A GRID-DEVELOPMENT FOR THE LEARNING AND TEACHING PRACTICE IN SECOND LIFE

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ABSTRACT

This paper examines the emerging ideas to implement the usage of Second Life as an educational tool in a wide range of subject areas. The majority of the information used to create these 10 pedagogical approaches was derived from a series of participative inquiries, personal observations, formal and informal interviews, and documenting the perceptions of teachers and students using (and trying to use) Second Life as an educational tool. Ten pedagogical approaches have emerged thus far. Each section briefing explains the concept, illustrates the idea with examples, and provides implementation suggestions.

Keywords: Immersive learning, machinima, second life, virtual worlds

INTRODUCTION

Developing the 10 Ways in Order to Overcome Pedagogical Barriers

Virtual worlds, such as Second Life (SL), have been considered an emerging technology surrounded by hype and growing educational expectations. These immersive world applications have the potential to support multimodal (using different senses) communications among learners; they set up the potential for problem- or challenge-based learning and offer the learner control through exploratory learning experiences (Saunders, 2007). In the recent Metaverse Roadmap Report 2007, Smart et al. (2007) envisage a powerful scenario over the next 20 years when:

"[virtual worlds] may become primary tools (with video and text secondary) for learning many aspects of history, for acquiring new skills, for job assessment, and for many of our most cost-effective and productive forms of collaboration. (Smart et al., 2007: 7)"

Moreover, virtual worlds in the future may provide 'wrappers' for sets of educational services including e-portfolios, e-learning materials, assignments and class sessions, course module materials, learning games, tracking and monitoring assignments, communications between tutors and learners, and e-assessment.

However, despite this, much needs to be understood about the best ways to convert these spaces for learning purposes such as seminars, simulations, modelling, learning activities, networked learning experiences, cyber campuses, and streamed lectures (Prasolova-Forland et al., 2006). Otherwise, virtual worlds might be the next misused educational technology.
Many educational technologists would agree that poor utilisation of the features of a technology will inevitably lead to complacency with that technology and probably lead to it being abandoned or, worse, massively underutilised (Rappa et al, 2008).

In an effort to assist teachers who were genuinely interested in applying virtual world activities into their classes (but had no idea what to do), the project team created different ways to use SL. Ten of these case studies were selected, each of which includes a definition, an example, and suggestions from those who have tried, and sometimes failed, to implement them effectively. It is aimed that these ways will illustrate the possibilities, encourage you, and spark ideas of your own.

**Way One: Adding a Visual Element (Data Visualisation)**

The first, and perhaps most obvious, feature of virtual worlds is their highly graphical nature. Second Life is open-sourced and thus any user can create 3D objects. From a teaching perspective, this means that the ability to demonstrate ideas in a visual form is now very feasible. Adding a visual element to your teaching can be accomplished in several ways. Visualisation of otherwise abstract concepts and data visualisation are two methods to utilise the highly graphical nature of virtual worlds.

**Examples**

There are numerous examples for the use of visualisation in SL. For example, at Strathclyde University, a professor in art & design faculty has been using the Studio Wikitecture to work with his design students. Various architectural objects have been established, along with an online community, so that building professionals can ask and answer all manner of building-related questions, whether a quick technical question or quick peer review of a design or detail. Professionals can share content, from a simple CAD (Computer Aided Design) detail to complex specific document. Students also can solicit and bid on small scopes of work, whether that be a quick 3D rendering job or help in drawing up simple building elevations. Their SL island is a place where the online collaboration tools used to help the community run smoothly also can be used privately, to help firms run their projects a little more smoothly, as well (See Appendix A1).

**Implementation Suggestions**

You can use this concept in your class by building learning objects based on your subject topics. From term to term, you can have the next year’s students elaborate on previous objects, or create their own, to add to the library of 3D interactive learning objects. The process of thinking how to illustrate and then creating the items is an excellent way to get students to think through the concepts. Such items also build your interactive library and give your students another resource for exam preparation. Developing the technical skills required can pose challenges that must be addressed.

**Way Two: Building for the Sake of Learning How to Build**

It is not uncommon to hear educational technologists express their concern that virtual worlds could revert to just another method for delivering content. Yet, one of the wonderful features of a virtual world is the ability to create content in an open source environment. The possible creations by combining textures and scripts are limitless. If you teach a computer science course, then SL can offer unprecedented opportunities.

