

Proceedings of the
Second Life Education Workshop at the
Second Life Community Convention
San Francisco
August 20th, 2006

Daniel Livingstone and Jeremy Kemp (eds.)



Proceedings of the First Second Life Education Workshop, Part of the 2006 Second Life Community Convention, August 18th-20th 2006, Fort Mason Centre, San Francisco, Ca.

Second Life Education Workshop

Chairs:

Daniel Livingstone, University of Paisley (SL: Buddy Sprocket)
Jeremy Kemp, San Jose State University (SL: Jeremy Kabumpo)

SLCC Co-ordinators and Local Arrangements:

Tim Allen, Electric Sheep Company (SL: FlipperPA Peregrine)
Jeska Dzwigalski, Linden Lab (SL: Jeska Linden)

Program Committee:

Bethany Bovard, New Mexico State University (SL: Naiad Remblai)
Chris Carella, Electric Sheep Co. (SL: Satchmo Prototype)
Claudia L'Amoreaux, Linden Lab (SL: Claudia Linden)
John Lester, Linden Lab (SL: Pathfinder Linden)
Danielle Mirliss, Seton Hall University (SL: Danielle Damone)
Vicki Suter, Pepperdine University (SL: Wendy Widget)
Heidi Trotta, Seton Hall University (SL: Heidi TeeCee)

With thanks to the Second Life Community Convention Committee and Volunteers

Special thanks to Chad Statosky, for outstanding technical support!

Cover images courtesy of Dave Taylor and Jeremy Kemp

ISBN: 1-903978-32-7

Published by The University of Paisley, UK

Also available online at: <http://www.simteach.com/SLCC06/>

Contents

Foreword.....	iii
John Bransford & Drue Gawel, University of Washington	
Preface.....	iv
John Lester, aka Pathfinder Linden, Linden Lab	
Word From the Chairs	viii
Daniel Livingstone and Jeremy Kemp	
KEYNOTE	
Down the Rabbit Holeor how the NMC took the red pill and got a Second Life.....	1
Dr Larry Johnson, CEO, New Media Consortium	
CASE STUDIES, POSTERS AND TUTORIAL	
Case Study: International Spaceflight Museum.....	2
Katherine Cochrane, The International Spaceflight Museum	
Second Life Learning Community: A peer-based approach to involving more faculty members in Second Life.....	6
Chang Liu, Ohio University	
Case Study: Camp Global Kids: a case study of bringing a global youth development model into Teen Second Life	11
Lori Feldman, Global Kids Inc.	
Designing an Educational Island inside Second Life for the National Oceanic and Atmospheric Administration (NOAA) Earth System Research Laboratory (ESRL).....	12
Eric J. Hackathorn, NOAA/ESRL	
Putting a Second Life “Metaverse” skin on Learning Management Systems	13
Jeremy Kemp, San Jose State University & Daniel Livingstone, University of Paisley	
Building an Interactive Science Museum in Second Life.....	19
Paul Doherty & Rob Rothfarb, The Exploratorium	
Second Life as an Educational Environment: A Student Perspective	25
Carly Bedford, Robyn Birkedal, Joseph Erhard, Josh Graff, Chris Hempel, Bjorn Minde, Owen Pitz, Kyle Pouliot, David Retamales-Toro and Joshua York, Johnson & Wales University	
Introducing Your RL Students to Second Life	27
Cheryl Carter, Pepperdine University	
PAPERS	
Multidisciplinary Experiential Education in Second Life: A Global Approach.....	30
Hilary Mason & Mehdi Moutahir, Johnson & Wales University,	
“Image Slippage”: Navigating the Dichotomies of an Academic Identity in a Non-academic Virtual World	35
Sarah Brooke Robbins, Ball State University	

FOREWORD

Thoughts On Second Life and Learning

Hats off to the educational pioneers whose work fills this volume. The two of us are relative newcomers to Second Life, but we have already become fans. The possibilities for creating effective Second Life learning opportunities seem to be immense. The papers in this volume provide excellent examples of the highly creative work that is taking place.

Several things about Second Life strike us as extremely positive. First is the sense of sharing among the groups we have met online. It's as if we all went somewhere new, to the moon for example, and needed one another's help to survive and thrive. It has been amazing to see the strong sense of collaborative community that Second Life helps support.

Second, Second Life provides an environment that enhances sharing through interoperability. In real life, many educators have built wonderful tools and programs, but these are often not compatible with one another. If you build something in Second Life you can merge it with other things built in Second Life. This makes cumulativity possible, something that has often failed to emerge in educational communities in real life.

Third, Second Life makes it possible to create interactive learning experiences that would be hard to duplicate in real life. Our LIFE Center (which stands for Learning in Informal and Formal environments – see LIFE-slc.org) has built some interactive environments that, even though very simple, would be very difficult to build in real life. Our informal experiences with these environments suggest that allowing people to have interactive Second Life experiences can have powerful effects on the first life learning, especially with the right kinds of connections between first life and Second Life (e.g. see http://www.simteach.com/wiki/index.php?title=John_Bransford_Transcript_2_October_2006). We plan to conduct formal studies to explore the learning benefits that occur.

Finally, Second Life provides the kind of environment that can allow true collaboration which makes all of us better. For example, some people have created designs that are stunning. Others have added content spaces in Second Life that are extremely relevant to real life. If we can eventually combine the talents of content area specialists, creative designers, learning scientists and assessment experts, we can recognize their contributions by expanding academic peer reviewed products to include learning environments. We think this can help us all redefine the nature of learning and assessment in the coming years.

Thanks again to all the educational pioneers who are being pathfinders in this exciting virtual environment, and thanks to Linden Lab for making these opportunities possible.

John Bransford & Drue Gavel
University of Washington

PREFACE

A Pioneering Community of Practice on the Frontier

Back in the Summer of 2005, I began my focus at Linden Lab on supporting the use of Second Life for educational purposes. At that time there was only a handful of educators actively working in Second Life. The community consisted of about a dozen academics, with just a few projects underway on scattered plots of educational land across the grid.

I created a few resources for educators to find each other and collaborate, such as the SLED mailing list, the "Real Life Education in Second Life" group, and the Campus island for educators exploring Second Life for the first time. I also made myself as accessible as possible to educators and students interested in learning more about how to best leverage Second Life for their academic goals.

In other words, I simply set up some basic infrastructure for educators to find each other and collaborate, offering whatever general guidance I could personally think of along the way.

My job was the easiest part of it all. The real work came next, and was done entirely by the educator community itself.

Watching it unfold was incredible. Educators quickly found each other, sharing knowledge and ideas. They helped each other explore Second Life, leveraging the experiences of their students. Projects unfolded involving educators from academic institutions around the world, working together towards common goals. And throughout it all, there was a true sense of exploring a new frontier. People helped each other, learning from each others successes and failures, and always the focus was on "how can we do things better?"

One year later, that pioneering spirit is stronger than ever, and the educator community in Second Life has grown into a true Community of Practice. Our SLED mailing list has over 500 subscribers. We have an amazing wiki created and hosted by an educator that serves as a fantastic central repository for information and knowledge. There are over 80 islands in Second Life dedicated to educational and academic use, and many of them offer land to other educators seeking a place to call home. An entire Education Track was organized by educators themselves for the Second Life Community Convention this Fall. And to this day, new educators and students continue to stream into our virtual world, learning from the experiences of those who came before and creating even more novel educational uses of Second Life.

It has been and continues to be an honor for me to work with the educator community in Second Life. I've never met a more motivated and creative group of people in my life. Your work and feedback inspires me every day, and it gives me precious insight into how Linden Lab can improve Second Life as a platform for both educators and all Residents.

So...thank you all for this opportunity to virtually peek over your shoulders and watch you build the future. :)

For those of you reading this who have not yet explored using Second Life for education, I'd like to share some suggestions and strategies to help you get started quickly. You can read this introductory orientation on the following pages.

John Lester
Aka: Pathfinder Linden
<http://www.pathfinderlinden.com/>

Pathfinder Linden's Guide to Getting Started in Second Life

The goal of all educators is to teach students essential skills that will help them become productive and successful members of society. Leveraging new technologies for education, particularly ones that students already use as part of their daily lives, is a key way to make learning both effective and engaging.

We live in a world that is becoming more networked every day, and the Internet has grown into an essential medium for communication, socialization, and creative expression. Virtual worlds like Second Life represent the future of human interaction in a globally networked world, and students who have grown up with the Internet naturally swim in these waters. These “digital natives” eagerly embrace tools such as Instant Messaging, social networking spaces, and massively multiplayer online games. And as the students of today grow into the leaders of tomorrow, they will bring these technologies into the workplace, making their use an essential part of the future of work and business.

Colleagues and Collaborators

Educators are most successful when they find colleagues and collaborators in real life to help them work through new teaching ideas and projects. Educators using Second Life face the same challenge, so the first thing to do is get connected with the growing community of real life educators actively exploring Second Life. Share your ideas and project plans, listen to the experience of people who may be working along similar lines, and you'll be off to a great start.

The first place to go is the Educators Mailing List, which you can subscribe to here (<http://tinyurl.com/qfw4>). This very active list is a great place to interact with other real life educators exploring how to effectively use Second Life for academic purposes. Your next stop should be the Education Wiki (<http://secondlife.com/educationwiki>), which serves as a central clearinghouse for education related information and links to useful resources. By leveraging the work of educators who have already used Second Life and engaging in discussions with other educators, you'll hit the ground running. Once your projects in Second Life are underway, be sure to share your own insights and knowledge on both the wiki and mailing list. This will help grow the collective knowledgebase for everyone.

There is also general page with more details on Education in Second Life located at <http://secondlife.com/education>. And for a frequently updated list of interesting third party websites and press articles, be sure to check out <http://del.icio.us/secondlife/education>.

Ready to dive into Second Life now? The first thing you should do when you log in is join the “Real Life Education in Second Life” group. This group is open for anyone to join, and is a great way to stay in touch with educators while you're inworld. Click the Find button and search under Groups for “Real Life Education,” click the Join button, and you'll be all set! Educators are encouraged to send Instant Messages to the group to coordinate inworld meetings and announce education-related events.

Creating your Own Space

To have a place of permanence where you and your students can build and work in Second Life requires owning land. One way educators accomplish this is to find colleagues who already own land in Second Life and share some of their available space. There are also other options for educators who wish to “try out” Second Life or own a large space of their own.

First of all, there is a Campus:Second Life offer where Linden Lab provides educators with an acre of land for free for the duration of a specific class. This is a one-time trial opportunity for educators wishing to explore Second Life for the first time, and you won't have to pay anything to temporarily use the land. Linden Lab requires a syllabus for the planned class, as well as a general summary at the end

of the class on how Second Life worked out for you as a platform. Full details on how you can sign up for Campus:Second Life can be found at <http://secondlife.com/csl>.

If you wish to own a permanent plot of land, Linden Lab has special educational pricing for private islands. A private island will allow you to completely control access to your learning environment (e.g., optionally restrict access to just students and faculty) and gives you 16 acres of land to use however you like. This is an idea setup if you want to create a true Intranet in Second Life and have a persistent virtual classroom. For verified real world academic institutions and 501(c)3 non-profit organizations using islands to support their organization's official work, the current fee for a 16 acre private island is a one-time US\$980 setup charge and US\$150 per month for maintenance. For more details, please **email education@lindenlab.com**.

If you wish to buy a small plot of land on the mainland in Second Life, that's also possible. Linden Lab doesn't offer educational discounts for this type of land, and the land management tools are not as comprehensive as the ones for private islands. For more information on how to purchase land on the mainland and the associated fees, please see <http://secondlife.com/community/land.php>.

Once you've got land and are ready to start the actual development of your inworld space, you can either do all the building and scripting work yourself or work with one of the many Resident-run development companies in Second Life. A comprehensive collection of developers is listed at <http://secondlife.com/developers/directory.php>, and be sure to ask other folks on the Educators Mailing List for recommendations. Linden Lab provides the building tools and land, while the development and creative work is entirely up to you!

Finding Education Places

While you're inworld, be sure to visit the Campus region (<http://tinyurl.com/jnafl>). This area is the main hub for classes participating in the Campus:Second Life program, and it's a great place to meet students and educators currently working on projects. There are also classes and projects being held on plots of land on the mainland across Second Life as well as on private islands. When you visit the Campus region, look for a kiosk sign that reads "Looking for Real Life Education Places in Second Life?" Click on it and you'll get a notecard with landmarks to more places. Be sure to also click on the kiosk nearby that reads "SLED PICAYUNE." That will give you the latest copy of an excellent weekly publication written by educators all about current education projects in Second Life.

Successful Strategies

As the saying goes, "pioneers are the people who catch arrows in their backs." Being a pioneering educator in Second Life is definitely a challenge, and academia in general sometimes discourages educators from exploring new teaching methodologies that appear a bit "out there." Here are 7 tips to help you be as successful as possible in using Second Life for real life education.

1) Spend as much time as possible exploring Second Life.

This sounds obvious, but it's most critical. To fully understand the potential of Second Life as a platform, you'll need to dedicate some time getting to learn how Second Life works, how people interact, and what the overall community is like. Talk to every Resident you meet and don't be afraid to ask questions.

2) Talk to other educators who are currently using Second Life for real life education purposes.

Get plugged into the existing educator community as soon as possible. They will help you better frame your ideas, as well as give you new ones!

3) Come up with clear and measureable goals for your academic use of Second Life.

Every course curriculum has clear goals, and your work in Second Life should have clear goals as well. Keep them in focus, and do your best to measure your accomplishments. This will be good ammunition for you when trying to convince other faculty that your projects in Second Life have merit.

4) Publish or Perish!

Write a paper about your experiences in Second Life. Get it published in a peer reviewed journal. Keep a public blog about your work, and encourage other colleagues to visit it. Get your students to blog about their work in Second Life. Contribute to the Education Wiki. As a pioneer, what you learn in using Second Life for real life education is a priceless resource for others who will follow. Share the knowledge!

5) Remember that Second Life is a platform for a wide range of activities.

While you explore Second Life, you'll meet an incredible range of residents all using Second Life in different ways and for different purposes. In many ways, Second Life is like the Web, representing the broadest possible range of interests and people you can imagine. Embrace this diversity! If you wish to have a very private area where you can completely control your environment, remember the private island option.

6) Work at Unlearning.

Second Life is a new medium that is unlike anything else you've experienced. As human beings, when we are faced with a completely new medium for creativity and interaction, we instinctively compare it to preexisting mediums and then apply our old ways of thinking to recreate old models.

When the motion picture camera was invented, it was initially stuck on a fixed pole and used to film plays on a single stage. Only after many years did directors think "wait, maybe I can film with multiple cameras and cut between them. Or maybe I can move the camera around while filming!" That insight was the birth of film montage. In a similar example, when educators first explored the Web, they simply scanned books and put them online. Both of these are examples of how we typically embrace new mediums.

Unlearn your old ways of thinking. Don't recreate preexisting models of education. If you want to teach biology, why build a virtual classroom with desks and a blackboard in Second Life when you could build a whole interactive human cell?

7) Learn from your Students.

Your students have most likely grown up with the Internet. They have always lived in a world where computers, Instant Messaging, email, and multiplayer games exist and are used daily. If they've never experienced Second Life before, they'll probably take to it like a fish to water and use it in ways you could never imagine. Learn as much as you can from them and their experiences, as the future of virtual worlds like Second Life and all new technologies truly belongs to the Digital Natives.

