



# Using Second Life in Health Care Education: MUVE Technology

**Sheryl Buckner MS, RN, CNE**



# Objectives

- Review Multi-User, Virtual Environments (MUVE) Technology.
- Describe activities within MUVE that can enhance nursing education.



# Outline

An aerial photograph of a pond with several large green lily pads. A white bird, possibly a heron or egret, is standing on the grassy bank to the right of the pond. The water is dark green and reflects the surrounding environment.

- Review MUVE
- Examples of MUVE
  - Second Life, Open Life
- Ways they have been used in healthcare education
- Facilitators and barriers to using MUVE

**MUVE**



Aggregators Wikis Folksonomy User Centered Joy of Use Blogs Participation Six Degrees Usability Widgets Pagerank XFN Recommendation Social Software FOAF Browser Videocasting Podcasting Sharing Collaboration Perpetual Beta Simplicity AJAX Audio IM Video **Web 2.0** Design Convergence CSS Pay Per Click UMTS Mobility Atom XHTML SVG Ruby on Rails VC Trust Affiliation OpenAPIs RSS Semantic Web Standards SEO Economy OpenID **Remixability** REST **Standardization** The Long Tail DataDriven Accessibility XML Modularity SOAP **Microformats** Syndication

**Multi User Virtual Environment**

examples Second Life and Open Life

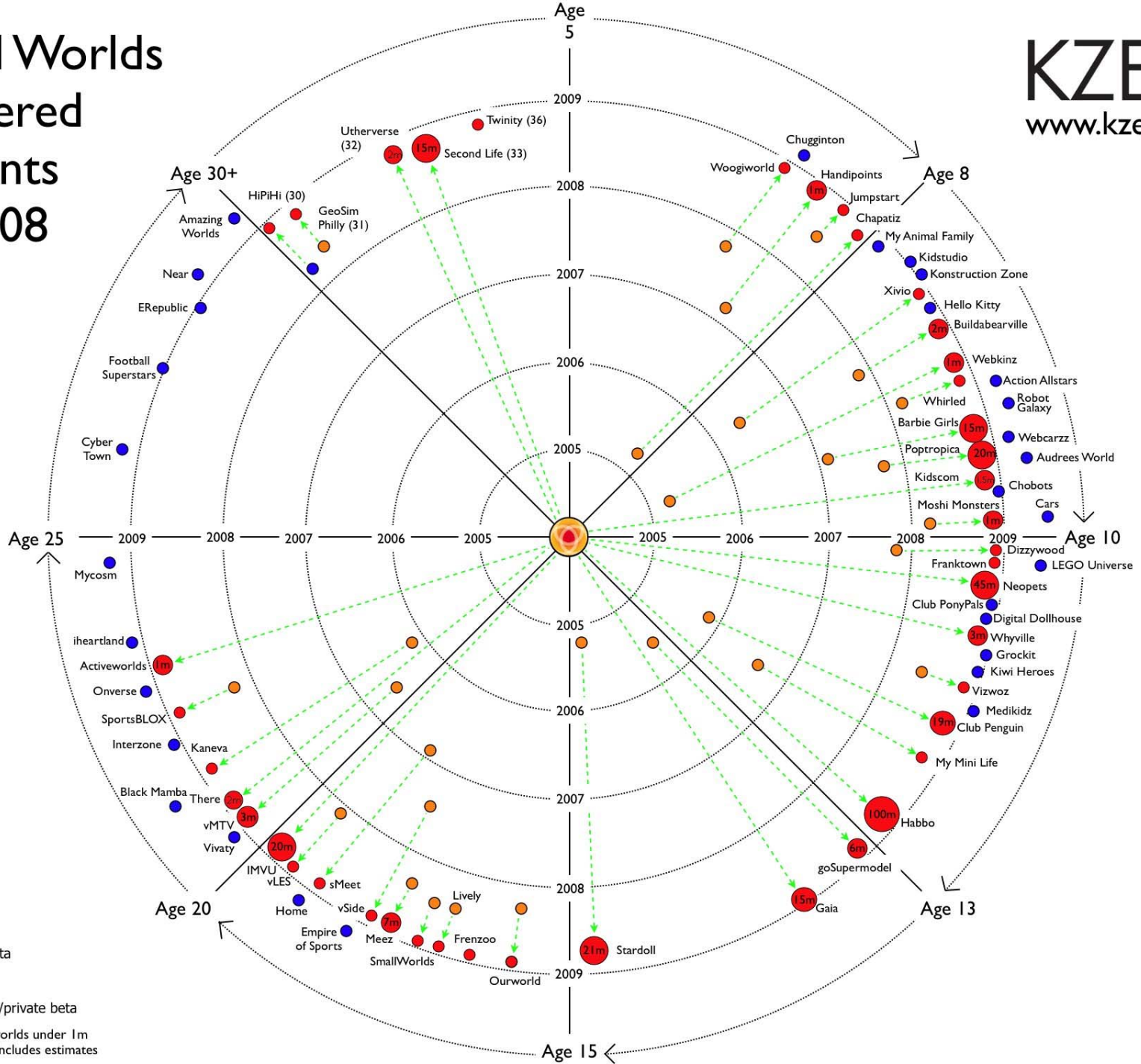
# MUVE



# Sawrio Town



# Virtual Worlds Registered Accounts Q3 2008

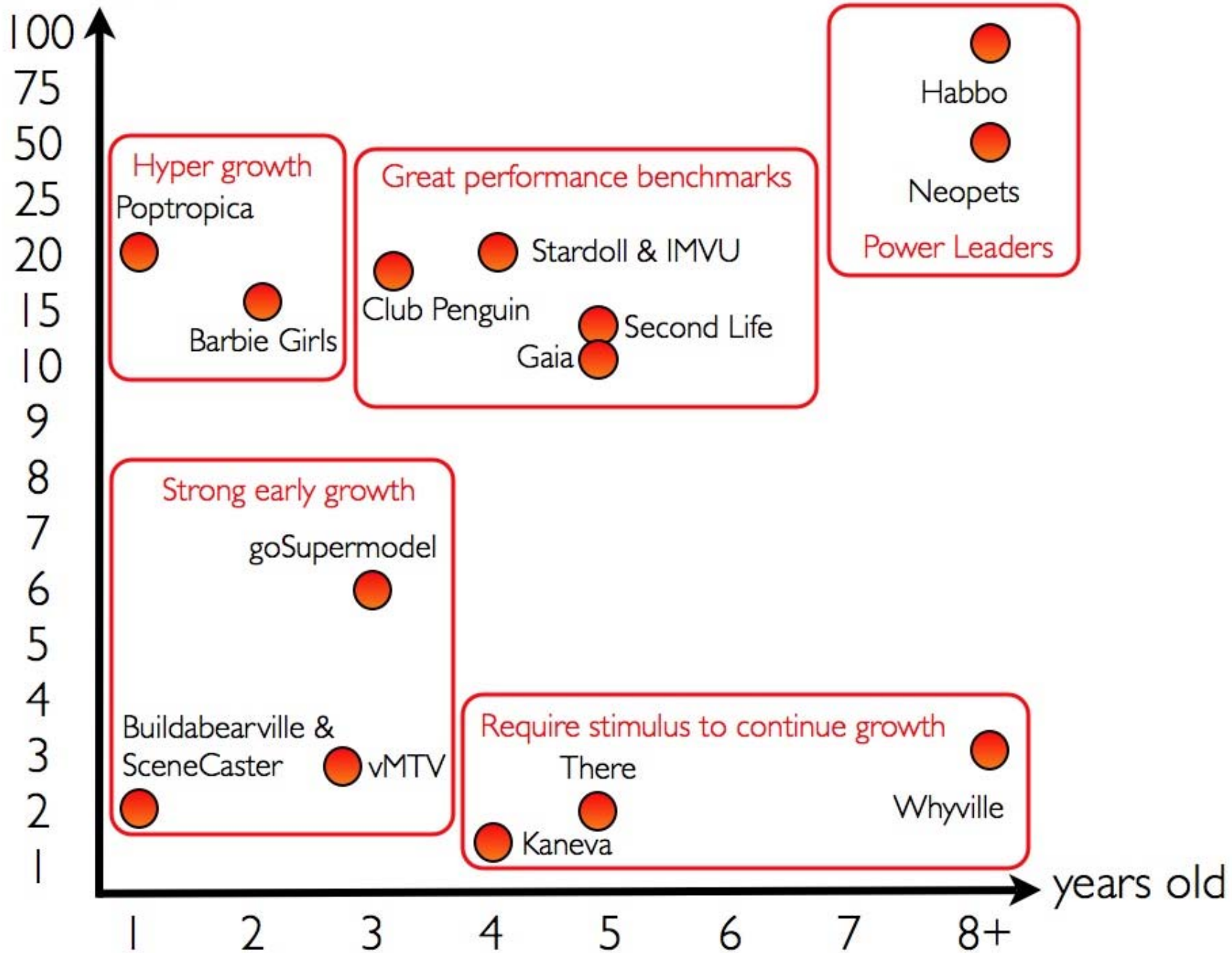


● Live or open beta  
● Launched in  
● In development/private beta  
 No data shown for worlds under 1m registered accounts. Includes estimates

Reg accs (m)