**Examples**

Several schools have started to build their own collection of learning objects and organise them in an interactive library accessible through their SL Island. HW Island (owned by a university in Scotland) has learning kiosks where students watch short videos, take quizzes and play learning games.
It provides a useful case study for looking at SL as a learning tool, embedded and already evaluated within a computer science course setting. Ideas for applications in computer science classes include topics where students need to learn about 3D rendering, scripting, spatial relationships, animations, database and grid management issues, and using third-party software application for Second Life purposes such as Photoshop, Illustrator, video and audio capturing programs (See Appendix A2).

**Implementation Suggestions**

If you teach a class that requires the students to learn about the theoretical foundations of computing concepts, then you can use the virtual world to link these concepts. As stated earlier, learning by doing is a powerful pedagogy. The nature of Second Life offers a valuable way to apply and practice using the various technical features, and determine the learning objectives that must be met prior to your in world activities. After these topics are covered, engage your students with the use of Second Life. Face to face, computer lab run classes provide a collaborative atmosphere. This may be a key success factor when teaching complex computer science concept.

**Way Three: Connection Device**

Another most obvious use of Second Life is that of a connection device. Not only are virtual worlds operating in real time, but they also can host material that can be accessed at a later time. Below is a list of the features of the many virtual worlds compared to other technologies with which you may be more familiar. We use this chart to help explain what Second Life is and to help spark ideas for usage. This list is not intended to be all inclusive.

<table>
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<tr>
<th>Communication Features</th>
<th>Virtual Worlds have</th>
<th>Which is similar to</th>
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<tr>
<td>Real-time text chatting-private</td>
<td></td>
<td>Instant messaging</td>
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<td>Real-time text chatting-group</td>
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<td>Chat room</td>
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<td>Delayed time text chatting</td>
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<td>Email</td>
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<tr>
<td>Real-time voice</td>
<td></td>
<td>VoIP / telephone &amp; conference calling</td>
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<td>Real-time video stream w/ audio</td>
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<td>Video calling</td>
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<tr>
<td>Searchable network tools</td>
<td></td>
<td>Social software / Web 2.0</td>
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<tr>
<td>Note card messaging</td>
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<td>RSS / newsfeeds</td>
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<td>Ability to create content</td>
<td></td>
<td>Forum, wiki, blogs</td>
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<td>Record activities for later access</td>
<td></td>
<td>Podcasting</td>
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<tr>
<td>Uploading documents</td>
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<td>File sharing</td>
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Events either can be streamed live or recorded for on-demand viewing. If you cannot attend a conference or a lecture, you and your students still can experience it. Second Life can be used as part of an e-learning-based classroom or a space to meet and communicate with persons with whom you and your students could not otherwise connect. Face-to-face classes benefit when students can meet other people who never could come to their classrooms; such as guest speakers or subject experts. Students also can work in teams from different locations and with other schools across the globe. An article in the magazine explores this in greater depth and proposes a chart in which MUVEs (Multi-User Virtual Environments) are placed alongside other forms of electronic communication. This is reproduced below.
Of note is that MUVEs do not provide very strong ‘latent social presence,’ i.e., when you log-off your presence ceases, unlike, for example, social networking or forums. In conjunction with the correct pedagogy and facilitation, the MUVE can be very effective in supporting shared endeavours.

![Figure: 1
MUVE and E-Communication Forms](image)

For a detailed description of this notion, please see the ‘Why Not Use Something Simpler’ article in the Open Habitat magazine.

**Examples**
The project OpenHabitat aimed to undertake a number of pilots with Art and Design students and philosophy students in MUVEs.

These were closely evaluated, adjusted, and rerun. The object of these activities was to gain a better understanding of how MUVEs can be used to support teaching and learning, and more specifically the ability of MUVEs to support creative collaborations and discussions. The project was envisaged as student-centred, exploring effective uses of MUVEs for teaching and learning. It had the advantage of having key ‘users’ on its team in the form of teaching practitioners from the art and design undergraduate programme based at a British university. A tutor from the online distance philosophy programme based at another university also was involved in the same study (See Appendix A3). The project brought together students and staff from two different universities.

**Implementation Suggestions**
Consider your desired purpose for connecting via the virtual world. Set designated times for inworld discussions or offer group meeting times to watch a pre-recorded event.
Invite guest speakers or make an alliance with a school that is teaching a similar course. Often school calendars and dramatically different time zones can cause scheduling conflicts. In such cases, the activities of a meeting on one side of the world could be recorded and then played on demand for the other group when it met. Be flexible in your associations and involve the students in resolving these challenges.