In Conclusion

My name in Second Life is Pathfinder Linden, and my primary focus at Linden Lab is how to use Second Life as a platform for real life education. Please feel free to contact me inworld and visit my personal website at <http://www.pathfinderlinden.com>. I hope you've found this little introductory guide helpful, and I hope to meet you soon in Second Life!

Pathfinder Linden

WORD FROM THE CHAIRS

Welcome to the post-proceedings from the Second Life Education Workshop, 2006. We were blown away by the amazing response the workshop received – we originally expected around 30 people to attend what was to be a small event on the periphery of the Second Life Community Convention. Instead, around 90 individuals attended over the course of the day – almost a quarter of the convention itself.

We want to thank everyone who helped make the day the success it turned out to be, from the committee members and volunteers whose names are listed at the front of this volume, to the audience themselves for bearing with the inevitable glitches as they occurred. Thanks also to Bruno Echegary for contributing to the panel, and the volunteers who helped keep the flow of communication between the meeting in San Francisco and the online participants around the globe who joined us in Second Life itself.

And of course it was Second Life itself which was responsible for drawing everyone together. This fantastical virtual world where it seems that imagination is the only limit.

We are very excited to witness the birth of a radically new mode of instruction. "Radical" is the only way to describe our newfound ability to fly around with students in role-playing costumes, manipulate intricate, life-sized models of spacecraft or safely experience being submerged in the rising tide of a tsunami.

We are seeing new vistas for teaching and learning as national foundations and governmental organizations jump into this setting. And the breathless enthusiasm of our students and the popular press may seem overblown, but notable researchers are studiously gathering hard data on the efficacy of multi-user virtual environments for achieving learning outcomes. The prospects for a fundamental improvement of tools for learning in a number of domains seem very likely.

And gradually, our technical community of extreme early adopters is spreading the word and gaining traction with mainstream educators, university administrators, corporate trainers and further education groups.

Please join us next year as the community explodes into new, helpful areas and educators around the world interact with colleagues and students in 3D persistent worlds.

Daniel Livingstone, Paisley
Jeremy Kemp, SJSU
October 2006

DOWN THE RABBIT HOLEOR HOW THE NMC TOOK THE RED PILL AND GOT A SECOND LIFE

**Dr. Laurence F. Johnson
CEO New Media Consortium**

In the past six months, the New Media Consortium (NMC) has conceptualized and built a virtual campus in SL to explore the potential of this environment for serious work and knowledge sharing. NMC's commitment to the project is long-term, and the effort includes not only a fully-realized campus in SL, but also an active blog, wiki, community directory, as well as streaming servers and other technical infrastructure. The campus includes a growing community, and certification for faculty will come online in the fall. An active research agenda is exploring social interaction in 3-D space along dimensions such as formal and informal; traditional and nontraditional; real and surreal; serious and playlike; and other continua.

Join Dr. Larry Johnson, CEO of the NMC, to learn why this international consortium of more than 200 universities and museums has embarked on this project, why they chose Second Life as the platform for this work, what they have learned already about the potential of virtual worlds for learning, and where the project is heading next.

Laurence F. Johnson, Ph.D.

Dr. Larry Johnson is Chief Executive Officer of the New Media Consortium (NMC), an international consortium of colleges, universities, museums, research centers, and other learning-focused organizations dedicated to using new technologies to inspire, energize, stimulate, and support learning and creative expression. He is an acknowledged expert on the effective application of information technology in higher education, and has authored a number of books, monographs, and articles on that topic. Dr. Johnson has over 25 years of experience in the higher education arena, having served in roles from faculty to dean, CIO, provost, and president.



CASE STUDY: INTERNATIONAL SPACEFLIGHT MUSEUM

Katherine Cochrane (Kat Lemieux in SL)

Founder, The International Spaceflight Museum

email: kat.lemieux@gmail.com

<http://slispaceflightmuseum.org>

+1 321.432.9703

What is the International Spaceflight Museum?

A virtual museum

The International Spaceflight Museum (ISM) is a real museum, with educational goals and high standards of building and scholarship, that happens to exist only within the virtual world of Second Life.

An all-volunteer organization

Unlike many other educational projects in SL, the ISM was conceived and executed completely independent of any real world organization, by people who met one another in SL and just decided that creating and operating such a museum would be a worthwhile, fun project.

A collection of space-related information from around the (real) world

The items in the museum's collection fall into several broad categories: spacecraft (historic rockets, space probes, space stations and landers), astronomy-related objects (planet/solar system models and a planetarium), space-related artwork and posters, and guest exhibits. Our spacecraft include over 50 full-scale models of launch vehicles and sounding rockets from the space agencies of over a dozen countries, and two from a private space company. Scaled Composites, private enterprise builders of the X-Prize winner, SpaceShip One and its launch plane, the White Knight, provided us with drawings that enabled us to create accurate models of these historic craft.

A demonstration of how virtual worlds can be used for learning

Just as Slate magazine found success as they discovered new ways of doing journalism online thanks to the nature of the new internet medium, we believe 3D virtual worlds present opportunities to forge new methods of putting

learning methods in the hands of people who use them. Every educator I've shown our museum to has told me about his or her excitement engendered by the ideas they have after seeing what we've done with interactivity, full-sized models in the round, and creative presentations. From the model of Canada's robotic arm used on Space Shuttle and the International Space Station, which visitors can try out themselves, to the incredible tour of the solar system with platforms at each scale-modeled planet, the immersive effect of Second Life opens up broad vistas of imagination and visualization impossible or incredibly expensive to accomplish in the mundane world.

History of the ISM

Origins

Oddly enough, this educational project started out as an exhibit for an art festival, Burning Life '05, the Second Life analog of the annual Burning Man extravaganza. Two of our founders, Gearsawe Stonecutter and Kat Lemieux, were invited to use the land parcel at Burning Life that Greene Hornet had won but had no plans for, and built a "derelict" space station in the week before the show opened. One of the exhibit's visitors was Shaun Altman, who confessed to Kat that he had a dream of starting a museum of spaceflight. A few days later, Kat sent him a proposal on September 6th, and with Shaun's concurrence started the Spaceflight Museum Planning Group.

Development of the Spaceflight Museum Planning Group

Naturally, Shaun, Kat, Gearsawe and Greene were the first members of the planning group. After Burning Life closed, Greene graciously allowed us to use some of his land as a "sandbox" to start building items to include in the proposed museum's collection. Gearsawe started working on the Canadarm model, which

inevitably drew attention from passers-by, several of whom subsequently asked to join the group.

Participants and Contributors

The museum planning group has been a closed group since its beginning, with membership grown by invitation only. Most of the planning group members have contributed exhibits, land use, design, presentation or organization ideas, and in some cases financial aid to the museum. Contributions by non-group members have also been significant, especially after the museum opened on its own island. As mentioned earlier, the ISM is not supported by any external organization, so several of the group members made and continue to make some substantial financial donations toward the purchase and land use costs of having the island at Spaceport Alpha. Monetary contributions from the general SL public and gift shop sales have covered about half of the monthly operating expenses (land use fees) so far.

Concept Development

Beyond the initial proposal, which outlined the purpose and scope for the museum, the planning and development has been accomplished as a collaboration among all the museum planning group's members. In mid-October, weekly meetings open to all group members were instituted, and a group Wiki was started to provide an archive of ideas and meeting notes. The Wiki later grew to include supplementary documentation for some of the exhibits, using weblinks embedded in notecards served by touch-enabled signs. Through encouraging open discussions and brainstorming sessions, the design for the individual exhibits and eventually the entire museum were created with ideas created and accepted by the entire group.

Acquiring and Building Spaceport Alpha

In April 2006 the Spaceflight Museum Planning Group decided to buy an island to house the museum. Using funds collected by the tipjars and contributions from group members, an order was placed with Linden Lab for an island by group officer, Troy McLuhan. Remarkably, the island was available in a very short time after the order was placed, and serious work began on terraforming the land and placing existing

exhibits, and creating new ones. The work from the previous six months paid off as almost everyone pitched in to meet the announced opening date of 18 June.

Since the opening, development has continued unabated, and shows no signs of slowing down.

ISM Grand Opening

After its beginning in early September 2005, the ISM Grand Opening on Spaceport Alpha took place from 18-25 June 2006. During opening week, planning group members and a guest speaker from NASA gave presentations and tours of the island which were very well attended, thanks to some wonderful cooperation from SL bloggers and SL press (most notably the Metaverse Messenger) who helped publicize the events.

Subsequent Events

Since the opening, the planning group has put on a number of events, including a remarkably successful showing of the recent NASA Space Shuttle launch. At least once a week there is an educational lecture, either by a museum staff member or a guest speaker. Scheduled tours are conducted by trained docents, and frequently ad hoc tours are offered by staff who happen to be available when visitors show an interest in being given an inside look at some aspect of the museum.

Building an Educational Project with Volunteer Labor and Donations

Volunteer Motivations and Motivating

The ISM was developed by a 100% volunteer organization, so analyzing and implementing motivations for a nonpaid workforce has been necessary since day one. It is obvious that people who come to Second Life and decide to volunteer to participate in such a project without pay need to get something out of it, or they will lose interest and move on to other activities. Incentives provided by the ISM, therefore, include a high level of public recognition for work contributed. Every exhibit is labeled with the builder's name(s), and documents include bylines of the people who wrote them. Contributors who run stores or sell products and services are allowed to post an interactive sign in a prominent place in the museum advertising

their business. At every possible opportunity, personal recognition is provided to let the public see who has worked on this project, whether in our website or by mentioning them to reporters during interviews, or from the stage during presentations.

Another benefit provided to planning group members is the opportunity to learn skills from each other. Whether it is basic SL building tools, or sophisticated techniques for using PhotoShop or other 3rd party software, or research methods, group members have been very willing to help each other learn and develop their abilities to better contribute to the museum's development.

Finally, but certainly not the least significant incentive for working on the ISM project, is the fact that it is fun.

Funding an all-volunteer, in-world educational project

In anticipation of eventually buying an island, the museum planning group created a "tipjar" to collect donations from visitors and other well-wishers. Proceeds from the tipjars placed at the museum's early temporary location and at supporter's stores netted almost L\$28,000 before the Spaceport Alpha grand opening, which were applied to the cost of buying the island. Since the grand opening, donations received this way have increased, so that between the tipjars and sales of items in the gift shop (which first opened at the same time as the grand opening) pay about half of the monthly land use fees for the island. Presently, the shortfall is made up by contributions from other spacerelated organizations who have been provided room for exhibits on the island, and by monthly donations from several group members.

Into the Future

Incorporating a non-profit organization for a virtual world project

Early in the planning and development stages of the ISM, the idea of creating a non-profit organization had been discussed, but it was only after the opening that we realized the museum will not be self-supporting using our current funding methods. About this time several of the group officers met with Larry Pixel of NMC, who advised that to obtain grants it is a

requirement to either be a project of a Real Life, accredited educational institution, or a 501(c)(3) non-profit corporation. Since that meeting a committee has been preparing background materials for an application for 501(c)(3) incorporation, and expect to have that completed within a few months.

Building links to other projects and organizations

So far, the ISM has provided pavilions for three external, Real Life organizations who wanted a presence at the museum for the purposes of reaching an appropriate audience, providing opportunities for collaboration between the museum's developers and the external organizations' in-world staff, and to support the museum. These organizations are the Second Life Planetarium (funded by Elon University and built by Elon astronomy professor, Chaac Amarula in SL); the National Physical Laboratory (NPL) from the U.K., and NOAA, a U.S. government agency.

The ISM has also worked on co-marketing projects with the New Media Consortium, who own several islands in Second Life. A copy of one of the ISM's models, the Voyager I, is on permanent loan to the NMC for display at the Brooks Library on NMC Campus, and a copy of Chaac Amarula's Planetarium is also displayed on NMC Campus, which loan was facilitated by the contacts between officers of these groups.

Other exhibits have been loaned out to various SL organizations for short-term display during festivals and other events. These cooperative activities lead to increased awareness of the museum among the SL public, and build good public relations in the SL community at large.

Growth Opportunities

Almost as soon as the museum opened, it was apparent that if more land was available, there were many opportunities to enhance the quantity and complexity of exhibits, and provide room for collaborative projects such as the one with NPL. The name "Spaceport Alpha" was designed, in fact, to allow expansion to "Spaceport Bravo" and "Spaceport Charlie", etc. as we obtain funding and projects for expansion.

In the meantime, new exhibits are constantly being added to the museum's collection, and existing ones are being enhanced with more detailed builds and documentation. The potential for growth both physically and in terms of innovative information presentation seem limitless, and the ISM planning group intends to continue to develop this project for the foreseeable future as a "real life virtual museum".

Author's Biography

Katherine Cochrane, B.A., Special Studies (Linguistics), the University of Hawaii at Manoa, 1985, has been involved in new media since the late 1980s. She wrote about using hypermedia for organizing and distributing information pertaining to the design and building of the International Space Station as part of the "Automation, Robotics and Design Knowledge Capture Plan", a document prepared for Boeing Aerospace and Engineering to deliver as part of the contract requirements for NASA's Space Station program. Since that time, she has worked as an independent technologist in the related fields of compact disc data storage and electronic publishing. She has had published a number of articles in trade and academic journals about these topics. In 1995 she began publishing the first independent Website about compact disc technology, industry and applications at <http://cd-info.com>, a site that continues to serve the public by providing accurate information in this field.

SECOND LIFE LEARNING COMMUNITY: A PEER-BASED APPROACH TO INVOLVING MORE FACULTY MEMBERS IN SECOND LIFE

Chang Liu

Assistant Professor

**School of Electrical Engineering and Computer Science
Ohio University, Athens, Ohio 45701**

liuc@ohio.edu

Tel: 740.593.1249

Introduction

Second Life supports rich communication, virtual collaboration, and 3-D content creation. The Second Life synthetic world has great potential for teaching and learning. For faculty members to adopt Second Life and take advantage of innovative features in their classes, however, they must first get to know Second Life and become familiar with features that are relevant to their own teaching. This is not a trivial process for many university educators.

At Ohio University, we are experimenting with the learning community approach to involving more faculty members in Second Life. About fifteen faculty members who are interested in finding more about the potentials of Second Life meet once every two to three weeks in virtual meetings in Second Life and quarterly in physical face-to-face meetings. In addition, learning community members are encouraged to involve their graduate students to identify relevant opportunities in not only teaching but also research.

In this article, we describe how we recruited faculty members to join the learning community and how we structured the learning community. We also discuss the barrier that we encountered in the process of organizing the learning community, and how we overcame some of them.

Motivation

Second Life provides a rich environment for teaching and learning. It also has potentials in a wide variety of research projects. The creation of engaging teaching and learning aids or effective research tools in Second Life,

however, requires not only strong scripting skills, visual design skills, and 3-D modelling skills, but also expertise in subject contents. As a result, a multi-discipline team with a diverse skill set is likely to be more productive in Second Life than individual instructors or researchers with expertise only in one discipline.

We had an initial success in using Second Life in a 2006 Summer Session One course on computer games. Figures 1 and 2 show the final demonstration session of this class in both Second Life and the real world. Figures 3 and 4 show the maps of all projects in that demonstration session.

We also won an ACM SIGCSE Special Projects grant [1], in which we proposed to use Second Life as a dissemination tool. In addition, we are planning to use Second Life in another educational project [2]. Our main expertise, however, was in computer science.

We felt that it was difficult for us to create attractive tools with elegant, professional visual appeal without involving artists from other disciplines. In addition, we sensed that Second Life had great potential for environmental education, health education, and other outreach projects. But we lacked expertise in subject contents that were necessary in implementing these projects.