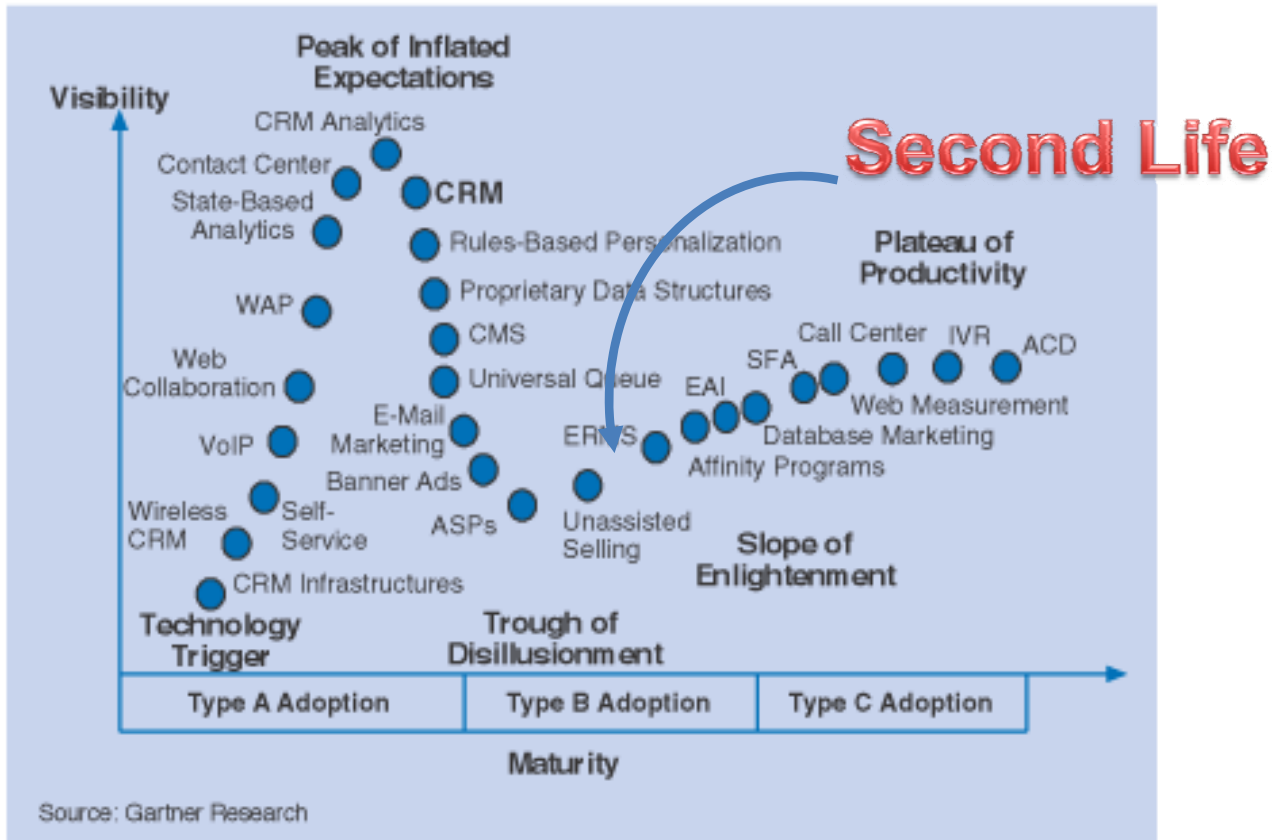
# Growth over time

KZERO 

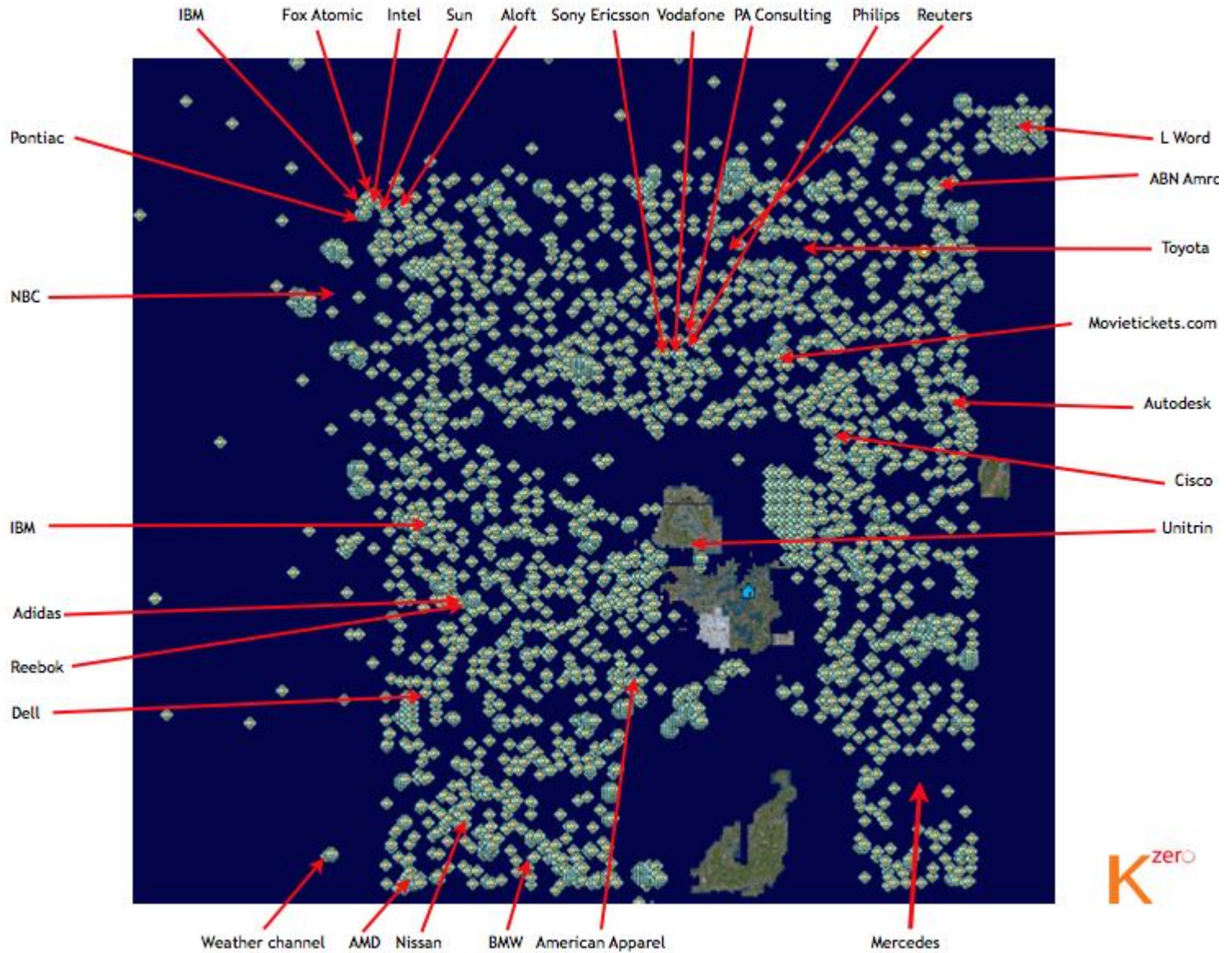


# GARTNER'S HYPE CYCLE OF EMERGING TECHNOLOGY

CRM Technological/Concept Hype Cycle



MATURITY OF SECOND LIFE IN THE TECHNOLOGY WORLD IS BEGINNING TO TAKE AN UPSWING



# Virtual World marketing activity: Teens / Adults

	HiPiHi	Kaneva	Kinset	Second Life	There	vMTV	vSide	World of Warcraft	Total
ABC					Orange				1
Acuvue					Orange				1
AT&T						Orange			1
Brookstone			Orange						1
Coca-Cola				Red	Orange				2
CosmoGIRL					Orange				1
Downtown Records							Orange		1
DKNY						Orange			1
Ford Models						Orange			1
eDoc Laundry							Orange		1
HSUS					Orange				1
Intel	Orange			Red					2
Kitson							Orange		1
MTV				Red		Orange			2
Penguin				Red					1
Pepsi						Orange			1
Rocawear							Orange		1
StarStyle							Orange		1
TBS		Orange							1