**Way Four: Role Playing Device**
A method that often is discussed in the literature is the use of virtual worlds for role-playing activities. Virtual environments allow teachers to create fictional situations. They provide a safe environment where students can immerse themselves in a scenario that they may not be normal for them. Safe practice means that students can take chances, make numerous attempts and fail without real-world consequences. These can be synchronous activities, either structured or not. The teacher can be part of the activity or simply assign it as an exercise. Usually, role-playing is used, in part, to develop or practice a skill. Therefore, study prior to going in world is centred on the skill or skills desired. Second Life then is used as a way to practice the skill by taking on a role, fictional or not. However, it also can be used to give a more tacit understanding of the course material (Kingsley, 2007). In this case, the role-playing activities are intended to provide an experience.

**Examples**
One idea explored was for a Chinese language class. The project “Second China” offers a blended immersive learning environment that optimises 2D and 3D elements for learning efficacy in the context of business Chinese language and culture. Understanding how other people think and what their actions imply is a daily challenge that we all face. Within our own cultures, we rely on shared knowledge to aid in our interpretation of the actions and words of others. When communicating outside of our culture, this shared knowledge is missing, which can lead to misunderstanding and miscommunication problems.

The project “Second China” offers a cost-effective, contextually relevant approach for the acquisition of Chinese cultural knowledge and sensitivity. The Second China project is a virtual three dimensional environment that delivers the feeling of immersion and maintains close ties to literary and multimedia knowledge. Participants can access information, take part in guided learning scenarios, communicate and collaborate, and role-play.

**Implementation Suggestions**
Using Second Life for role playing means creating scenarios, giving at least some structure and outlining the purpose of the role-playing activity. Most role playing exercises have predetermined or assigned roles that the teacher gives to the students. In the case in which skill development is the overall goal, the assignment should involve an area where students can practice extensively. An easy way to do this is for the teacher to simply instruct the students to visit a place where practicing the skill is likely to happen naturally (See Appendix A4).

**Way Five: Simulation Device**
The difference between using Second Life as a role-playing device and as a simulator is a distinct one. Simulations often are designed to allow the student to practice a process. Unlike role-playing, where the student is primarily practicing a skill, simulations allow the students to concentrate on a process and/or their role in that process. In addition, simulations in virtual worlds can be seen as a combination of role-play and data visualisation.
Simulations offer an excellent vehicle for teaching through trial and error. Decades of literature support learning by doing concepts; learning by doing it wrong, making mistakes in a safe environment and the ability to visually see the components of the process are aspects of how Second Life can be utilised (Kapp & Hamilton, 2006).

**Examples**

The Preview project is an innovative response to address the difficulties of distributed collaborative problem-based learning and also to take advantage of the new opportunities afforded by three-dimensional multiuser virtual environments. An increasing number of curricula use Problem-based Learning (PBL). Existing campus-based PBL carries a legacy of limitations from its paper base nature. Such cases therefore have limited use in developing abstract reasoning, and often are unrealistic for emulating real life.

More significantly, at a time when PBL has become a central tenet of many curricula, it already is under threat from the movement towards more self-directed learning and the migration of students from campus-based to more workplace-based learning. This has drastically reduced the opportunities for using what is fundamentally a collaborative learning method. Particular potential benefits for PBL are the increased authenticity of a simulated real-world environment and the open-ended nature of in world activity.

The Preview project had the following underlying objectives:

- To develop, deliver and test PBL scenarios within virtual worlds for existing healthcare programmes.
- To ensure that the innovation and implementation is user-guided at development, testing and evaluation stages.
- To provide materials that will enable others to build and develop further work.

Such an approach also involves utilisation of a combination of different resources, including creatively displayed web links, instructional video clips, learning objects, text-based documents, interactive spreadsheets, blogs and wikis (See Appendix A5).

Another exemplary model with regard to the integration of simulations into Second Life is the virtual patient specification which was developed to take advantage of the natural affinity for the branching narrative style of much of medical education. The Virtual Patient is a common standard by which patient cases can be structured in a manner that can be read by many simulation systems. A virtual patient represents whichever characteristics of the patient are relevant to the current educational context (See Appendix A6).

**Implementation Suggestions**

Developing a simulation involves a great deal of planning. Students can offer some fascinating ideas. Ultimately, the key to a successful educational simulation is that it works properly. Adding behaviours to objects, scripts and conditions that involve contingencies is a complex process. However, these complexities in themselves are an excellent teaching tool.

The act of thinking it through, determining what should happen, in what sequence, and in relation to what variables mostly support the achievement of the learning outcomes (See Appendix A6). Besides, the technical skill might also be the primary barrier.
Way Six: Games for Learning
Within the virtual community, there is a great deal of controversy regarding whether or not Second Life itself is a game. Technically speaking, by most modern definitions of the word game, it is not. It has no overall objective, does not have a beginning or ending and is not designed to foster competition. Yet, it looks like a game and often is assumed to be one, especially by those who have never been inworld. However, the game-like appearance and functionality can allow for inworld learning games to be created and executed.

Examples
The Faculty of Medicine at Imperial College, London, has developed a Virtual Hospital in Second Life that aims to design game-based learning activities for the delivery of virtual patients that can drive experiential, diagnostic, and role-play learning activities supporting patients’ diagnoses, investigation and treatment. Game-based learning has been considered as a new way of delivering clinical teaching more suited to the new generation of ‘digital natives’- ‘native speakers’ of the digital language of computers, video games, mobile phones and the Internet.

Implementation Suggestions
Learning games can be created from scratch by the teacher or done as part of the course itself. The process of planning and creating a game will get your students thinking through the content material in greater detail. However, if time does not permit, you may be able to find games created by others that can serve your purposes. There are courses that assign students to visit a public island and participate in a game that was created by another institution. In these cases the teachers did not accompany the students. After participating in the learning game, students were required to write an essay about their experiences and tie the subject content into the paper by answering several questions proposed by the teacher (See Appendix A6).

Way Seven: Soft Skill Development
Decades of research shows that soft skills, or social skills, are best developed through interactive practice.

In the virtual world these skills can be practiced in a variety of ways. In general, the concept of skill development in Second Life is applicable when the pedagogy is not task-oriented. In other words, the assigned virtual task is not the learning objective instead it is a method for practicing a skill (Ludlow & Wallace, 2007). If, however, the skill can be directly related to the task, then the learning experience may be even more powerful.

Examples
Second Life also can be used to develop skills in a less direct manner. One example for such a case would be the project Moose that investigates the scaffolding and processes needed to enable groups of students from Higher Education environments to establish their socialisation and engagement for more productive information and knowledge exchange and learning through the medium of online 3D Multi User Virtual Environments using Second Life. Although the academic community is showing a strong interest in the use of 3D environments for education, these environments, originally developed for gamers and recreational purposes, are little researched in terms of their other educational uses.

Other popular uses of 3D environments are limited to creating a 3D presence of an educational institution and facilitating a 3D experience for prospective students.
The project “Moose” developed pedagogical models to use in supporting and enhancing students’ learning through 3D MUVEs (See Appendix A7). It provided guidelines for developing students’ transferable skills through SL including team-working, communication, decision-making, negotiation and collaboration in virtual spaces. The project also acted as a demonstrator in SL to show how learning spaces can be designed in SL to promote and enable team activities and group projects. Throughout the project, transferable SL-tivities also were designed for Computing and Archaeology modules, with guidelines for adapting these SL-tivities by teachers from other disciplines (See Appendix A7).

**Implementation Suggestions**

Begin by identifying the soft skills that your students need to practice. These may include less tangible skills such as critical thinking, problem solving, team building, and collaboration. Assign a task that is easy enough for the students to accomplish based on their inworld experience, yet difficult enough that the execution of the task will require them to use the skills you desire they use. In the virtual world when students do not know how to perform a task, they often figure it out through collaboration and end up practicing these skills along the way.

**Way Eight: As an Open Learning Environment (Virtual Action Learning)**

This is perhaps the most fun and often the scariest way to use Second Life - scary in the sense that it is outside the comfort zone of many educators. It is based on the open learning concepts and theories of action learning. Virtual Action Learning (VAL) draws from experiential learning (i.e., Kolb & Dewey), reflective problem solving (i.e., Schon), and andragogy theory (i.e., Knowles) and combines them with e-learning pedagogies. Dickenson, Pedler & Burgoyne (2008) define VAL as “... action learning which takes place in a virtual environment ... via a range of enabling, interactive and collaborative technologies”. In Second Life, VAL can be used as pedagogical strategy. In its simplest form, it involves getting your students to participate in the decision making process regarding how to accomplish the learning objectives. This is done through cycles of learning sets that involve inquiries, action and reflection.

**Examples**

The project “Experiential Learning” -how SL virtually compares with first life reality.

