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A 'Second Life' For Educators

by John K. Waters

Lauded as a learning tool, the popular virtual world is now being used by teachers for their own enrichment, providing them with a wealth of opportunities for collaboration, peer interaction, and sharing of resources.

ELIZABETH KNITTLE, technology integration specialist for the **Barnstable Public School District** in Massachusetts, took her first tentative steps in the 3D online virtual world known as Second Life about two years ago. She wasn't impressed.

"I looked around and I thought, this is crazy," Knittle recalls. "I just couldn't see the value of it, so I left. But then people starting blogging about it-- a lot of people-- so I had to reconsider. I decided that if I was going to understand this thing and be able to answer questions about it intelligently, I really just had to suck it up and get in there and participate. Once I connected with people *inworld*, it made all the difference."

That early buzz among K-12 educators centered on Second Life's potential as a learning platform. And in the last few years, many colleges, universities, and libraries have established resources in what has become the preeminent multiuser virtual environment (MUVE). Today, more than 100 Second Life "regions" are used for educational purposes.

However, Second Life is a bifurcated environment, with an adults-only Main Grid and a Teen Grid for users ages 13 to 18. Because most of their students are over 18, colleges and universities can take full advantage of all the resources on the Main Grid-- everything from a re-creation of the Sistine Chapel to a simulation of 1920s Paris; from a replica of the Alamo to a virtual coral reef. But those restrictions, which Second Life creator Linden Lab established to ensure the safety of younger children, have limited the environment's usefulness for K-12 learning.

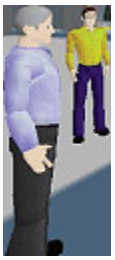
And yet, K-12 educators are flocking to Second Life in growing numbers. They come, Knittle says, because they believe in its pedagogical potential despite the limitations of the Teen Grid, but more importantly in the short run, because of something she discovered herself: A virtual world can provide a rich and productive environment for teacher education, professional development, and networking.

"I quickly realized that Second Life was a great place for educators to collaborate and share their experiences," she says, "which is not something we have all that many opportunities to do. Here was a place where anyone could participate. You didn't have to be invited or submit a proposal. And if my

district didn't have the money to send me places, I could just go into Second Life and learn great things."

Since it was launched in 2003 with one square kilometer of virtual real estate, Second Life has become an international phenomenon, having grown into a 600-square-kilometer world with 6.9 million registered users and between 30,000 and 40,000 online "residents" who explore the space in the form of avatars, buying and selling goods, clothing, avatar attributes, and property, and participating in individual and group activities. The environment contains woodlands, shopping malls, private residences, and a wide range of special-purpose "sims," or simulations, sometimes called islands or states.

Sun Makes Its MUVE



ALTHOUGH IT HAS EMERGED as the undisputed brand name in virtual worlds, Second Life isn't the only multiuser virtual environment getting attention from the education community. Jonathon Richter, research associate at the Center for Advanced Technology in Education at the University of Oregon, points to Project Wonderland as a compelling example of the growing competitiveness in the virtual arena.

Created by Sun Microsystems Laboratories, Project Wonderland is an open source, Java-based tool kit for creating 3D virtual worlds. It's designed to allow developers to create highly interactive environments for both business and educational collaboration. The environments created with the Wonderland tool kit can run live desktop applications, such as presentation software and spreadsheets, and allow avatars to make changes to slides and documents in real time. They also offers real-time immersive audio, which Sun promises will be better than what the real world has to offer. Perhaps most important for its future, Wonderland virtual spaces are completely extensible, which means that developers and graphic artists can extend its functionality to create new worlds and new features within existing worlds. A new release of Wonderland (version 0.5) is scheduled for early 2009.

"The 0.5 release is going to cause some extreme ripples in the world of virtual worlds," says Richter. "I think it has the potential to leapfrog Second Life, because it has the ability to incorporate the desktop applications that people need to use to be productive. Not only can you open up your Microsoft Word document within Wonderland, you can change that document in real time in collaboration with others in the space, just as you would on a wiki."

That particular Wonderland advantage may have been nullified, however, by a recent move by search engine giant Google. In December, the company released an early version of Native Client, a framework for running native code securely inside a web browser. That technology, Richter says, will make it possible for web applications to run operating systems.