Toyota				Red	Orange			Orange	3
Vidal Sassoon	Orange								1
Virgin / EMI					Orange				1
<b>Total</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>7</b>	<b>5</b>	<b>5</b>	<b>1</b>	<b>27</b>

# Other For Profit Presence

**ANGEL<sup>®</sup> LEARNING**

**DKNY**  
DONNA KARAN NEW YORK

**SCIENCE FRIDAY<sup>®</sup>**  
MAKING SCIENCE USER-FRIENDLY<sup>™</sup>



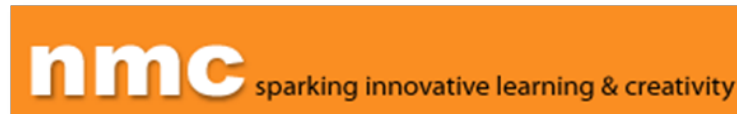
*Coca-Cola* open happiness<sup>™</sup>

**CNN.com**

# Nonprofit Presence



**BERKMAN CENTER FOR INTERNET & SOCIETY**  
AT HARVARD UNIVERSITY



**Skoolaborate**  
Schools collaborating to engage student learners



# Why MUVE?

US educational system is designed to

“prepare people to live in the 1950s”

*Connie Yowell, MacArthur Foundation*

*Second Life Community Convention*

*August 2007*

Number of child and teen virtual world users in the US is projected to increase by 55% in the next five years. By 2012, it is estimated that nearly 50% of children aged 8-11 will belong to a MUVE.

[http://www.emarketer.com/Reports/All/Emarketer\\_2000568.aspx](http://www.emarketer.com/Reports/All/Emarketer_2000568.aspx)

What does this mean for us?

# Second Life (SL)

June 2007 Population: eight million

June 2008 Population: fourteen million



Linden Lab, Second Life Virtual Economy Key Metrics (BETA) through May 2008, p. 6, [http://s3.amazonaws.com/static-secondlife-com/economy/stats\\_200805.xls](http://s3.amazonaws.com/static-secondlife-com/economy/stats_200805.xls); "Economic Statistics," June 26, 2008, Second Life website, [http://secondlife.com/whatis/economy\\_stats.php](http://secondlife.com/whatis/economy_stats.php).

## UNITED STATES GRANTMAKING

### PROGRAM ON HUMAN AND COMMUNITY DEVELOPMENT

- ▶ Affordable Housing
- ▶ Community & