008; 179) or rather, learning to apply the social conventions of the real world within the space. McVey (2008; 179) concludes that "Time to explore is time well spent" within Second Life, i.e. that these are necessary prerequisites to any curriculum-focused learning activities.

Embodiment

The next stage is that arrived at when the learners have spent sufficient time inworld that they feel embodied within the space, Warburton's "avatar as extension of self". Only one third of the students, when asked in the questionnaire, stated that they felt as if they were really there. Heeter (1995; 200) found that one quarter of participants could not feel embodied within mediated environment and it may be found that there will always be a certain number of participants that do not reach the required level of immersion. This level is required for sensory impression of the space

to make an impact on the participant, as opposed to observing them detachedly. Our question “what do you think the challenges for actors and designers would be in the real theatre this model represents?” requires this level of immersion, since it requires the learner to project themselves within the space, as if it were real, and report back on that experience. How long must be allocated before students can be sufficiently experienced to engage with these sort of activities will require more study and lengthier programmes, however within this session it appeared that the class as a whole was not ready to discuss this aspect.

Acculturation

The final level equates to Warburton’s “avatar has own identity (social and cultural capital)” and requires a level of participation in the society of the virtual world in order to understand the social constructions that exist there, and the context for the activities and designs that may be observed within that environment. Our question “what can you determine from the stage design (and any other surrounding spaces) are the nature of the performances, and the communities that built the stages?” requires this level of experience. This requires a far greater depth of understanding of the nature of Second Life as a world in which communities are built and in which roleplay is engaged. This could take much longer for students to achieve, and in fact it may not be reasonable to expect students to engage at this level, unless the subject content of the course is the social structure of virtual worlds.

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