Figure 1. A Second Life screenshot from the final project demonstration of the summer class on games.



Figure 2. A real-world screenshot from the final project demonstration session of the summer class on games.

To seek like-minded faculty members who are interested in using Second Life in teaching and research, and to identify suitable projects to collaborate on, we decided to establish a Second Life Learning Community at Ohio University [3], through which we could introduce Second Life to interested faculty members and discuss how tools like Second Life can be used in our own individual classes and disciplines. We chose this approach because 1) faculty learning communities [4][5] are an effective way of facilitating interactions among faculty members from different disciplines, and 2) we had experience in establishing and operating a coherent, productive faculty learning community [6].

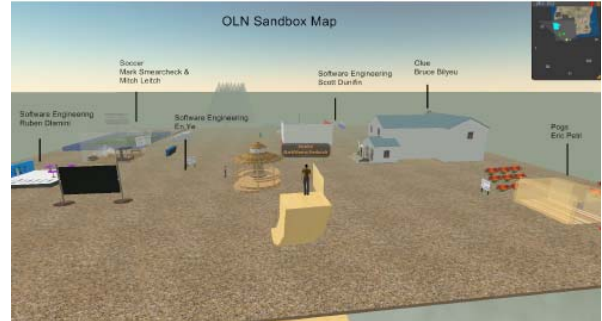


Figure 3. Map of the projects in the final demonstration on the sandbox-on-the-sky level.



Figure 4. Map of the projects in the final demonstration on the surface level.

Barriers

We encountered a number of barriers as we attempted to establish the Second Life Learning Community at Ohio University and organize various Second Life Learning Community events, including:

- The “It’s just a game” mentality;
- Computer upgrades for faculty members;
- “Black Wednesdays” and unscheduled downtime;
- Updating Second Life in student labs;
- Getting started in Second Life.

First, while people in the field of games for learning are familiar with the term “serious games” and are convinced of the potential of game-like tools in teaching and learning, many faculty members outside this field are not. It is not uncommon for someone to think that Second Life “is just a game” and is not suitable for educational use. To counter this mentality, during recruiting meetings, we visited the boardroom on the NMC Campus [7] and showed the pictures of NMC board members

from Dartmouth, the University of Iowa, Case Western Reserve, IBM Research, Macromedia, etc. in Second Life. We also visited the University of Southern California island as well as other educational outlets in Second Life. The presence of “serious” people and institutions in Second Life helped convince some that Second Life could be used for serious purposes.

Second, Second Life did not run smoothly on some community members’ computers. Most of these computers were not obsolete, but they were only intended for office applications and had integrated graphics with small video memory. To enable these community members to explore Second Life to find out what was possible, we asked for support from the Academic Technology unit of Ohio University, which agreed to pay for graphic card upgrades.

Third, Linden Lab updates both server software and client software for Second Life frequently. Most scheduled upgrades take place during business hours, often on Wednesdays, not during weekends. This is probably because the education community is still not a majority among its user base. There is also less frequent, but still quite possible unscheduled downtime.

When we schedule a presentation or a meeting involving Second Life and run into such Second Life downtime, some participants often walk away with the impression that Second Life is not ready for serious business, which is the opposite of the purpose of these presentations and meetings. In addition, if we have an assignment involving Second Life due on Thursday, and the Second Life downtime on Wednesday is longer than planned, students often experience greater stress. We have not found an effective solution to this problem. We can only hope that as the Second Life educational community grows, Linden Lab will consider moving the upgrades to weekends.

Fourth, on Windows computers, only system administrators can update the Second Life client software. In student labs, student users do not have that privilege for good reasons. As a result, students cannot update the client software themselves. The technical support person for the labs has to update all computers in the lab as soon as Linden Lab updates its software, which often happens weekly. This is not a task that a

typical technical support team can realistically keep up with. After consulting the Second Life Mailing List, we learned to install the Second Life client on a shared drive so that the update only had to be done once. Even with this solution, students still cannot update the software by themselves, which still could lead to problems from time to time.

Fifth, not every faculty member has prior computer gaming experience. It may be fairly easy or even trivial for people with gaming experience to go through the orientation island and learn to move around in Second Life. But for first-time gamers, the initial experience could be frustrating if left alone. We scheduled a half-hour lab session in the physical kickoff meeting of the learning community, which helped the first-timers to 1) see what can be done in Second Life; and 2) receive help immediately when trapped in a situation that they could not get out of.

We sensed that this group lab session was indeed helpful to those first-timers.

Separately, the presence of firewall could cause problems for Second Life, although we did not run into firewall-related issues in our offices and student labs.

Structure Of The Second Life Learning Community

We decided to meet virtually once every two to three weeks in Second Life, during which time we exchange ideas about innovative use of Second Life in teaching and learning, discuss the blue print of our islands, and share new things we discovered in Second Life. In addition, we meet physically once every quarter so that community members have an opportunity to get to know each other in the real world and see the real faces behind avatars.

We also try to involve graduate students because they are a source of tremendous creativity. We invite select graduate students to physical meetings and encourage all of them to attend the virtual meetings.

Since the learning community kickoff meeting on June 21, 2006, we have had two physical meetings and three virtual meetings. Currently, there are about twenty people who expressed

interest in Second Life, fifteen who attended at least one physical meeting, and ten who attended at least one virtual meeting. In addition, we offered one course involving Second Life in summer, and plan to offer four more Second Life-related courses, two in fall and two in winter.

Next steps

We now have access to sufficient land in Second Life. The learning community members have computers that can run Second Life. Our students also have access to Second Life in select computer labs. We can already hold office hours in Second Life. We have all necessary conditions to explore the use of Second Life in teaching and learning.

Next, we will work on creating teaching aids in Second Life that can be used in classrooms. More importantly, we will use the virtual and physical learning community meetings as a venue to identify opportunities for collaboration. In addition, as we build up the community, we will attempt to involve external experts in community events so that we are up-to-date on recent developments.

Summary

Collaborations among faculty members from different disciplines help facilitate effective adoption of Second Life in teaching and learning. To create opportunities for such collaborations, we have established a Second Life Learning Community to serve as a venue for interaction among like-minded faculty members.

Through activities of this learning community, we have introduced Second Life to some faculty members who otherwise would not have spent time looking into computer games. We have also helped with computer upgrades to enable some faculty members to explore Second Life.

The Second Life Learning Community at Ohio University is still at its initial forming stage. We have yet to find out how we can effectively use Second Life in our individual classes and disciplines and how we can collaborate with each other. At this moment, we can only claim that we have enabled further exploration of Second Life in our university environment.

Acknowledgements

We thank all members of the Ohio University SLLC for their participation in this learning community; Marjorie DeWert, Director of Academic Technology of Ohio University, for funding computer upgrades and SLLC physical meetings; Bill Sams, Associate Provost for Information Technology and Chief Information Officer of Ohio University, for encouraging the initial SLLC idea; Merle Graybill, Director of University Outreach at Ohio University, for providing support for island purchase in SL; Kendree Sampson, Associate Dean for Academics of Russ College, Bryan Jordan, Russ College Computer System Administrator, and the Russ College IT team, including Pradeep Kumar and Burzin Khajotia, for installing and maintaining SL in Engineering PC labs; Cable Green, Director of Technology of Ohio Learning Network, for sharing the OLN Island in SL; Larry Pixel (aka Larry Johnson), CEO of the New Media Consortium for showing us the NMC Campus in SL; Bruce Bilyeu for capturing the screenshot in Figure 1; Mark Smearcheck for creating the two project maps in Figures 3 and 4; students of Ohio University Summer Session I CS490/590 “Massively Multiplayer Games” for creating and presenting excellent projects in SL; and several members of the SL Educator’s Mailing List for sharing tips on how to update Second Life in student labs.

References

- [1] ACM SIGCSE Special Project Grants.
<http://www.sigcse.org/join/SpecialProjects.shtml>
- [2] The STEAM project.
<http://www.ent.ohiou.edu/~steam>
- [3] Second Life Learning Community.
<http://www.library.ohiou.edu/sllc> (contact Chang Liu for access)
- [4] M. D. Cox, Faculty Learning Community Program Director's and Facilitator's Handbook, Miami University, Ohio, 2003.
- [5] M. D. Cox, Introduction to Faculty Learning Communities, in M. D. Cox and L. Richlin, (Eds.) Building Faculty Learning Communities (p. 5-23). New Directions for Teaching and Learning: No. 97, San Francisco: Jossey-Bass, 2004.

[6] Martha Kline, Chang Liu, Jane Johnsen, Christine Wolfe, and Patrick Drumm, "Mastering Case- Based Instruction Techniques in a Faculty Learning Community," in the Proceedings of the 2005 Frontiers in Education Conference (FIE), Indianapolis, Indiana, USA, session T3F, pages 9-14, October 19 - 22, 2005.

[7] The NMC Campus in Second Life.
<http://nmc.org/sl>,
<http://slurl.com/secondlife/NMC%20Campus>

Dr. Chang Liu

Dr. Chang Liu is an Assistant Professor with the School of Electrical Engineering and Computer Science in the Russ College of Engineering and Technology at Ohio University. Chang obtained his doctoral degree from the Department of Information & Computer Science (now School of Information & Computer Science) at the University of California at Irvine in 2002. Chang is known as Chang Meyer in Second Life.

**CASE STUDY: CAMP GLOBAL KIDS:
A CASE STUDY OF BRINGING A GLOBAL YOUTH DEVELOPMENT MODEL
INTO TEEN SECOND LIFE**

Lori Feldman

Camp Global Kids

Second Life Curriculum Specialist

Global Kids, Inc.

New York, NY

Background

Global Kids, a nonprofit educational organization based in New York City, has been exploring how to bring a youth development model dealing with global issues into the teen grid of Second Life. In February 2006, Global Kids Island was launched, making Global Kids the first non-profit to build public land and offer activities within Teen Second Life.

Global Kids Island has become a place for teen residents to explore important social and world issues. The island is home to interactive workshops, and game-based activities, such as the challenges that lead youth from an Earth Throne that quizzes the teens about digital media issues to a bat filled a cave within an active volcano.

Camp Global Kids

In the summer of 2006, Global Kids asked the residents of Teen Second Life, "Do you ever feel like you want to make a difference in the world, but you're not sure how?"

Camp Global Kids took place on Global Kids Island from July 10th through August 4th, 2006, and was the first virtual summer camp in the teen grid of Second Life. This groundbreaking experiment gathered together a diverse group of teens logging in from all over the world. The intensive 4-week program engaged the teens in activity-based discussions and experiences aimed at raising their awareness of global issues, and helping them to realize what they can do to influence change in their world.

Camp GK culminated with a final action project, where the "campers" selected an issue of great importance to them: Child Sex Trafficking. The teens chose to educate and inspire other teens to take action by holding a "teach-in" event, and through the construction of a build that experientially represents how the issue impacts its victims. The action project build incorporates a maze filled with real-world content, content related freebies, and is ultimately connected to real-world action that visitors can take to make a difference.

**SLCC 2006 Education Workshop
Presentation**

In my presentation, I will talk about Camp Global Kids as a case study for bringing a global youth development model into the virtual world of Teen Second Life. I was contracted by Global Kids to develop the curriculum for Camp Global Kids, and to assist in the administration of the camp, as well as the daily facilitation of camp activities. This experience has given me valuable insight into the process of bringing an educational initiative into the Second Life space.

My presentation will provide some background on how Camp Global Kids came to be, describe what transpired working with the teens for the 4-week program, and discuss my role in the project. Ultimately, I would like to share some of the lessons and best practices that emerged while translating the real life Global Kids youth development model of workshop into Second Life.

DESIGNING AN EDUCATIONAL ISLAND INSIDE SECOND LIFE FOR THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION (NOAA) EARTH SYSTEM RESEARCH LABORATORY (ESRL)

Eric Hackathorn, IT Specialist and SL Explorer,
NOAA / ESRL

Email: Eric.J.Hackathorn@noaa.gov

URL: <http://www.esrl.noaa.gov/>

Part of NOAA/ESRL's mission is to inform the public about how weather, climate change, and human disturbance affect our world. By informing people about these concerns, NOAA/ESRL hopes to assist the public in making informed decisions related to the health of the environment.

To support this mission, NOAA/ESRL does presentations in schools, science fairs, and conducts weekly tours of their facilities to discuss a variety of environmental issues. One of the highlights of this outreach effort is called "Science on a Sphere." This spectacular vision of our Earth is the brainchild of Alexander (Sandy) MacDonald, Director of ESRL in Boulder, Colorado. Four projectors cast rotating images onto a sphere to create the effect of Earth in space.

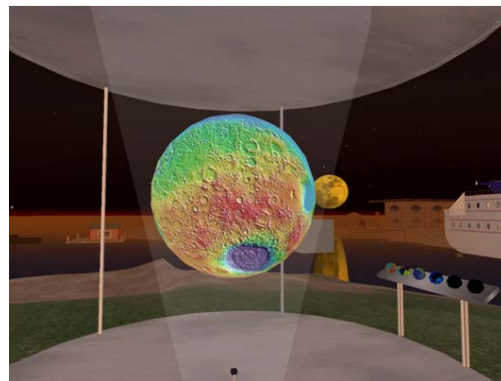
Recently, SOS has been recreated in the world of Second Life. NOAA/ESRL hopes to expand

this online content to include a variety of environmentally themed educational attractions.

NOAA/ESRL has been involved in Second Life since April of 2006. After receiving a temporary donation of land from Linden Lab, an SL island was purchased in June of 2006. Since then, a design contest was created to generate interest and satisfy governmental bidding requirements.

This poster will review the following aspects of creating an educational environment in Second Life:

- Design contest
- Gaining approval and funding
- Intellectual property concerns
- Future directions for NOAA/ESRL



PUTTING A SECOND LIFE “METAVERSE” SKIN ON LEARNING MANAGEMENT SYSTEMS

Jeremy Kemp,
eCampus,
San Jose State University
jkemp@cemail.sjsu.edu
SL: Jeremy Kabumpo

Daniel Livingstone,
School of Computing
University of Paisley
daniel.livingstone@paisley.ac.uk
SL: Buddy Sprocket

Abstract

This paper outlines the advantages and weaknesses of Multi-User Virtual Environments for teaching and explores the possible benefits of integrating them closely with traditional Learning Management Systems. We present survey findings of teachers interested in using the Second Life MUVE for teaching. The teachers gave us their opinions about integrating SL and LMS in their classrooms. We finally propose technical methods for creating hybrid systems combining elements of both MUVE and traditional LMS systems for use in teaching. The hybrid system uses the Moodle open source system and Second Life's connectivity features to mirror web-based classrooms with in-world learning spaces and interactive objects. We suggest that further work may help suggest the most suitable educational applications for these hybrid systems.

Introduction

Faculty who offer web-based instruction and resources have become very familiar with the likes of WebCT, Blackboard, Moodle and other Learning Management Systems, or LMS. Rather than wasting time learning the technical craft of Web design, they rely on templates and simple forms to create interactive web-based class environments.

These environments offer affordances beyond simple document repositories, by featuring discussion forums, online chatrooms, gradebooks and the ability to give automatically marked tests such as multiple choice questionnaires.

LMS often include a variety of means for communication between staff and students, but they are perhaps most commonly used as document repositories (Livingstone and Kemp 2006). This enables flexible access to course materials – on and off campus with the security of password-controlled access. More adept faculty employ the fuller range of communication tools including discussion forums, synchronous chat, assignment file drop-boxes, self scoring quizzes and grade books.