"Essentially, you'll be able to run your applications from within any website," he explains. "If you can run a website inside Second Life, you'll be able to run Photoshop or PowerPoint from within your web pages." Sun Labs continues to lead the development effort on Project Wonderland, and has emphasized that this is experimental technology in the early stages of development. Track the progression of the project here.

One of the strengths of the growing education community in Second Life is its "fundamental predisposition to collaborate," says John Lester, who leads the education and healthcare market development group at Linden Lab. His avatar is well-known inworld as Pathfinder Linden. "With teachers, you have this built-in culture of collaboration," he says. "It's in their DNA; they succeed by working with other people on projects and learning from them and leveraging each other's work. It's not

surprising that Second Life is proving to be such a useful platform for their own professional development.

"When I say SL is a collaborative environment, I mean two things," Lester adds. "You will find other faculty to work with on projects and figure out best practices for your common goals. But you can also leverage all the things-- the content, the events, the tools-- that have already been created in Second Life."

He cites the example of a chemistry teacher he talked to who was interested in creating models of molecules and simulations of chemical reactions. The teacher was prepared to build them all from scratch until Lester informed him that the American Chemical Society has an interactive museum in SL users can freely visit. "At its core," Lester says, "Second Life is a rich ecosystem of learning experiences that are open to the public. Teachers don't have to create everything from scratch."

Virtual Venues

As K-12 teachers start to buy into the idea of Second Life, professional learning communities are beginning to spring up in the environment. One highly respected example is the Lighthouse Learning Island. Founded by Kathy Schrock, administrator for technology for **Nauset Public Schools**, Lighthouse Learning was created by four school districts in southeastern Massachusetts: Nauset, Barnstable, **Dennis-Yarmouth Regional School District**, and **Plymouth Public Schools**.

Blogging about the launch of the virtual island in 2007, Schrock wrote that its purpose was twofold: 1) to serve as an "engaging venue for traditional professional development and collaboration, including staff meetings, presentations on topics of interest to the educators in our district, and training materials"; and 2) to "ramp up the Second Life skills of the teachers in the four districts, in order to move ahead, in Year 2, with content-specific Teen Grid islands."

Lighthouse Learning member districts lead tours of Second Life and host seminars and "learning opportunities" at inworld venues-- virtual meeting rooms and auditoriums created for that purpose. Attendees gather at these sites and take part very much as they would in a real-world session, listening to lectures, watching slides and videos, and interacting with other attendees before and after a presentation-- the one difference being that the participation and interaction are all done through their avatars.

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Knittle serves as the Barnstable lead for the Lighthouse, through which her district offers professional development training for its teachers. "It's a space for a few teachers who are preparing to take their students into the teen side of Second Life," she says. "They're using it to figure out how they're going to teach their kids to do this stuff."

A recent Barnstable inworld session focused on the basics of presenting in Second Life, and included demonstrations of some of the tools used for inworld presentations. The session also explained how to find a venue to host a presentation and ways to advertise it. Another session took attendees to various Second Life educational venues and demonstrated how to create "landmarks," which are similar to bookmarks in a web browser, so that they could easily return. That session also covered the essentials of

teleportation: how to travel instantly from venue to venue in a virtual world.

Now in its second year, the Lighthouse Learning Island is also home to other groups of educators, including the Virtual Pioneers, a group of teachers who meet, collaborate, share ideas, and tour social studies-themed simulations with the intent of professional development. Among other activities, Virtual Pioneers points teachers to inworld historical venues that are exemplars of the kind of 3D content a MUVE can deliver. Among the sites the group has recommended are Chateau de Versailles; Antiquity Texas; Olana History Museum; Alhambra, Spain; the Holocaust Museum; Land of Lincoln; Virtual Harlem; Replica Plymouth; and Capitol Hill North.

Visiting Second Life is free, but acquiring real estate, virtual though it may be, costs real money. Knittle says there's a discount for educators, but that an "island" costs about $2,000 to buy and $1,000 per year for maintenance. Knittle pays rent for her own home base, which she shares with two other educators on the educator-focused EduIsland II sim; she spends about $100 per year for her space on the server.

Knittle is on the leadership council of the Discovery Educator Network in Second Life, a group of volunteer teachers who assist other teachers as they begin to explore the virtual world. "Our feeling at DEN is, the more teachers we have in Second Life who are comfortable, the more connections, the more learning, the more collaborating we can do," Knittle says.