The underlying objective is to explore whether participating in an experiential learning experience inworld results in similar outcomes for the individual as more traditional experiential learning experiences in 'first world' (See Appendix A8). The underlying objective of the project is to find out whether a virtual learning experience enables individuals disengaged from traditional role-play activities to engage and interact with a mode confidently. The hypothesis is that satisfaction and engagement ratings might differ with respect to levels of extraversion/ introversion.

**Implementation Suggestions**

Whether you plan to implement a pure form of action learning through participative inquiry, or simply use some of its features to engage your students, you likely will want to have a rudimentary understanding of the theory and concepts of action learning sets. Being transparent about the learning process is essential. Explain your learning objectives and ask your students what they would like to know in order to accomplish those goals.

Discuss how they can use Second Life to meet them. Execute those ideas and then have your students reflect upon the process and make suggestions for improving it. If your students have no previous virtual world experience, you may want to include basic skills of the technology in your targets.

Be open with your students and let them dictate the direction. Your job is to facilitate the achievement of the learning objectives. Include how they will be assessed as part
of the decisions they need to make. Those who have experimented with action learning say that it is rich and amazing educational experience.

Way Nine: Social Device
Second Life is a social space first and foremost. In this context, you can use it to hold social activities. These events can be excellent ice breakers to help team members get to know one another. It has an added benefit that it will inevitable also help students practice communication and other social skills (Mitchell & McKenna, 2008). These social events break tensions, plus they are a lot of fun.

Examples
The Theatron project originally started life as an European Union (EU) project and now, in its third incarnation, it incorporates not only theatre reconstruction inside SL but also a number of interesting sub-projects, e.g., integrating film technologies into Second Life. The project involves importing a range of pre-existing 3D theatre models into the SL environment and supplementing these with existing and new interpretative content and a spectrum of original interactive tools, scenarios and automated tutorials, incorporating manipulability and customisable actors, props, sound effects, lighting and scenic technologies, streaming video, and scripts enabling individual and group movement/choreography. The new scenarios to be developed and tested will allow a wide range of Higher Education subject areas -including but extending far beyond the performing arts- to take advantage of the social, collaborative and interactive aspects of this shared virtual environment (See Appendix A9).

Implementation Suggestions
Creating avatars and going inworld for the first time is an excellent class project. Even students who were physically in the same room enjoyed going through the discovery process together. They helped one another, and the sharing of the newbie experience helped overcome reluctances. It is not uncommon for schools (especially those in Europe) to have technical barriers that prevent account creation from within the institution. In this case, information could be gathered in advance and accounts created off campus. The participants then meet in a campus computer lab and log on for the first time all as one group. Let your students play and experiment with their avatar’s appearance and keep the first sessions very socially focused. The main goal for the first class is to simply help students get more convertible in the virtual world. Students appeared to connect strongly as a group when they logged on together for the first time. Later, look for any excuse to have a virtual party. It does wonders for the group’s cohesion.

Way Ten: Machinima Creation (Video Filmed Inworld)
The creation of an inworld film, or machinima, requires a plethora of project management skills. Using machinima as a class assignment will force students to plan, organise and structure their content-based message. It can be used as an assigned task, part of an e-portfolio or added to traditional PowerPoint style presentations. However, machinima creation can be too complex for short courses or for novice inworld students.

Examples
The project “SL as a Holistic Learning Environment” demonstrates the affordances of SL for a multifaceted approach to learning and shows how SL supports the development of wider transferable skills while delivering subject specific content. A problem-based element of learning has been embedded within a conventionally taught module and a machinima-based assessment is used where students work in groups to create short video clips from their activities in SL (See Appendix A10).
Implementation Suggestions
Carefully consider the learning objectives and purpose for using machinima. Take into account the skill level of your students and their inworld experience. Make sure there is enough time in the course to require your students to create a machinima. Clearly outline the grading rubric, content requirements and creative expectations. Provide them with the tools they need to complete the project, including examples of other machinimas, third party screen capturing software and basic film production (or project management) strategies. Showcase their work when it is completed. Students who completed the machinima projects expressed disappointment that their work was viewed only by the instructor.

CONCLUSION
Developing these 10 ways to use Second Life has been an enlightening experience. Further research can expand on these ideas and provide more empirical evidence in years to come. There are many enthusiastic educators (with good intentions) who have not yet taken their students inworld. It is our desire that these pedagogical approaches and the experiments with virtual assignments mentioned above will empower them to take that virtual jump.