For the most part, the educational content is stored in static documents – copies of Powerpoint slides and Word documents. Assessment and interactive

features are used more sparingly. It is clear that the full potential for interactive learning support is not being reached in the main. There is relatively little use of multi-media – and indeed these VLE's do not readily support the creation of multi-media content. But richer multi-media presentations supporting learning of 'hard' topics has long been known to have value in student learning (Laurillard, 1997).

Second Life overview

Teachers and university administrators are experimenting with a new form of virtual learning environment with some basic similarities to LMS but offering radically different affordances. The Second Life, SL, system by Linden Lab is a persistent 3D world, or "metaverse". Users access the online system with a proprietary client and interact with content and other "residents." Unique features include simple tools for constructing 3D objects and scripting tools for interactive content - including connectivity with external web-pages and internet resources. SL improves on its predecessors in several key ways.

First, the SL platform is completely free of a publisher-imposed narrative. Unlike thematic MMORPG games such as *World of Warcraft*, SL has no plotline or setting. Teachers have freedom to weave their own metaphors and build domain-specific settings in 3D environments. Currently, education designers in SL create all manner of classrooms, lecture halls and campus landmarks. For example, New York Law School created a "Democracy Island" complete with a Supreme Court building and miniature models of urban neighbourhoods. These cityscapes were proposed as a way to meet public review requirements for city planning (Democracy Design Workshop 2006).

Secondly, SL offers very simple tools for modifying or "modding" content. Users build items with a limited palette of primitive objects "prims" including cubes, spheres, cones, etc. Simple menus allow users to adjust the size of the objects and to map images on their surface. For-profit designers do a brisk business in virtual furniture and pre-fabricated structures such as one-room school houses, office desks, decorative seats and interactive bookshelves.

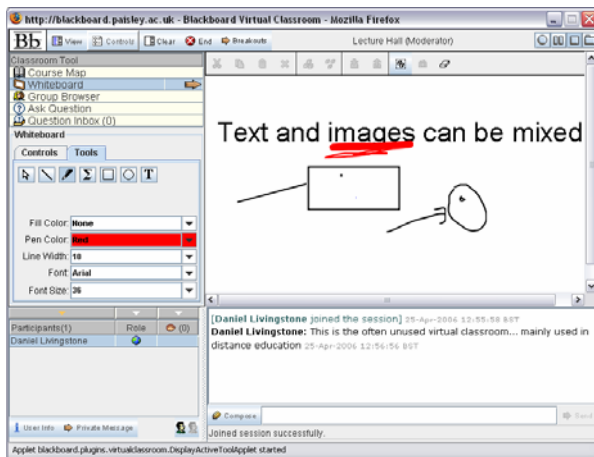


Figure 1. Interactive classroom settings in traditional LMS and Second Life.

Source: <http://www.sluniverse.com/pics/pic.aspx?id=50270>

Finally, amateur programmers create complex interactive applications in the proprietary Linden Scripting Language (LSL). They design objects that react intelligently to touch - making virtual “manipulatives” helpful for instruction (Resnick, 1998). For example, physics professor Anthony Crider at Elon University created a telescope trainer that teaches students the proper order for adjusting focus knobs on a real telescope (Crider, 2006). Objects respond in text chat to chatted commands allowing rudimentary teaching “agents” which answer questions and dispense domain content similarly to Harvard’s River City MUVE project. (Dede, 2005). One object can even be programmed to move independently and control other items to create complex, multi-step building tools.

Objects can also send data to Web-based systems outside SL using the hyper-text transfer protocol (http). This data conduit is unique among all MUVE systems and opens immense opportunities for creating powerful connected learning applications.

While the features that already exist in LMS are not generally used to their fullest, they nicely fill in some of the current weaknesses of SL as a learning platform.

SL vs. LMS: Round 1

Many papers highlight benefits of learning within 3D worlds where students are embodied as avatars. For example, a review of two distance learning projects using Active Worlds is presented in Dickey (2005), concluding that the 3D immersive format has significant potential for “facilitating collaborations, community and experiential learning” and highlighting the situated embodied nature of the learning as a particular strength. A more speculative look at the future potential of 3D learning environments, albeit grounded in much prior

practical experience, is presented in Dede (2004). Also see Antonacci & Modares (2005).

As with the hypothetical example of Dede (2004), SL provides a sense of embodiment, yet one in which normal barriers between students and staff can be broken down as in Robbins (2006) concept of image slippage. Compared to other electronic tools for distance communication, there can be an improved sense of being ‘there’ in a classroom, rather than of being a disembodied observer, Figure 1.

Rich 3D demonstration models can be built in SL – leveraging the power of modern computers to allow students to *experience* phenomena of interest. The acknowledged power of multi-media to improve delivery of material over purely written means, (Laurillard, 1997), is worth exploiting – and SL makes this quite feasible, even for faculty with only modest scripting and modelling skills.

So, in terms of enhancing the experience of learning, it seems clear that SL should have some distinct advantages over traditional LMS. It also has some clear disadvantages.

SL vs. LMS: Round 2

If it is a weakness of LMS that they are often used only as document repositories, it is certainly the case that *MUVEs* including SL are very poor document repositories. The note cards used with SL are simple text documents which can support only very limited formatting. The documents which can be generated are essentially simple ASCII texts with embedded objects which require clicking on to view or open. Transferring documents between SL and desktop OS is also less straightforward than with LMS – generally requiring cut-and-paste.

SL developers have created PowerPoint-style presentations tools which require presenters to upload

each individual slide as a separate image – either to *Second Life* itself or to a web site such as *Flickr* (Metalab 2006).

Several other issues cause concern for the nascent community for educators. First, *SL* makes considerable hardware demands. The minimum technical requirements are beyond the capabilities of typical labs in most schools and colleges – particularly with regards to graphics cards. Some teachers must find secretly sympathetic technology administrators who accommodate their special needs (Delwiche 2003). This issue is exacerbated somewhat by a constant call for visual improvements from users with heightened expectations from the latest video game offerings. Linden Lab designers are tasked with serving an extremely heterogenous user base. Users range from game designers recreating traditional MMORPGs (Solvang 2006) to Barry Joseph's *Global Kids* (2006) youth program educating underserved communities.

Educators often raise the important topic of improving access for visually impaired students. Aside from the problems of navigating a 3D world, even the chat is inaccessible – the user-interface currently does not work with any screen-readers. For students with less severe visual-impairments, the ability to modify the user interface – to change colours and fonts to less stylish but more readable settings – would be a step in the right direction. Linden Lab promises to move toward a more flexible interface.

Disruptive players present another problem. For classes held in publicly accessible areas, these 'griefers' may interfere with classes and negatively impact the student experience such as paintballing the instructor (Kemp 2006). The virtual harm inflicted in many grieving incidents can cause very real distress (c.f. the well known incident reported in Dibbell, 1993).

Of these, only the issue of access for visually impaired students will concern users of LMS – and these students at least may rely on screen readers to some degree.

SL with LMS

Each platform offers complimentary affordances not available in the other. Connecting the two systems may allow instructional developers and teachers to explore exciting new opportunities for interaction on the Web and within the *SL* Multi-User Virtual Environment. It makes sense then to progress past the mindset of *SL* “vs.” LMS, to the interconnection of the two - *SL* “with” LMS. We also want to avoid using *SL* as a weak rendition of LMS for document

management or to continue using legacy Web learning systems by themselves with less interactivity and student engagement.

Survey Results

We recently completed a survey to better understand needs and desires for integrating both types of system for educators.

There are two distinct directions in which to progress this work. Moodle, or similar, can be modified to link or refer to *SL*. For example, using the Map API it might be possible to have links to *SL* locations, with maps, shown inside the LMS. LMS content generally allows HTML formatting, but not scripting, to be embedded in pages – thus a custom resource or similar would need to be developed.

Secondly, developers may put content, or links to LMS content, into *SL*.

We surveyed educators interested in using *Second Life* in their teaching to help determine whether these efforts would be worthwhile. To reach educators, a post was made to the *Second Life* Education mailing list and 27 educators responded. All respondents were able to exit the survey at any time or skip any question. A number of the questions were of general interest (showing, for example, that 80% of respondents had been active in *SL* for less than one year), while other questions were focused on questions relating to integrating *SL* and LMS. As it was possible to skip questions, for each of the findings we include details of the number of respondents that answered that particular question.

Asked which LMS they used, there was an equal split between Blackboard, WebCT, Moodle and 'Other', with 35% not using LMS at all (n=23).

Asked to compare aspects of *SL* and LMS environments, (n=16), 94% felt that *SL* was 'slightly better' or 'best' for synchronous chat, and 85% felt the same for live presentations or classes. Unsurprisingly, these opinions were reversed for features such as document storage, asynchronous discussion (e.g. forums) or grade-book support.

86% (n=22) thought integrating *SL* and LMS would be moderately, very or extremely useful. A final question asked what features of an integrated system would respondents find most useful, and allowed up to four choices to be selected (n=21). The most requested features, and number of times the feature was requested, were:

- Link to *SL* locations from inside LMS (e.g. *SL* Map API) (15)
- Broadcast LMS announcements in *SL* (13)

- Access assignment handouts from SL & LMS (13)
- Display text information from LMS in SL (13)
- Log of student time in SL sent to LMS (11)

Other requested features included linking live chat in SL and LMS, or allowing assignment submission in both, or accessing LMS forums from SL.

Sloodle

While the survey size was small, it was focussed very tightly on educators using – or planning to use – Second Life in their teaching. As such, we feel that the findings do illustrate genuine interest in SL/LMS integration, and provide motivation for designing and prototyping different integrated systems. The system we propose will integrate the Open Source Moodle LMS with SL, and which we call *Sloodle*.

Platform Layers

In thinking through the possible integration of these systems, it is helpful to consider them in the framework of “three tier” architecture (Wikipedia, 2006). Most modern Web-based teaching systems comprise three parts separated into the “layers” of data, logic and presentation.

The data layer includes passwords, pointers to assignment files, logs of interactions such as threaded messages and chat transcripts. It also includes guidelines for page designs and how static materials are arranged for viewing. LMS systems store this raw information in databases such as MySQL (Moodle) or Oracle (Blackboard Vista).

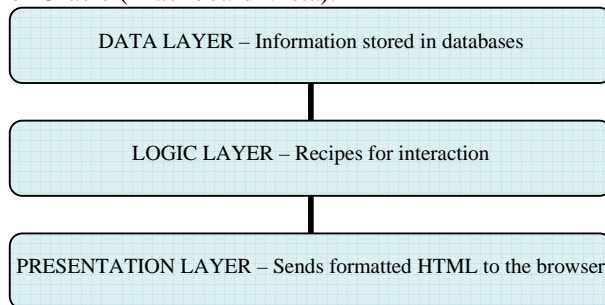


Figure 2. Typical three-tier architecture of an LMS

Logic is the second tier or layer in these systems. This layer implements interactive functions such as restricting access to materials, calculating grades, and multi-step operations such as quizzes and assignments. In the Moodle LMS system which we are currently working with, this layer is implemented using PHP. The final, presentation, layer delivers HTML code to the user combining images, static content and layout.

SL applications coded inside the environment may also be seen in this structure. Data is stored on notecards or chatted into the applications. For instance, museum owners set up “tour bot” agents that greet guests and take them on a pre-determined track with descriptions of the exhibits. The stopping points and text for the descriptions sit inside the “bots” as notecards. Logic is implemented using LSL, the presentation layer in 3D interactive objects.

Possibilities for interoperability

Now we take these three layers and see what areas lend themselves to interoperability. How will the two systems work together?

The logic layer for Moodle requires some minor adjustments to remove HTML formatting and to map the data onto the new interfaces offered in the SL environment. The SL logic layer mostly handles passthrough of data to the web-based database. Linden Lab limits access through this portal to a few times each minute so that real-time interaction is difficult. Thus, LSL scripting will be required to buffer data.

The presentation layer is the most interesting and holds the greatest potential for innovation. We think developers will be very active creating new ways to present previously web-delivered class information. Ubiquitous functions such as threaded messaging may be used in completely novel ways in this new setting where 3D metaphorical objects are generated automatically. Will artists create giant oak trees, each branch representing a thread of conversation? Or, as has often been the case, will fanciful interfaces be wittled down to bare-bones functionality, enabling students and their teachers to focus directly on the content being discussed?

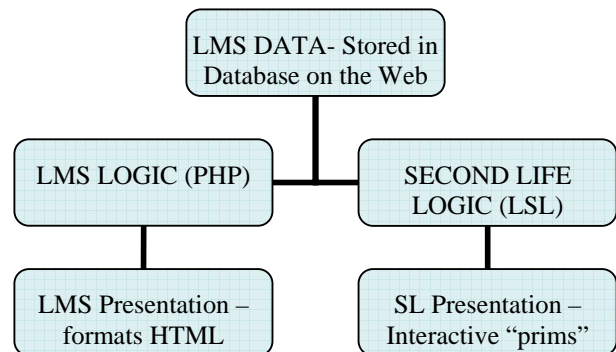


Figure 3. Three-tier architecture of a combined LMS-SL tool

Some features would only require changes to the LMS – such as adding resources which would allow the SL Map API (Second Life, 2006) to work inside Moodle. However, we would like to propose a set of tools to give access to Moodle resources from inside SL, and

to attempt to make effective and interesting use of the 3D space – otherwise why not simply open Moodle in a separate web-browser?

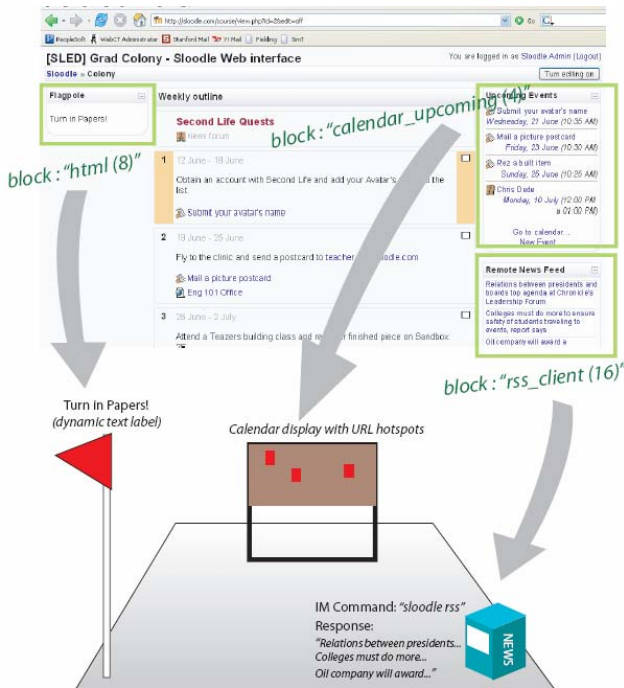


Figure 4. Sloodle will reflect the 2D page design in Moodle in a 3D ‘office’ space in SL

There are very many possible uses for this, but we propose a very simple example of this system at work. Our plan is that a standard-sized 512m² "office" in SL that reflects in 3D the Moodle page structure, Figure 4. This will be instantiated, or “rezzed”, automatically based on blocks visible in the Moodle class. Each tool displayed in the Moodle class is re-created as interactive, metaphorical objects or “furnishings.”

For example, notices in Moodle may be appear as

flagpoles with text labels – providing clear visual cues to important new content. Calendar information may be rendered as a wall display, while real simple syndication “RSS” feeds appear in the form of radios or teletype machines. Interacting with any of these elements results in loading an appropriate URL or sending an IM text message to the user. Figure 5. shows three configurations of a Moodle class page along the top row and the corresponding SL office layouts below. The first column shows a calendar block on the left column and the flagpole on the opposite column announcing “Essays due now!” The reader board in SL shows the text included in the Moodle HTML block. The flagpole is down in the middle example, while the calendar and flagpole have shifted on the page and the RSS block is showing. The final column shows another flagpole announcement and the three blocks in their new positions.

Backend Functionality

The current prototype implementation uses "Sloodle distillers" loaded in PHP on the Moodle server. When the *Second Life* Sloodle objects are used, these use HTTP requests to PHP pages which then access the Moodle database. They output simplified, non HTML data that can be gathered by LSL scripts in-world.

It is hoped that as faculty re-arrange blocks in the Moodle shell, the office furnishings layout should change as well to mirror this. This repositioning might be either automatic or upon a "Sloodle reset" command chatted by the faculty member's avatar.

Conclusions

While previous work highlighted the distinct differences between SL and LMS, our subsequent investigations have identified a strong interest in

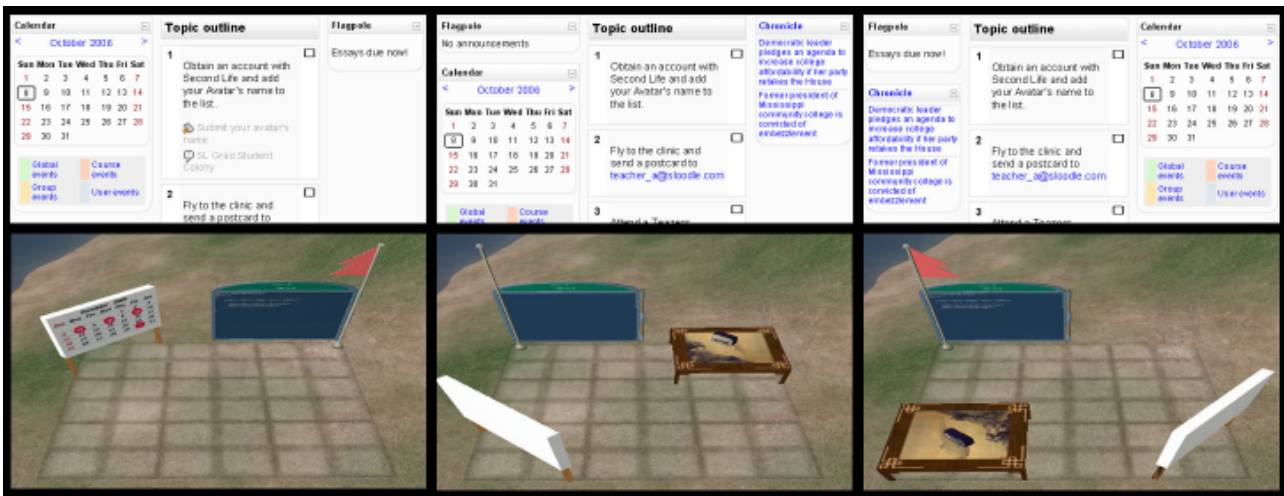


Figure 5. Moodle class page designs on the top row show calendar, flagpole (html) and RSS blocks. Corresponding layouts in SL show how 3D items reflect the Moodle design.

integrating these systems. We argue that any such integration should avoid merely presenting a weak LMS interface inside of SL, but should rather attempt to build something innovative that might lead to richer forms of interaction. Finally, we discussed how such integration may be achieved, and detailed our initial work in this area. While much remains to be done, we are confident that this will be a productive area of activity – and only time will tell what exciting shapes the flat worlds of LMS are transformed into when they become fully realised in three dimensions.

References

- Antonacci, D., Modares, N. (2005) *Second Life: The Educational Possibilities of Massively Multiplayer Virtual Worlds (MMVW)*, EDUCAUSE Western Regional Conference, April 26, 2005, San Francisco, CA.
<http://www2.kumc.edu/netlearning/SLEUCAUSES W2005/SLPresentationOutline.htm> (accessed August 2006)
- Crider, M. (2006). "Living and Learning in Second Life: A Firsthand Exploration and Tour of a User-Created Virtual World." Games, Learning, and Society Conference. Madison, WI, July 2006.
<http://homepage.mac.com/acrider/SL/SpaceportAlphaTalk-SV3.mov> (October 2006)
- Dede, C. (2004). "Enabling Distributed Learning Communities Via Emerging Technologies - Part One." T.H.E. Journal (September).
- Dede, C., et al. (2005). "Fostering Motivation, Learning, and Transfer in Multi-User Virtual Environments." Paper presented at the American Education Research Association, Montreal.
http://muve.gse.harvard.edu/muvees2003/documents/Dede_Games_Symposium_AERA_2005.pdf (last accessed October 2006)
- Delwiche, A. (2003). MMORPG's in the College Classroom. *The State of Play: Law, Games and Virtual Worlds*. New York Law School, November 2003.
<http://www.nyls.edu/docs/delwiche.pdf> (last accessed October 2006)
- Dibbell, Julian. "A Rape in Cyberspace." *The Village Voice* 21 Dec 1993.
- Dickey, M. D. (2005). "Three-dimensional virtual worlds and distance learning: two case studies of Active Worlds as a medium for distance education." *British Journal of Educational Technology* 36(3): 439-451.
- Democracy Design Workshop (2006)
<http://dotank.nyls.edu/DemocracyIsland.html> (accessed October 2006)
- Global Kids. (2006) <http://www.globalkids.org/olp/> (accessed October 2006)
- Kemp, J. (2006) "There: Fading platform offers good chat tools." [Weblog entry.] From where I hover....
<http://www.simteach.com/blog/?p=16/> (accessed October 2006)
- Livingstone, D. and J. Kemp (2006). "Massively multi-learner: recent advances in 3D social environments." *Computing and Information Systems Journal*, School of Computing, University of Paisley 10(2).
- Laurillard, Diana (1997) *Learning Formal Representations through Multimedia*, in *The Experience of Learning*, Marton, Hounsell & Entwistle (eds), 2nd Edition, Scottish Academic Press
- Metalab (2006),
<http://metalab.blogspot.com/2006/06/communal-whiteboard.html> (accessed October 2006)
- Resnick M. et al. (1998) *Digital manipulatives: New toys to think with*. Proceeding of CHI 1998.
<http://ilk.media.mit.edu/papers/dig-manip> (accessed October 2006)
- Robbins, S. (2006) "Image Slippage: Navigating the Dichotomies of an Academic Identity in a Non-Academic Virtual World." *Education Workshop at the Second Life Community Convention*. San Francisco, August 2006.
- Second Life (2006),
<http://secondlife.com/developers/mapapi/> (accessed August 2006)
- SimTeach (2006a) <http://www.simteach.com/wiki/> (accessed August 2006)
- SimTeach (2006b) <http://simteach.com/moodle> (accessed August 2006)
- Solvang, J. (2006) *Dark Life in Second Life. Way Out There Radio*.
<http://www.wayoutthere.net/GameReports/DarkLife.html/>
- Wikipedia (2006), http://en.wikipedia.org/wiki/Three-tier_%28computing%29 (accessed October 2006)

Authors Note

Daniel Livingstone teaches computer game development at the University of Paisley. Research interests cover ALife, Game AI and teaching and learning with game technology.

Jeremy Kemp has coordinated online communities since 1998 and taught Web-based distance learning courses at the university level, starting in 1999. As a research assistant for Stanford University's medical school in 2001, he created Flash simulations for radiation therapy further education. Contact: jkemp@simteach.com.

BUILDING AN INTERACTIVE SCIENCE MUSEUM IN SECOND LIFE

**Paul Doherty,
Senior Scientist,
The Exploratorium
3601 Lyon St.
San Francisco CA 94123**

Pauld@exploratorium.edu
415-561-0313
SL: Patio Plasma

**Rob Rothfarb,
Director of Web
Development,
The Exploratorium
SL: Pepto Majestic**

**Dave Barker, Senior Artist,
The Exploratorium,
Artistic Director of the
'Splo
SL: Demarco Spatula,**

Introduction

A team of scientists, teachers, artists and web experts from the Exploratorium science museum in San Francisco were inspired by the science teaching possibilities of Second Life after streaming a live video of the 2006 total solar eclipse from an amphitheater in Turkey into an amphitheater in Second Life. When the eclipse program ended the team decided to build an (avatar) hands-on museum in Second Life named the 'Splo. In Midnight City(177,54,27). By building a museum in Second Life we have made several discoveries about what makes a good or bad exhibit. We'll share some of our discoveries in this paper.

Total Solar Eclipse Webcast

Leveraging the ability to bring a live video stream into Second Life, the Exploratorium collaborated with community member and virtual world designer Aimee Weber to create a shared in-world context for experiencing a rare scientific phenomenon as it was occurring.

The path of totality of the total solar eclipse of March 2006 crossed directly over a second-century Roman amphitheater in Side, Turkey. The Exploratorium's video and educator field crew broadcast the event from this ancient amphitheater via satellite connection to tens of thousands of viewers world-wide.



Figure 1. The amphitheater and the eclipse. Photo courtesy of Torley Linden

To simulate this unique setting, a 3D replica of the amphitheater was created in Second Life and equipped with a “viewing screen” for watching the live video stream of the event, Figure 1. Avatars gathered in three locations (“sims”) to experience the eclipse. Each location included a complete copy of the amphitheater and an adjacent planetarium building containing several interactive models illustrating solar eclipse alignments and moon shadow paths. The three locations were set up for redundancy and to scale the audience size to a projected 225 maximum.

The premise for this experiment was to bring the live event and educational program into the virtual world and to observe the impact of the shared experience by participants.

During the eclipse, the feeling of telepresence that the participants experienced seemed to be dramatically enhanced by their simultaneous viewing of the eclipse phenomena together with the observers in Turkey. Participants curiosity about eclipses was demonstrated by the questions they asked of each other about what they were seeing. They remarked about the sensation of feeling like they were experiencing the eclipse directly.

Sixty-five Second Life community members viewed the live eclipse Webcast. Most participants arrived 30 minutes before the program started and stayed to view the entire one-hour program. It’s believed that the middle-of-the-night start time of 2 a.m. Pacific time limited the North American audience. Though the audience size was small in comparison to the audience watching the live video stream offered via the Exploratorium’s web links, the length of time residents stayed and watched the program is significant. After the event, many residents returned to watch the replay of the eclipse video in the amphitheater, explore the planetarium, and interact with the eclipse exhibits. Overall, Second Life residents responded positively to the experience and said they would return for similar webcast events on science topics.

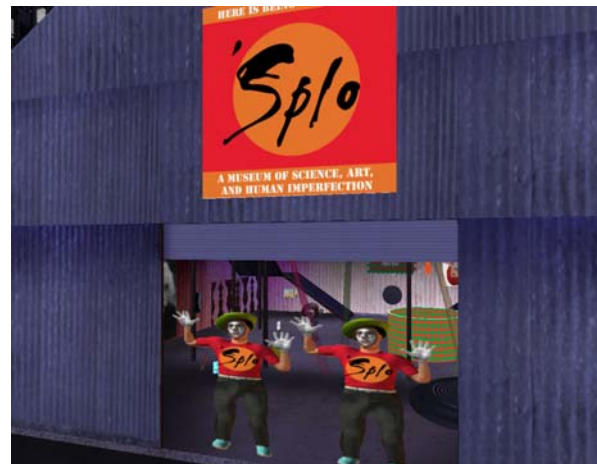


Figure 2. The ‘Splo science museum.

History

We began our work with Aimee Weber who built a replica of the Turkish amphitheater in Midnight City (Aimee Weber, 2006a). Aimee then created a planetarium with exhibits to help visitors understand eclipses (Aimee Weber, 2006b). The exhibits included a real scale model of the earth and the moon: a one meter diameter earth was placed 30 meters from a one-quarter meter diameter moon, Figure 3. The ability of an avatar to walk or fly from the earth to the moon in Second Life really gives the feeling of distance.

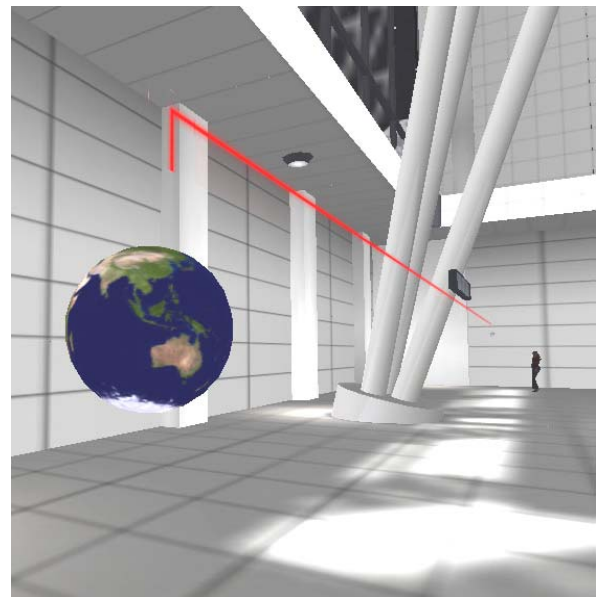


Figure 3. A true scale model of the earth-moon system.

Windows to Other Worlds

Virtual world participants routinely experience simulated representations of real world life at the human scale. By playing with representations of scale, we can use these environments to place appropriately sized avatars in macro and micro scale worlds to examine and interact with objects and phenomena at those scales.

Macro environments, such as planetary systems, and micro environments, such as cellular and even nanoscale worlds, can be created in which avatars can freely move around with the ability to dynamically change their “size” in relation to the scale of the worlds around them. Like peering into a microscopic view, denizens of these radically scaled cyberspaces can immerse themselves in three dimensional simulations of the difficult to comprehend worlds of the very large and the very small.

The planetarium also included a model showing how the Umbra and penumbra are created, Figure 4. This model was not to scale, a scale model of the shadow of the moon is nearly impossible to make, even in Second Life.

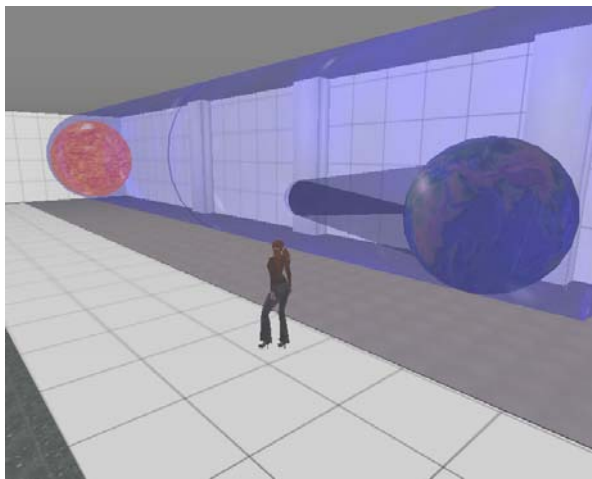


Figure 4. By filling the vacuum of space with smoke the umbra and penumbra of an eclipse become visible.

Aimee Weber then provided the space, the prims, and the building for the ‘Splo museum in Midnight City. The warehouse appearance of the former club space used was perfect for the museum.

Lesson 1: Scale models that are difficult to represent in a book or on a flat computer screen

become easy to build and interesting to explore in Second Life.

A further example of this in Second Life, The International Spaceflight Museum (Cochrane, 2006) is a museum that does a great job of showing scale models of planets, their moons, and also of rockets.

Exhibit Lessons

One of our exhibits, Patio-oitaP, Figure 5, shows an image of a face that is upside-down. To interact with the exhibit the visitor must look at the face right-side-up. In a real world museum the visitor reaches out and rotates the image. This is how we first built the exhibit in second life. However, we soon realized that in second life it is just as easy to rotate the visitor as it is to rotate the exhibit. So we built a new version of the exhibit in which the visitor sits in a chair that rotates. The visitor looks at the image in mouselook and as the visitor flips upside down he/she/or it sees the image flip upside down. The added bit of fun provided by turning upside down brings exclamations of joy (and nausea) from visitors.



Figure 5. Rotate the visitor not the art.

Lesson 2: Allow the visitors to have full body participation in the exhibits.

Into the Fourth Dimension

Aimee Weber also helped us to enter the fourth dimension of time. She made an animation of the path of the solar eclipse. The animation showed how the rotation of the earth and the

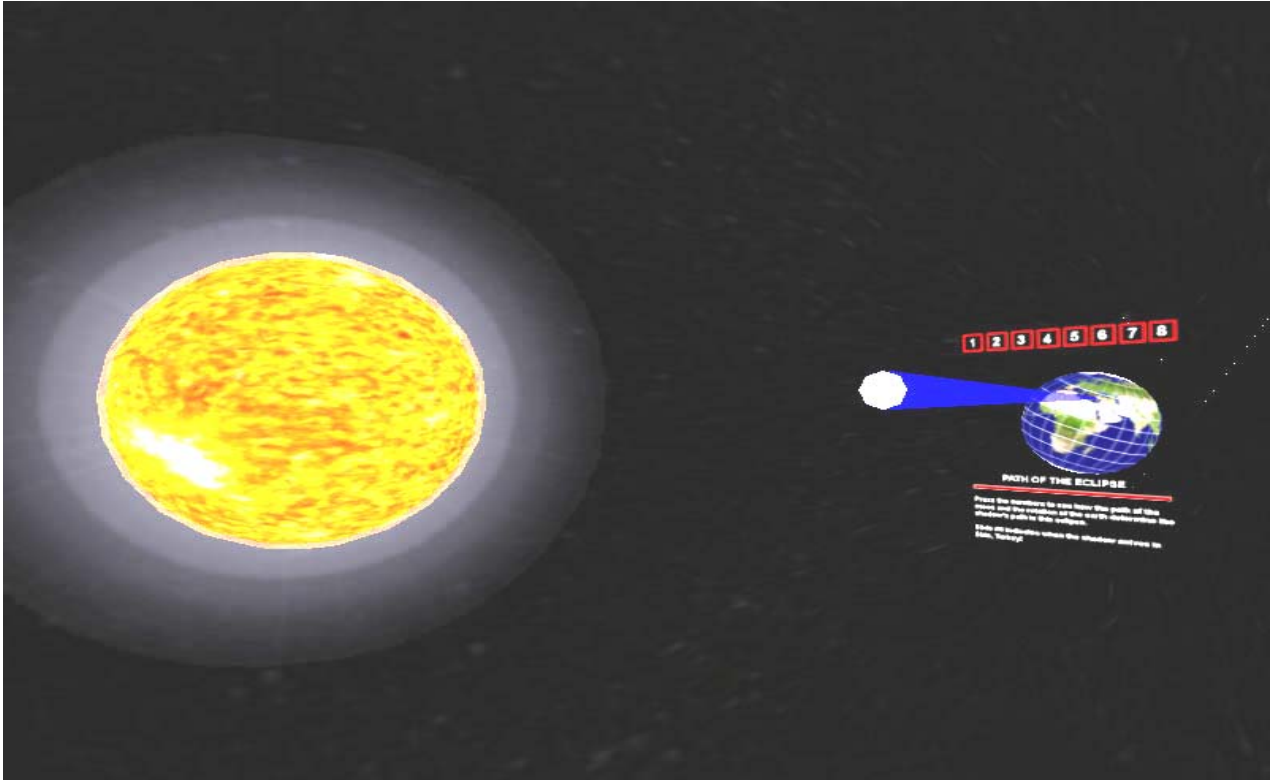


Figure 6. The moon revolves and the earth rotates in this animation of a solar eclipse.

orbit of the moon worked together to create the sigmoidal path of the eclipse shadow across the surface of the earth (Figure 6).

When the real life exhibit building department at the Exploratorium saw how well the exhibit worked in Second Life they immediately decided to build a real life version of the exhibit for sale to other museums. The ability to rapidly prototype objects in second life and view them makes this an excellent testing ground for real world exhibits.

Illusions From Second Life to Real Life

In the ‘Splo there is a rotating spiral named “Depth Spinner” Stare at the center of the spiral for thirty seconds or so and then look at something in the real world. The object in the real world will appear to grow. Watching llusions in Scond Life can change the way we see things in Real Life.



Figure 7. The usually flat café wall illusion is wrapped on a rotating cylinder. All the lines are parallel.

Second Life is great at showing the view inside a frame of reference. In the Exhibit Coriolis Fountain (Figure 8) a ball revolves around in a circle emitting particles that travel in straight lines. And yet a stream of particles does not look

straight! The human eye and brain jump into the rotating frame of reference and show the curved path of the particles due to the coriolis effect. Visitors can also actually sit on a rotating exhibit and enter the rotating frame of reference.

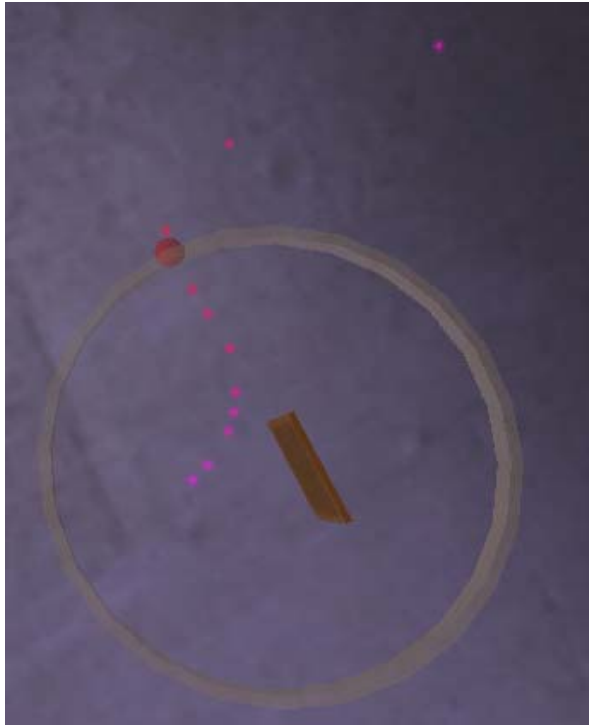


Figure 8. Red particles are emitted in straight lines from a revolving ball, they appear to follow curved paths.

Lesson 3: Motion in second life adds to the power of an exhibit.

Moving in the third dimension

How can a two-dimensional computer screen display a 3-D world? The motion of the observer or camera gives a constantly changing view of the world that the eye and brain of the observer assembles into a 3-D representation.

One exhibit that is almost impossible to show in a video in real life is named “Far Out Corners”, Figure 9. The exhibit is made by looking at the inside of a box where three faces join at a corner. The exhibit is lit from below. Observers perceive the inside of the box as the outside of a box, a box that rotates to follow them. This exhibit works in Second Life because the avatar or the camera can move in the 3-D space of the world, the corner of the box does seem to follow them. Then they can approach the exhibit and

move into the box to see what is really happening.

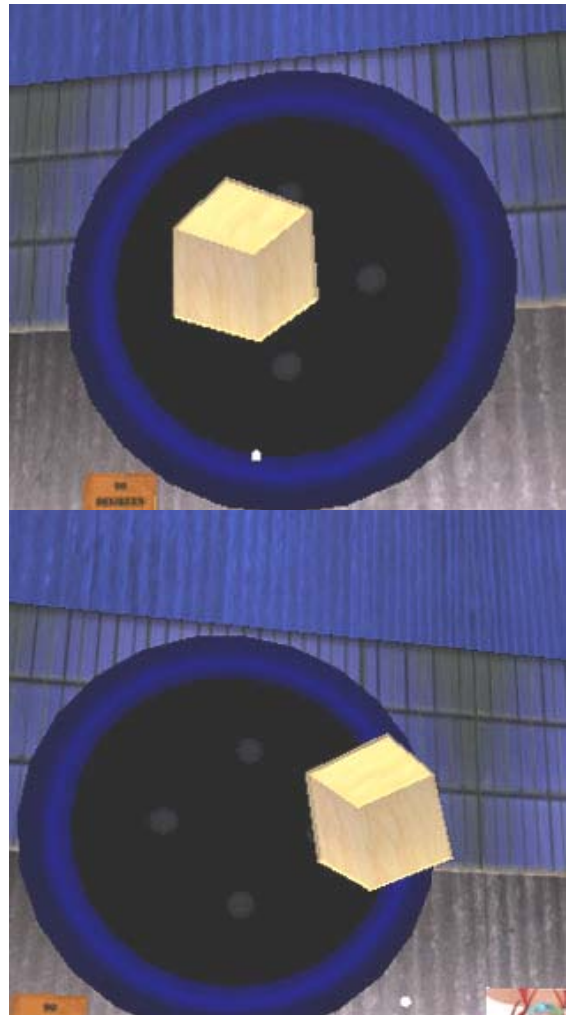


Figure 9. As the viewer moves the corner of the stationary cube appears to rotate.

Lesson 4: The motion of the observer strengthens the perception of 3-D

Exhibit Graphics

One of the great questions in real museums is “How much information should be displayed on a Museum Graphic?” Simple instructions on how to operate an exhibit may get lost among too much explanatory text. One museum in real life, Tom Tits Experiment, in Stockholm has no text on any exhibit, not even instructions!

A museum in second life can easily answer this question. Move the cursor across an exhibit to get the name of the exhibit. Left-click on an

exhibit to get a notecard with instructions and some background information. The notecard may then direct the viewer to other notecards with more information or give the URL of a website with extensive information on the exhibit. Many exhibits need no instructions, and visitors can then figure out what to do by themselves, they then have the added joy of discovery. Some exhibits only need a few words of instruction. But we always strive to equal Tom Tits Experiment and make exhibits with no instructions at all.

The use of museum graphics is particularly well done in a model of the Louvre museum in Second Life [at secondlife://exclusiveisland/126/228/23, Accessed August 2006]. It is possible to scroll over a painting to find its name and the name of the artist. Left-clicking on the painting provides a notecard with excellent information on the painting and the painter, and a URL provided on the notecard can be followed for more for in-depth information.

The question of the apple

A classic activity in real life is to start with the written word “Apple” and have people write down their descriptions of the word. Then show people a photograph of an apple and have them describe the photo. The exercise continues with a three-dimensional model of an apple, perhaps carved from wood and painted. It finishes with a real apple. People notice that their written descriptions become more interesting and voluminous as they move from each representation of an apple to the next. The question for Second life is this, where does an apple made from prims in second life fit into this list? perhaps between the two-dimensional photo of an apple and the three dimensional model. But can it be more than this, Would the

ability to see inside the apple, to observe the structure of molecules in the apple might allow the SL apple to surpass the 3-D model?

Conclusion

At the ‘Splo Museum we have built or commissioned over 50 exhibits since we opened on April 1, 2006. We’ve learned from our mistakes while building these exhibits and getting them to work in Second Life. Now as we embark on building the next few hundred exhibits we hope to continue to share our discoveries with other museums in Second Life.

References

Aimee Weber, 2006a, Turkish amphitheater in Midnight City [Second Life] . [secondlife://midnight city/31/50/22](http://secondlife://midnightcity/31/50/22) [Accessed August 2006]

Aimee Weber, 2006b, Planetarium in Midnight City [Second Life] [secondlife://midnight city/93/78/27](http://secondlife://midnightcity/93/78/27) [Accessed August 2006]

Cochrane, K., 2006, Case Study: International Spaceflight Museum, This volume. Also: [Second Life] [secondlife://spaceport alpha/48/83/24](http://secondlife://spaceportalpha/48/83/24) [Accessed August 2006]

Paul Doherty PhD

Paul Doherty has been at the Exploratorium for 20 years, where he was the founding director of the Center for Teaching and and where he is now Senior Staff Scientist. He received his PhD in Physics from MIT in 1974 and went on to be a physics professor for 12 years at Oakland University in Rochester Michigan. He has published over a dozen science books including the Explorabook for Klutz Press which has sold over 1 million copies.

SECOND LIFE AS AN EDUCATIONAL ENVIRONMENT: A STUDENT PERSPECTIVE

Carly Bedford, Robyn Birkedal, Joseph Erhard, Josh Graff, Chris Hempel, Bjorn Minde, Owen Pitz, Kyle Pouliot, David Retamales-Toro, Joshua York

Johnson & Wales University, Providence, Rhode Island, USA

Abstract

The Global Outreach Morocco (G.O. Morocco) project brought students with backgrounds in technology, business, and hospitality together to study economic development in Morocco through the growth of the travel and tourism industry. The G.O. Morocco team created a plan for using Second Life as a promotional tool for the country of Morocco. Over three months, the team created a technical prototype, rebuilding the symbolic Hassan II mosque on the Campus island in Second Life (Figure 1), and a business proposal for the use of Second Life as a promotional tool. The team met in Second Life to work on all components of the project. The team also visited Morocco as part of the overall project (Figure 2).

This poster paper reviews the student perspective on using Second Life as an education tool, including consideration of barriers to entry, and how SL helped or hindered communication and collaboration. The paper concludes with an outline of future directions.

Barrier to Entry – how easy was it to learn?

From a technical perspective, the barrier of entry to enter Second Life is simply to have access to internet connection and a modern computer. A student from the Technology College writes,

“I have a very high technical understanding of computer programs and in general, Second Life was fairly easy to learn. It took me about 2-3 hours to figure most things out.”

While others, like a student from the hospitality school, found Second Life to have a learning curve that she is still struggling to overcome. Overall, the students found Second Life to be fun, exciting, and easily accessible.



Figure 2. The Hassan II Mosque on Casablanca Island in Second Life

Collaboration – was the SL environment conducive to collaboration?

Second Life was conducive to collaboration in terms of allowing all of the students to work successfully as a group. The participants of G.O. Morocco are very diverse with a variety of skillsets and backgrounds. Second Life allowed each student to individually experience, explore, and develop ideas then combine them into a much larger idea. Through Second Life, we eventually saw as a group was was feasible to create in a certain time frame with the abilities we had. This turned out to be a recreation of the Hassan II Mosque located in Casablanca, Morocco.

Communication – how did SL help us communicate as a team? How did it hinder our work?

Through Second Life, G.O. Morocco students were able to work from different access points at the same time without the need to need to sit face to face or in the same room. What makes Second Life successful in the communication aspect is that each person has their own identity,

also known as an avatar which makes communicating through SL appear more personable than an e-mail or instant messaging programs. G.O Morocco will come to rely on the communication abilities through Second Life because it is a more flexible way of conducting business.

Our work was hindered by the high learning curve, and the lack of collaboration tools in Second Life. One student recommends that Second Life offer digital whiteboards compatible with tablet PC's which would allow users to visualize.



Figure 3. The G.O. Morocco Team at the Hassan II Mosque in Casablanca

Community – how the SL community assisted our project.

The Second Life community was always there to answer any questions. The community was enthusiastic and supportive of our project, and freely offered their time and assistance.