DEN sponsors a group of volunteers called DEN guides, who help SL newbies shop, develop their avatars, and learn how to present learning materials in a virtual environment. "We want people to be there, so we make it a point to help," she adds. "We do newbie sessions, but we also do one-on-one training: how you take a picture, how you upload files, how you build things. And some basic scripting classes."

Knittle says that it takes about a year for an educator to become really comfortable in Second Life and get close to mastering all the skills needed to make the most of the experience.

"There is a learning curve," she says, "but it's well worth the effort. We talk about networking with Twitter and LinkedIn and blogs, but the part of my own network that I find the strongest and most compelling is the network I have in Second Life."

That networking component should not be underestimated, says Chris Collins, project manager for the University of Cincinnati's Second Life Project. (Avatar name: Fleep Tuque.)

"It's easier than ever to become isolated," Collins says. "It's a side effect of the technology so many of us work with today. I work in a large public urban university in a great city with lots of stuff to do and see, but I still find myself stuck in my department silo. When I go into a place like Second Life, suddenly I can find people in my field from all over the world."

byte size

Called the Salamander Project, an effort to develop a system for indexing and searching the 3D learning objects found within Second Life is underway at the Center for Advanced Technology in Education at the University of Oregon.

Collins introduced the idea of virtual worlds for education to her dean and provost in early 2006. Since that time, the school has had more than 1,000 students use Second Life, and offers a number of courses

inworld from several disciplines.

Currently, the university's Second Life Project is re-creating the Galapagos Islands. Collins says she expects the project to go public early in 2009 and to make the resource available to teachers around the world. "We're hoping it will appeal to everyone from biology teachers to political science professors," she says.

Collins says it is the "serendipitous professional interactions" that make virtual worlds uniquely valuable to K-12 educators. "It's that chance encounter with people who share your interests or research. For that reason alone, it's the best professional development tool I've ever seen."

Jonathon Richter, research associate at the Center for Advanced Technology in Education at the University of Oregon, has also seen the value of serendipity in a virtual world. "You can watch a presentation on the web, but you don't get the same opportunities for accidental interactions that you do in a virtual world," Richter says. "Someone once told me that the most powerful learning that goes on when you attend a conference is the 20 minutes before a presentation and the 30 minutes after. And that's what Second Life is good for."

Jump Right In

Cathy Arreguin, a technology educator and consultant, says that teachers who use virtual worlds for professional development are gaining more than professional support. They're also growing accustomed to an environment they will be working in more frequently as MUVEs gain wider adoption as learning tools. "You can't understand a virtual world without actually experiencing it," Arreguin says. "It's avatar-based learning, and unless you, as an educator, have the experience of relating to other avatars as an avatar, you won't understand the experience of the learner."

According to Arreguin, who teaches a graduate seminar at San Diego State University called 3D Multiuser Learning Environments, educators who explore Second Life for their own professional growth are also influencing the evolution of the environment. "This is a world that's almost entirely user-built," she says. "So they add their creativity and their experience to the environment, and that changes it."

And that evolution is destined to spill out of Second Life, she says, largely because of Linden Lab's decision to release much of Second Life's code to open source. "Over the next few years, we're going to see more virtual-world platforms that can be used for education. As they become savvier about these environments, teachers are going to start asking, 'Just how much virtual world do I really need?' So expect multiple platforms, but that's a good thing. It will help the conversations mature as far as how we use virtual worlds for learning and education."

So what's the best way for K-12 educators to plug in to Second Life communities and activities? Linden Lab's Lester suggests two strategies. The most popular and effective approach, he says, is to sign up for the Second Life Educators mailing list. The SLED list currently has more than 5,000 subscribers.

"It's the first place many educators go to find help with how to succeed in Second Life," Lester says. "You see people introducing themselves and saying things like, 'I'm interested in this type of training exercise.' And someone else will say, 'I'm working with something similar; let's talk about this and collaborate.'"

Links

- **Center for Advanced Technology in Education**
- **Discovery Educator Network**
- **Linden Lab**
- **Second Life**

Richter advises the following to educators who want to get the most out of the professional development opportunities available in Second Life: No grazing.

"Jump in and find a community that you have some connection to," he says. "If you just wander around, looking for content to consume, flying through empty space, trying to figure out why people do this, you'll miss the point. If you miss the social aspect-- the water-cooler discussions-- you miss the essential value of the environment. It's not until you become part of a community that it all makes sense."

::WEBEXTRAS ::
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