We believe that by utilising the features of Second Life, virtual worlds eventually will find their place in mainstream education.

One complicating factor is that most of the research is reported in online blogs and informal publications, making it difficult to validate key assertions.

More methodologies need to be developed to evaluate and validate these learning experiences and modes for validation and assessment need to be adopted nationally and internationally to allow for cross-border module accreditation. While the spaces are excellent for bringing together the use of a range of different media, questions remain as to how best to integrate these media to support the most enriched learning experiences, so more work is needed to identify the key strengths of learning in immersive worlds and guidelines are required to support practitioners and learners.

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REFERENCES


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<tr>
<td>Discipline/s</td>
<td>Architecture and Design and Prototyping</td>
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<tr>
<td>Target group (sector)</td>
<td>Higher Education</td>
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<td>Mode</td>
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| Supporting documents and resources | Slideshare: [http://www.slideshare.net/schase56/virtual-worlds-for-design-200708-presentation](http://www.slideshare.net/schase56/virtual-worlds-for-design-200708-presentation)  
[Studio wikitecture blog:](http://studiowikitecture.wordpress.com/)  
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[Related videos:](http://www.vuvox.com/collage/detail/09f6e15d87?item=12130)  
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[Related wiki:](http://studiowikitecture.wikidot.com/)  
[Slideshare:](http://www.slideshare.net/theoryshaw/test-238891)  
[Article:](http://www.crescendodesign.com/103_chase.pdf)  
[An article from Architectural Record (one of the premier journals for professional architects in the US):](http://archrecord.construction.com/archrecord2/work/0810/wikitectur)  
| Key words | MUVEs, architecture, design, collaboration, wiki, 3D, prototyping |
### HW ISLAND

**Appendix** A2  
**Discipline/s** Multimedia Design and Human Factors and Usability (both MSc and 4th year undergraduate)  
**Target group (sector)** Higher Education  
**Mode** Formal Mixed: SL and RL  
**Description:** "Now all the students have finished working on the HW island, I have opened it to the public. Feel free to go there ([http://slurl.com/secondlife/HeriotWatt%20University/94/139/28/](http://slurl.com/secondlife/HeriotWatt%20University/94/139/28/)) and talk to the storytelling pirate cat, laze in the lizard lounge or teach the alien brain. The island is a bit of a mess just now with lots of student work lying around. But hey - it shows how hard we work... (and if you think that’s messy, you should see my kitchen)"

**Supporting documents and resources**  
- **Teaching website:** [http://judyrobertson.typepad.com](http://judyrobertson.typepad.com)  
- **Suggested tags** MUVEs, HCI, Computer Science

### OPEN HABITAT

**Appendix** A3  
**Discipline/s** Collaborative activities for Art and Design students  
**Target group (sector)** Higher Education  
**Mode** Formal Mixed: Real Life and Second Life  
**Description:** Can MUVEs be successfully used for collaboration? This is the fundamental question being asked in this pilot study. Two groups, each of around ten students are using SL as a design project environment for 8 weeks at a time.

**Supporting documents and resources**  
- **Project website:** [http://www.openhabitat.org](http://www.openhabitat.org)  
- **Papers produced:** [http://www.openhabitat.org/media/deliverables/papers/papers-producedcontributed](http://www.openhabitat.org/media/deliverables/papers/papers-producedcontributed)  
- **Project management meeting notes:** [http://www.openhabitat.org/pm](http://www.openhabitat.org/pm)  
- **TALL link regarding the Habitat Project:** [http://www.tall.ox.ac.uk/research/current/habitat.php](http://www.tall.ox.ac.uk/research/current/habitat.php)  
- **TALL Blog post regarding the Habitat Project:** [http://tallblog.conted.ox.ac.uk/index.php/2008/03/05/the-habitat-project-launches/](http://tallblog.conted.ox.ac.uk/index.php/2008/03/05/the-habitat-project-launches/)  
- **Lessons learned:** [http://www.openhabitat.org/datastores/researchinternal/lessons-learned](http://www.openhabitat.org/datastores/researchinternal/lessons-learned)  
- **Slideshare presentations:** [http://www.slideshare.net/stevenw/virtuals-worlds-and-radical-pedagogy/](http://www.slideshare.net/stevenw/virtuals-worlds-and-radical-pedagogy/)  
- **Video regarding Phase 1 activity (more related to Case 02):** [http://blip.tv/file/1208348](http://blip.tv/file/1208348)  