Future Directions – how we plan to use SL in the future.

We will be completing our build on Casablanca Island. Our hope is that virtual Morocco will recreate the experience of visiting Morocco in Second Life, while promoting cultural education and knowledge.

Second Life has become a part of our lives. We've made friends, explored, and been able to share our work with people from around the world.

References

Visit the Casablanca Island here:

<http://slurl.com/secondlife/casablanca/99/83/28/>

[last accessed: 15th September, 2006]

INTRODUCING YOUR RL STUDENTS TO SECOND LIFE

**Cheryl Carter,
Pepperdine University**

Second Life's virtual environment offers a unique opportunity for educators to weave into their curriculum real-time interactive activities that support experiential learning.

To help with the planning and development of SL educational activities, I have created a planning and resource guide that can serve as a blueprint for orientating your students to the SL environment. This resource guide includes the steps one can take regarding how to introduce real life students to the SL virtual environment.

By integrating a SL student orientation into your curriculum, students are more likely to acquire the skills necessary to make their involvement in your SL assignments more participatory and engaging. Think of it as the building blocks or foundation for your SL educational activities.

Topics Covered Include:

- **How to assess the level of skill your students will need to complete the SL assignments;**

As you develop your lesson plans, consider the type of skills needed for your students to complete your planned activities. For example, a Sociology class may only need to acquire skills necessary for observation and interviewing while an Architecture class may need to develop building and scripting skills.

- **How to integrate an RL orientation into your curriculum;**

Introducing SL to your students at the beginning of the term via an SL orientation is a good way to engage them when their interest level is usually high. Without a solid foundation, students can struggle while trying to learn the navigational skills necessary to complete your assignments. Frustration can lead to disengagement and once you lose their attention, it's hard to get it back.

- **Real life and Second Life resources that can assist in the learning process;**

At the conclusion of Orientation Island, students are given the choice between going to Help Island or directly to the Mainland—they should choose to go to Help Island. At Help Island, there are SL mentors (volunteers) that are available to help students with everything from flying -- changing their appearance – shopping – basic building – basic scripting and more. There are other resources both in-world and outside of SL where students can learn additional skills that will expand their SL experience.







- **Overview of the RL Student Orientation (RLSO) Area**




The Real Life Student Orientation (RLSO) Area was created to give RL students a place to practice basic SL skills. At the entrance of RLSO is a slide viewer and welcome sign that give instructional notecards for the RLSO activities. With a Native American theme as the back drop, various practice stations have been set up so students can practice everything from walking to moving objects to scripting particle fires.

Practice Stations for RL Student Orientation Area (RLSO)

Theme: Pacific Northwest Native American

Overview: At the entrance of RLSO will be a console with notecards that provide instructions for the activities. Posts with activity headings will be placed near each of the activity stations.

Station	Activities	Learning Skills	Image
RLSO Pond	Use Camera Controls to count the number of fish swimming in the pond	<ul style="list-style-type: none"> ▪ Walking ▪ Camera Controls 	
Sit Next to Jesper (Horse)	Student practices sitting and standing	<ul style="list-style-type: none"> ▪ Pie Control (right click) – Sit Here/Stand Up 	
Pacific NW Totems	2-3 students stand on different sides of totem pole; use Movement Controls to fly to the top of the totem—circle the totem; Shout out 3 objects that can be viewed from the air; Land softly	<ul style="list-style-type: none"> ▪ Movement Controls ▪ Shout ▪ Chat 	
Musical Sounds	IM to a classmate how to make the gongs and rainstick work using the Pie Control	<ul style="list-style-type: none"> ▪ IM ▪ Pie Control (right click) 	
Totem Build	Several pieces of the totem will be placed on the ground, students are to use Toolbar to move objects one on top of the other, using chat to assist one another	<ul style="list-style-type: none"> ▪ Chat ▪ Build ▪ Toolbar ▪ Camera Controls 	
Native Bird Puzzle	2-3 students touch giant puzzle so that pieces fall to ground, working together and using chat they move each piece back into the frame	<ul style="list-style-type: none"> ▪ Chat ▪ Build ▪ Toolbar ▪ Camera Controls ▪ Movement Controls ▪ Pie Control (right click) 	

<p>Touring the World</p> <ul style="list-style-type: none"> ▪ Amsterdam ▪ Japan ▪ Egypt ▪ Svarga 	<p>Each student chooses a different location to teleport;</p> <p>Take snapshot of location, label and email it to classmate;</p> <p>Use notecard to describe location and drop in the inventories of classmates</p>	<ul style="list-style-type: none"> ▪ Map ▪ Teleport ▪ Snapshot ▪ Notecard ▪ Inventory ▪ Camera Controls 	
<p>Shopping Expedition</p>	<p>Each student offers “friendship” to one another, using the Find menu, locate YadNi’s Junkyard; One person teleports to YadNi’s—each student uses the Map to view the location of the others, classmates are offered Teleports to Junkyard; Each student uses L\$ to buy an item in a box; Teleport back to RLSO to practice opening boxes and placing in inventory.</p>	<ul style="list-style-type: none"> ▪ Friendship ▪ Teleport ▪ Map ▪ Using L\$ ▪ Inventory ▪ Camera Control ▪ Movement Control ▪ Buying Items ▪ Chat ▪ IM ▪ Opening Boxes 	
<p>Create a Campfire (Advanced)</p>	<p>Logs are scattered around, sample campfire is available; Students look at the scripting of the sample campfire and duplicate the script. In-world and website resources listed on notecard.</p>	<ul style="list-style-type: none"> ▪ Toolbar ▪ Building ▪ Scripting ▪ Find Menu ▪ Teleport ▪ Chatting ▪ Website Resources 	

MULTIDISCIPLINARY EXPERIENTIAL EDUCATION IN SECOND LIFE: A GLOBAL APPROACH

Hilary Mason, Johnson & Wales University,

hmason@jwu.edu

Mehdi Moutahir, Johnson & Wales University,

mmoutahir@jwu.edu

Abstract

Massively multi-user virtual environments are a new type of collaborative workspace. Participants in a virtual environment are represented by avatars with human capabilities, such as walking and gesturing. Avatars may resemble a user's real-world appearance. They can communicate by chat, share files and documents, and possibly voice teleconference.

We present a model for using virtual environments such as Second Life, developed by Linden Lab in San Francisco, CA, as collaborative workspaces for experiential education projects. We present a case study of our first implementation of this new model.

Introduction and Motivation

Experiential education is a core component of applied undergraduate curricula. In a project-based learning environment, students work in teams to solve real-world problems. They are assisted by facilitators, but have no direct faculty instruction.

Traditional "alternative spring break" service-learning programs generally focus on exposing students to current social issues via physical labor, such as cleaning a space or constructing a building. The authors were interested in expanding the "alternative break" structure to provide an opportunity for students to use their academic skills and abilities to produce a significant contribution to a problem.

For example, rather than doing construction work on a single home, students would consider the problem of starting an organization to work within a community, from initiation through fund-raising to recruiting volunteers.

We believe that the combination of a challenging technical problem, international travel, and a multidisciplinary team results in a successful service-learning experience where students are able to learn highly relevant skills and make a significant contribution to a social problem.

Background and Previous Work

The proposed model builds on several established ideas and programs, from project-based learning to community-service learning to study abroad experiences. A few of the major influences are discussed below, though in limited space it is impossible to include them all.

Experiential learning theory was initially developed by Carl Rogers in the 1970s. It is based on several basic principles:

1. Significant learning takes place when the subject matter is relevant to the personal interests of the student
2. Learning which is threatening to the self (e.g., new attitudes or perspectives) are more easily assimilated when external threats are at a minimum
3. Learning proceeds faster when the threat to the self is low
4. Self-initiated learning is the most lasting and pervasive. (Rogers, 1969)

Project-based learning is an appropriate paradigm for addressing service-learning problems. Project-based service learning projects provide a "hand-on" opportunity for students to address real-world problems in a multidisciplinary, collaborative environment. This has been shown to increase student engagement and provide intrinsic motivation for authentic, relevant learning. (Bradford, 2005)

By placing students in the unfamiliar and uncomfortable environment of a foreign country, they become self-motivated learners. The limited time in the host country forces students to focus intently on their project. (Dwyer et. al., 2004)

Second Life is an emerging virtual environment development platform. Its immersion, ease of use, wide availability and low barrier to entry are essential qualities that make it an excellent choice for use in education. Many educators have already made impressive contributions by using Second Life in their courses and projects. (Simteach, 2006)

The Global Outreach Model

In essence, the global outreach model is a service-learning project-based educational experience where the student team identifies a social issue and develops a technological solution. The final outcome of this process is a prototype of a significant student-driven technological contribution to a real-world problem.

There are several phases in this process:

1. Student selection/Team building
2. Project and concept development
3. Travel abroad/Presentation and contextualization
4. Project deployment /Business creation

The project is internally and externally evaluated, and, if successful, may be eventually deployed as an independent product or business.

The virtual environment of Second Life is an integral part of the Global Outreach model. It acts as:

- An educational environment for teaching technology concepts
- A tool for online collaboration
- A platform for the development of a technological solution to a social problem

Using Second Life in so many capacities broadens the range of the potential projects, and provides a central platform. It also offers a vibrant and diverse community for students to explore.

Phase 1: Student Selection and Identification

The Global Outreach experience seeks a diverse blend of students who are able to contribute various skills, interests, and experience-levels to

the group. In a typical university setting, team projects are constructed such that each team member has roughly the same training and experience with the relevant subject matter. A common result is that one or two members of the team bear the brunt of the work, while others ‘slack off’.

A Global Outreach problem requires a variety of students with a complimentary overlap in skills. Further, the project is so difficult that it is impossible for only one or two team members to complete it alone.

Students who succeed in a Global Outreach project are not necessarily traditional academic high-achievers. They are resourceful, intrinsically motivated, and open-minded. Student selection cannot focus only on grades and test scores, and needs to take the personalities of students into account.

Phase 2: Project and Concept Development

Selecting problems for the Global Outreach experience is complex. A successful problem must be multidisciplinary, team-oriented, challenging, and an effective solution to a real problem.

Integrating technology with service-learning problems presents the opportunity for students to develop new solutions that may not have been possible before. There is a recognized need for innovative technologies in developing countries, and not enough resources for their development. (Sadowsky, 1996)

The Global Outreach team collaborates with technology and business experts to select an issue, research it, and identify a technological solution. A prototype of the solution is built, and an implementation plan written and discussed. This occurs in the three months before travel.

Phase 3: Presentation and Contextualization

The Global Outreach model provides technological solutions to problems in developing countries. For students to fully grasp the impact of their work, they are given the opportunity to travel to the country they have been studying and present their solution to local professionals.

This travel provides opportunities for student educational development in several areas:

- Cultural awareness – Students are given the opportunity to interact with individuals with vastly different backgrounds and experience.
- Communication skills – Student must communicate their solution to local professionals. They may face a language barrier, or have to overcome variations in expectations.
- Intellectual development – The project may require skills beyond what the team members possess at the beginning. Students must learn to assess themselves and their teammates, and either learn those skills or seek outside assistance.
- Intrinsic motivation – Students can see the real-world impact of their work, which motivates them to continue to contribute, and in many cases, influences their future career goals.

Phase 4: Business Development

The final stage in the Global Outreach process is product development and business incubation. If an expert evaluation demonstrates that the team solution is viable, the students are given the opportunity to develop it further after they return home.

Second Life is a vital tool in this phase. Students may not live in the same place, have compatible schedules, or even attend the same university. Second Life offers an “always available” workspace that is accessible from anywhere in the world at any time.

Case Study: Global Outreach Morocco

Introduction

The Community Action Association at Johnson & Wales University is a volunteer-driven organization that brings students and faculty together to solve problems that revolve around significant social issues.

The Global Outreach Morocco (G.O. Morocco) project presented a multidisciplinary team of students with the issues of community and economic development in Morocco. The G.O. Morocco project focused on economic development related to the growth of the travel and tourism industry.

The Experience

The Students

G.O. Morocco faculty advisors began recruiting student volunteers in February, 2006. The project was open to all University students in good standing. The only requirements were for each participant to agree to contribute to the project and attend mandatory weekly meetings. The attendance requirement filtered out several students. Two additional students were asked to leave after they did not make substantive individual contributions during the development phase of the project.

This selection process led to a final group of ten students, six students from the School of Technology, two from the College of Business, and two from the Hospitality College. The project evolved to suit the aptitudes and focus of the team.

The selection of students for G.O. Morocco relied solely on faculty advisor identification of eligible candidates based on the display of the following behaviors: motivation, resourcefulness, time commitment and team work. The authors intend to refine the selection process by developing and integrating specific metrics to measure the above behaviors and aptitudes.

The Concept

The team began by researching Morocco and understanding the specific issues facing the country. They evaluated the technological resources available to them, and then proposed the use of Second Life as a marketing tool for Morocco. The concept was further refined as they tested out technologies and ideas over the course of the first months of the project. Eventually, the team settled on the idea of recreating several monuments with cultural and historical importance in order to allow visitors to experience Morocco in a unique fashion while providing them with tourism information about the country.

The team started with the Hassan II Mosque in Casablanca on an island in Second Life. The mosque is a powerful symbol and also a technically difficult building to reproduce, with many arches, a large plaza, and a detailed minaret. The final month before the trip was spent developing the mosque in Second Life and writing an implementation and business plan for the marketing tool.

The Travel

The faculty advisors coordinated all logistical aspects of the trip. Prior to the travel abroad, we identified various activities, cultural visits, teamwork exercises and meetings with interested audiences that were to be incorporated into the program. We adjusted the agenda on a daily basis to optimize student's performance based on their fluctuating emotional, physical and intellectual states. The familiarity with the site/country, the knowledge of the language allowed the advisors to take advantage of opportunities and deal with situations as they arose.

The Advisors

Both advisors in this program were volunteers, passionate about education, technology and personal development. During the project, both advisors alternatively shifted their roles from team leaders to group facilitators. The purpose was to give project ownership to the students and provide them with a unique experiential education opportunity where everything was possible, including failure. The advisors led by example by attending meetings and by demonstrating enthusiasm and dedication to the project. During the various phases of the project, the advisors played various roles such as, content experts, coaches, facilitators, authority figures, and logistics coordinators.

Difficulties

The Technology

The concept of a virtual development environment is new, even to college students. Several found the open environment with no set goal to be "weird", or quickly got lost and confused. This helped select those students who were open-minded enough to see the possibilities of the environment and resourceful enough to figure out how to navigate it. In general, a student's ability to adapt to the Second Life environment was more dependent on attitude than technical skills.

After a team of curious and motivated student formed, the second challenge was to find the sufficient computing power with the administrative rights to install the SL client and updates on campus. The SL client requires graphic capabilities that are not necessarily

available throughout the campus. Moreover, students do not have the administrative right to install software and updates on university machines. This problem was circumvented by installing the Second Life application to a shared drive that was available from the lab. This also allowed faculty to roll out the required updates without interference from the lab staff.

The Business Model

The idea that real money could be earned through the sale of virtual goods and services was a foreign concept to the project audience both in Morocco and in the United States. In general, these audiences came from a traditional business background. They found the notion of virtual goods, and the combination of real and virtual services, to be difficult to grasp.

In addition to the skepticism regarding the virtual economy as whole, when the students introduced the project concept to a more business-oriented audience, the automatic response was, "How are you going to make money with this?" While the team is currently refining this section of the concept, the experience indicates that it is neither always clear nor obvious to extrapolate revenues from the sale of virtual merchandise.

The initial assumption behind the business model was that revenues would be generated partly in Linden dollars through the sale of virtual goods (Moroccan crafts, post cards, etc). Additional revenues would be generated in US Dollars by selling marketing and promotion services through the development of virtual environments.

During the fourth phase of this project, the students will work collaboratively to develop a sound business plan and technological deployment with the academic support of the various colleges. The team will also participate in regional and national business plan competition to obtain third party validation and feedback.

Successes

Multidisciplinary collaboration

Traditional education processes often put students with similar backgrounds and interests in the same classrooms and group projects. This may be the results of the highly departmentalized structure of many academic institutions. The G.O. Morocco program encourages multidisciplinary

collaboration between students from diverse backgrounds.

Technological and business awareness and understanding

The G.O. Morocco program allowed students to discover an innovative technology and its business application in the hospitality industry. The concept development phase allowed students to research and experience Second Life while constantly investigating its application and impact in the real world.

Cultural awareness

The 21st century's "flat world" according to Thomas L. Friedman will require students to understand the world beyond the limits of their state, country or continent. The G.O. Morocco program allowed students to experience the culture of a country across the Atlantic Ocean, where they had the opportunity to see various facets of a developing nation. With the current events in the Middle East, the students had the opportunity to experience the culture of a moderate Muslim Arab country which contrasted with the expectations and preconceptions developed in the United States.

Service-learning

G.O. Morocco builds on the tradition of "alternative break" service-learning experiences by offering students opportunities to use their academic and intellectual skills to contribute to economic development. G.O. Morocco promotes the understanding of the social impact of business and technology.

Future Work

G.O. Morocco represents a first implementation of the general Global Outreach model. While this first project has been successful, there is quite a bit of work still to be done!

Any solution produced by student volunteers is vulnerable to a decaying attention span. If a lasting contribution is to be made, the solutions must be sustainable, and self-supporting. The G.O. Morocco team will be creating a startup to complete the G.O. Morocco project and others in Second Life. This will be supported by a class at Johnson & Wales University during the fall term, and various other University resources.

The Global Outreach model itself must be continually refined, building on experience to be gained during subsequent projects. Assessment is a major part of any successful academic program. Currently, there is no formal assessment scheme for this model. While we believe that this type of experience has a significant impact on participants, we must develop robust metrics to demonstrate that effect.

The final issue is scalability. The model must be tested in new environments, with new projects, new countries, new technologies, and new students. Each new experience will suggest changes that reflect back on to the model.

Conclusion

The global outreach model appears to be a solid framework for developing programs that educate students, create valuable products, and meaningfully contribute to developing economies. These programs can offer a new type of experience to students from varying backgrounds, while helping them practice and enhance the skills that they will eventually need in their careers. We are excited about developing this framework within the larger Second Life educational community.

References

- Bradford, M. (2005). "Motivating Students Through Project-Based Service Learning", *THE Journal*, January 2005.
- Castronova, E. (2005). *Synthetic Worlds: The Business and Culture of Online Games*, University of Chicago Press: Chicago, IL.
- Dwyer, M., and Peters, C. (2004). "The Benefits of Study Abroad", *Transitions Abroad*, March/April 2004.
- Rogers, C.R. (1969). *Freedom to Learn*. Merrill: Columbus, OH.
- Sadowsky, G. (1996). "The Internet Society and Developing Countries". *OnTheInternet*, November/December 1996.
- Simteach Second Life Education Wiki, [web site] http://www.simteach.com/wiki/index.php?title=Second_Life_Education_Wiki [Accessed August 2006]

“IMAGE SLIPPAGE”: NAVIGATING THE DICHOTOMIES OF AN ACADEMIC IDENTITY IN A NON-ACADEMIC VIRTUAL WORLD

Sarah “Intellagirl Tully” Robbins

Ball State University

First, a Story

My first day teaching a college course was in the winter of 1997. I was 21 years old and teaching a freshman composition class at a bustling, and rather rough inner-city community college. I had gone through a whole *week* of instructor training and was then thrown into a class of 25 students. Some were traditional students, 18 years old and in college for the first time. Other students were older, taking time off work to attend classes to get a better job or a promotion. I felt unprepared to say the least. On the first day of class, as I sat outside the classroom watching students saunter into the room one by one, I was more and more intimidated. Class didn't start for twenty minutes and I had no idea how I was going to establish myself as someone they should listen to, trust, or respect.

As class time neared, I decided to at least go in and scope out the class, see how the seats were arranged, where the computers were etc. I sat down in the back row to see how far away the front of the room seemed to be, something I do to gauge how loudly I'll need to speak. As I did, a student sat down next to me and asked if I knew anything about the professor. I gave him a blank stare somewhat dumbfounded by the question. Before I could answer he responded “I heard she's a real bitch, some old lady.” I was shocked but quickly realized I was enjoying it. Before I knew it a few other students joined in with him to speculate about the instructor listed only as “staff” on the schedule.

“I bet she won't know squat, some newb teacher.”

“I'm sure it will be a man. Aren't all writing classes taught by old guys in bow ties?”

On and on they went until I realized that it was a few minutes past when class was set to begin. I gathered my books and moved to the front of the room and began taking out the copies of my syllabus to hand out.

“You can't be up there. That's where the prof stands. When he comes in he's gonna be pissed!” A younger student in the third row jeered me. “I *am* the instructor” I said smiling at him and handed him a syllabus. I introduced myself and let the gent in the back row know that I wasn't, in fact, an “old bitch.” The students laughed and poked at me for tricking them. I had them from day one and the semester was fun, enthusiastic and a great learning experience for all involved.

Later, reflecting on what happened on that first day, I realized that I had inadvertently subsumed my own role as an instructor. I had played a different role than they expected and as a result, the classroom was much more casual, much more communal than it could have been if I had walked straight to the front of the room when I entered the classroom.

Encountering Image Slippage

No doubt as students we've all been mortified seeing our third or fourth grade teacher at the grocery store or our high school teacher out on a date at the movie theatre. After all, in a kid's mind, teachers don't exist outside the classroom, right? On the same theme, as an instructor, I'm constantly surprised by being sighted at the local watering hole or in the dressing room at the mall. My students seem to be everywhere when it's most uncomfortable to run into them.

Not unlike other professions, educators have an esteemed and very public role in the community. We aren't just teachers in the classroom. The moniker may as well be tattooed on our foreheads when we're out to dinner, buying underwear at the local super store, or waiting in the doctor's office lobby. When you're a teacher, you're a teacher everywhere, not just in the classroom. There is no way to hide who you are, nor should you, but there is no denying that students will see you as their teacher no matter where they run into you.

SecondLife certainly makes this educator-identity more complicated. Our students are on our SecondLife friends list; they can track us on the map and know just where we hang out on a Friday night when we're not teaching. It's as if we have a GPS device permanently attached to us. On the flip side, it's just as easy to hold virtual office hours at the beach as it is in an office. SecondLife creates opportunities for teacher-student socializing that simply don't exist in real life. But with these opportunities come strange and often complex identity issues that can be either a hindrance to communication or a great benefit. I'm not here to encourage educators to use a second avatar for their personal use of SecondLife. I'm not here to advocate hiding from your students. Instead, I intend to suggest that these locations of "image slippage" offer unique learning opportunities that only SecondLife can offer.

Strange situations arise in the conflict between SecondLife educator and SecondLife resident, conflicts in identity that don't occur in the real world. For example, in first life we need not worry about what we wear to a friend's party on a Saturday night being unfitting for an instructor. However, in SecondLife, it's not nearly as impossible to imagine that a student might attend the same party as it is to imagine that a personal, first life friend might invite one's students to a party. It's more than clothes, however. We know we can talk in confidence in an office on campus or at a coffee shop, sharing ideas about the progress of a class or a troublesome student. In SecondLife, it's more difficult to ensure that one is not overheard or that text isn't copied and blogged or emailed. Different rules of confidence and trust apply in this new frontier. SecondLife is a small world and the lines between instructor, student, and resident blur in a continuous ebb and flow of information and activity.

So why do I bring these issues up? Am I paranoid about the breakdown between one's role as an instructor and one's role as a resident? Am I being overly concerned with trivialities? I think not and here's why. We can learn much about classroom dynamics and our academic selves through the analysis of such strange situations which can only occur in an immersive environment like SecondLife.

To begin to understand how these dichotomies of identity can enhance learning and our understanding of our own roles as instructors, we must first identify them to find out when and where they occur. The best way to do this is to identify the aspects of educational settings in SecondLife that differ from real-world educational settings.

Living spaces and Designated Learning Spaces

Imagine a university where all instructors also served as residence hall managers and were required to live in the same building with his or her students. Think about how your relationship with your students would change if you lived down the hall from each other, if students were free to wander into your rooms and have a seat whether you were there or not, where you could explore and inspect their living area as well. If a student could see where you lived what would he/she learn about you that they don't know from only seeing you in class? What would you learn about them if you could flip through a CD collection, inspect the posters hung on their walls, observe their desk? We learn much about a person from seeing where they choose to live and how they choose to live but in the real world this seldom happens with our students. On occasion a graduate professor may invite graduate students to his or her home but this situation is extremely rare with undergraduates.

Communal living in SecondLife, that is, inhabiting spaces in SecondLife designated as shared social spaces rather than just living spaces, allows students, and instructor alike, to become more familiar with each other. It may seem strange to decorate a house that isn't directly related to your classroom teaching but your students will surely wander around in it to get a peak at what you're like. They want to know more about you to learn about you as a person. Anthropologists and other social scientists have long known that the ability to trust someone is based on how much you know (or think you know) about them. Allowing your students in your house shows them that you trust them as well, even if it's a virtual trust (it's not as if they can steal your virtual sofa).

Allocating living and social spaces for students gives them spaces for self expression and a feeling of place. Their personal décor decisions

also allows them to communicate who they are (or would like to be seen as) to classmates. The crucial element to this expression is that it be free; we must not put rules and limits on their spaces that will inhibit their expression. Common sense should prevail.

The flip side of this discussion of living and learning spaces is our ability to encourage “world learning” verses “classroom learning.” Students who engage in a community, such as is possible in SecondLife, quickly realize that learning can occur in more places than just a designated classroom space. Even the identity of academic spaces shift in SecondLife.

Discussion regarding assignments begins in the set class time but continues as students look for the latest clothes, explore an amusement park, or decorate their dorm rooms. Instead of flitting off to their campus cliques as they do in the real world, students in a virtual environment have an opportunity for increased social contact and meaningful discussions. They quickly realize that, not only can they learn from each other, but that that learning can occur long after class time is over.

Role markers

Both the role of student and that of instructor are accompanied by visual/physical and verbal markers that identify us in our roles. In the real world the visual/physical markers such as age, position in the classroom, and dress allow students to easily identify who is in charge in the classroom. The instructor stands at the front of the class (at least on occasion) and is, for the most part, older than the average student. We carry with us markers of our status and our sanction by the university to be the educator in the room. We have, in hand, a roster and a grade book. We speak to begin the class session and set the agenda for the meeting. We have the power to give permission to students to speak and our approval and consent of ideas is final.

How are these visual/physical role markers different in SecondLife? As instructors, we probably rarely stand in front of a room of students. We’re much more likely to sit among a group where everyone is physically equal. We don’t appear bigger or older necessarily and we most likely don’t carry a brief case or other

marker of authority. Our only possible physical marker of authority is a tag above our name marking us as an educator or as the leader of a group in which our students are members.

Although SecondLife doesn’t limit verbal role markers, it does mitigate how those verbal markers are expressed and the ability to use them. For instance, I might use all capitol letters when leading a discussion so my students can easily pick out my text out among the lines of excited conversation. This would mark my text as mine but if the rest of the class suddenly decides to use all capitol letters too there is nothing I can do to stop them. They’ve snatched away my verbal marker. I can’t talk louder; I can’t talk more excitedly to any affect if the group isn’t paying attention. I can’t even guarantee that standing on a table and stomping my feet to get their attention will necessarily work to calm the discussion. The tone of my text can certainly be more polished and considered than my students, but again, this isn’t a guaranteed marker of my authority. In fact, if it takes me longer to compose authoritative statements they may just get buried in the banter of the group.

The important idea to grasp here is that the lack of role markers encourages equality among the class. What the instructor loses in obvious authority the student gains in ownership of his or her own learning.

Communication styles

The way we communicate, verbal communication that is, has much to do with how others perceive us and how we establish our identity. If we speak in slang, or in a quiet mousy voice, or a loud boisterous voice, we’re sending a message to others about who we are and how we want them to see us. In collaborative virtual environments such as SecondLife, our communication styles are especially important. In instant messages, for example, our text is all we can rely on to represent who we are. We have little in the way of intonation to relay our mood or our tenor. Emoticons can help but they are often perceived as immature or the signs of someone who is unable to fully express themselves.

SecondLife offers animations and gestures to augment face to face communication and while they can be helpful they come with their own

complications. Gestures are somewhat counter intuitive to use and may even cause disruptions to conversations as you search for the appropriate gesture or animation to augment your text.

It's also important to point out, as we discuss communication styles that synchronous online text environments, such as instant messaging and SecondLife, encourage a more casual conversation than face to face classroom discussion often does. This easy-going chat results in a freer exchange of ideas, encourages introverted students to speak their minds, and facilitates more lively conversation because there is no drawback to "talking over" each other.

These shifts in communication styles result in a reduced difference between the way an instructor "speaks" and the way a student "speaks." A group that speaks the same way feels more homogenous and communal.

The Advantages of a Slippery Identity

Confusion about everything from clothing to communication might make virtual environments like SecondLife seem counterintuitive for good teaching. How can we focus on an important teaching subject if we're worried about whether or not students know who the instructor is? How can we feel as if we have our classroom under control if students are flying this way and that, reading each other's profiles, and instant messaging us while we lead a discussion? It seems as if the potential for chaos might outweigh the benefits of the immersive environment. I would argue, however, that this very chaos is what makes environments like SecondLife the perfect places for post-modern online education.

Even if we only consider the difficulties of identity, as this paper does, we can make art of this confusion. Facing the dichotomies head on can create brilliant learning environments that cannot be duplicated in the real world. If we are able to relax and allow our own identities to flow and ebb with the interaction in our classrooms we will find that students feel closer to us, feel as if they know us better, and will learn to trust us which allows them to learn more. A sense of comradery and community forms from the wreckage of traditional classroom hierarchy. Embracing and engaging slippery identities is conducive to reflection and self-discovery which

is absolutely necessary for building a learning community.

Further Reading

The following texts are recommended as further reading for those wishing to delve deeper into the issues raised in this paper.

Michele Foucault, *The Archeology of Knowledge and Power and Knowledge*

Kenneth Burke, *A Rhetoric of Motives*

Jaques Lacan, *Ecrits*

Bolter, J.D. & Grusin, R., *Remediation: Understanding New Media*

Sherry Turkle, *Life on the Screen*

Cheng, V. J., *Inauthentic: The Anxiety over Culture and Identity.*

JMP Wolf, *The Video Game Theory Reader*

About the Author

Sarah "Intellagirl" Robbins is a PhD Candidate in Rhetoric and Composition at Ball State University in Muncie, Indiana. In the fall of 2006 Intellagirl will be teaching Ball State's first course inside SecondLife. Her research centers on online identity, visual rhetoric, and collaborative knowledge formation. To see more about Intellagirl's research please visit www.intellagirl.com. Sarah is also a pink-haired, sock collecting, mother of triplets. Intellagirl@gmail.com