**Keywords** Collaboration, MUVEs, Art, Design, Undergraduate, HE, Activity, Blended, Design,
<table>
<thead>
<tr>
<th>Title</th>
<th>SECOND CHINA</th>
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</thead>
<tbody>
<tr>
<td>Appendix</td>
<td>A4</td>
</tr>
<tr>
<td>Discipline/s</td>
<td>Foreign Language, Business</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher Education</td>
</tr>
<tr>
<td>Mode</td>
<td>Second Life</td>
</tr>
<tr>
<td>Description:</td>
<td>“Integrating traditional Web content with 3D cultural immersion” A blended immersive learning environment that optimizes 2D and 3D elements for learning efficacy in the context of business Chinese language and culture.</td>
</tr>
</tbody>
</table>
Project blog: [http://secondchinaproject.blogspot.com/](http://secondchinaproject.blogspot.com/)  
Presentations: [http://cero11.cise.ufl.edu/~webmaster/Presentations/presentations.html](http://cero11.cise.ufl.edu/~webmaster/Presentations/presentations.html)  
Learning modules: [http://cero11.cise.ufl.edu/~webmaster/Learning_Modules/CHN_main/content/index.html](http://cero11.cise.ufl.edu/~webmaster/Learning_Modules/CHN_main/content/index.html) |
| Key words  | MUVEs, business Chinese, foreign language learning, immersive culture, intercultural competence |

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<thead>
<tr>
<th>Title</th>
<th>PREVIEW</th>
</tr>
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<tbody>
<tr>
<td>Appendix</td>
<td>A5</td>
</tr>
<tr>
<td>Discipline/s</td>
<td>Problem based learning in Clinical Management: building paramedic scenarios</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher education</td>
</tr>
<tr>
<td>Mode</td>
<td>Formal Second Life</td>
</tr>
</tbody>
</table>
| Description: | PREVIEW Project description: Problem-based Learning (PBL) has become a central learning approach in many curricula, but in collaborative style of learning is threatened by the movement towards more self-directed and distance learning. This project will investigate, implement and evaluate a user-focused approach to developing scenarios and materials, linking the emerging technologies of virtual worlds with interactive PBL online, to create immersive collaborative tutorials. The project team will create  
✓ specific PBL environments within Second Life,  
✓ PBL scenarios  
✓ strategies, guidance materials and good practice guides, all of which will be evaluated under the guidance of users, and made available to the higher education community. |
| Supporting documents and resources | Project website: [http://www.elu.sgu.uk/preview/blog/](http://www.elu.sgu.uk/preview/blog/)  
Publications: [http://www.elu.sgu.ac.uk/preview/blog/?page_id=3](http://www.elu.sgu.ac.uk/preview/blog/?page_id=3)  
JISC- Gema McLean’s blog: [http://elgg.jiscemerge.org.uk/mcleang/weblog/](http://elgg.jiscemerge.org.uk/mcleang/weblog/) |
<p>| Key words  | MUVEs, simulation, roleplay, PBL, HE |</p>
<table>
<thead>
<tr>
<th>Title</th>
<th>GAME-BASED LEARNING FOR VIRTUAL PATIENTS IN SECONDLIFE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appendix</td>
<td>A6</td>
</tr>
<tr>
<td>Discipline/s</td>
<td>Clinical teaching</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher Education</td>
</tr>
<tr>
<td>Mode</td>
<td>Second Life</td>
</tr>
<tr>
<td>Description:</td>
<td>This project aims to deliver game-based learning activities within the 3D world, thereby supporting learning about patients’ diagnoses, investigations and treatment.</td>
</tr>
</tbody>
</table>
Youtube video: [http://www.youtube.com/watch?v=WnPYhSbSABA](http://www.youtube.com/watch?v=WnPYhSbSABA)  
| Key words | Game-based learning, role-play, clinical teaching, game-informed learning |

<table>
<thead>
<tr>
<th>Title</th>
<th>MOOSE</th>
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<tbody>
<tr>
<td>Appendix</td>
<td>A7</td>
</tr>
<tr>
<td>Discipline/s</td>
<td>Computing and Archaeology (and Ancient History), Arts and Human Sciences in general. Transferable outputs are expected across disciplines.</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher Education</td>
</tr>
<tr>
<td>Mode</td>
<td>Formal Second Life</td>
</tr>
<tr>
<td>Description:</td>
<td>Modelling Of SecondLife Environments MOOSE investigates the scaffolding and processes needed to enable groups of students from HE environments to establish their socialisation and engagement for more productive information and knowledge exchange and learning through the medium of online 3-D Multi User Virtual Environments using Second Life.</td>
</tr>
</tbody>
</table>
| Supporting documents and resources | Project website: [http://www.le.ac.uk/beyonddistance/moose/](http://www.le.ac.uk/beyonddistance/moose/)  
Project wiki: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose)  
Project blog: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/mooseblog](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/mooseblog)  
Outputs:  
Participants guide: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/mooseblog/participantsmaster.pdf](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/mooseblog/participantsmaster.pdf)  
Moderators guide: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/mooseblog/moderatormaster.pdf](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/mooseblog/moderatormaster.pdf)  
Project description document: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/aboutmoose/view](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/aboutmoose/view)  
Moose dissemination: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/moose-dissemination](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/moose-dissemination)  
Examples of SL-tivities: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/examples-of-sl-tivities](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/examples-of-sl-tivities)  
User exemplars- MOOSE personal experiences of using SL: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/user-exemplars-1](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/user-exemplars-1)  
Student activities in SL: [http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/moose-show](http://www2.le.ac.uk/departments/beyond-distance-research-alliance/projects/moose/moose-show)  
JISC website- Project overview: [http://www.jisc.ac.uk/whatwedo/programmes/usersandinnovation/moose.aspx](http://www.jisc.ac.uk/whatwedo/programmes/usersandinnovation/moose.aspx)  
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<tr>
<td>Keywords</td>
<td>Project, MUVEs, SL-tivities, Arts, HE</td>
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<tr>
<td>Title</td>
<td>EXPERIENTIAL LEARNING- HOW DOES SL VIRTUALLY COMPARE WITH FIRST LIFE REALITY?</td>
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<tr>
<td>Appendix</td>
<td>A8</td>
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<tr>
<td>Discipline/s</td>
<td>No specific discipline/ Staff development</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher Education</td>
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<td>Mode</td>
<td>Second Life</td>
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<tr>
<td>Description:</td>
<td>This case study tries to find out whether a virtual learning experience enables individuals disengaged from traditional role play activities to engage and interact mode confidently. The hypothesis is that satisfaction and engagement ratings might differ with respect to levels of extraversion/ introversion.</td>
</tr>
<tr>
<td>Supporting documents and resources</td>
<td>About the project: <a href="http://relive08.edublogs.org/">http://relive08.edublogs.org/</a></td>
</tr>
<tr>
<td>Key words</td>
<td>Staff development, role play, MUVEs</td>
</tr>
<tr>
<td>Title</td>
<td>THEATRON</td>
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<tr>
<td>Appendix</td>
<td>A9</td>
</tr>
<tr>
<td>Discipline/s</td>
<td>Performing Arts and beyond</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher education and beyond</td>
</tr>
<tr>
<td>Mode</td>
<td>Second Life</td>
</tr>
<tr>
<td>Description:</td>
<td>The project involves the importing of a range of pre-existing 3D theatre models into the Second Life environment and supplementing these with existing and new interpretative content and a spectrum of original interactive tools, scenarios and automated tutorials, incorporating manipulable and customisable actors, props, sound effects, lighting and scenic technologies, streaming video and scripts enabling individual and group movement/choreography. The new scenarios to be developed and tested will allow a wide range of Higher Education subject areas – including but extending far beyond the performing arts – to take advantage of the social, collaborative and interactive aspects of this shared virtual environment.</td>
</tr>
<tr>
<td>Key words</td>
<td>MUVEs, theatre, project, reconstruction, performing, arts, HE</td>
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<tr>
<th>Title</th>
<th>SECOND LIFE AS A HOLISTIC LEARNING ENVIRONMENT FOR PROBLEM BASED LEARNING TRANSFERABLE SKILLS</th>
</tr>
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<tbody>
<tr>
<td>Appendix</td>
<td>A10</td>
</tr>
<tr>
<td>Discipline/s</td>
<td>Problem-based learning, project management</td>
</tr>
<tr>
<td>Target group (sector)</td>
<td>Higher Education</td>
</tr>
<tr>
<td>Mode</td>
<td>Second Life</td>
</tr>
<tr>
<td>Description:</td>
<td>A problem based element of learning has been embedded within a conventionally taught module and a machinima based assessment is used where students worked in groups to create short video clips from their activities in SL.</td>
</tr>
<tr>
<td>Key words</td>
<td>MUVEs, problem-based learning, project management, transferable skills</td>
</tr>
</tbody>
</table>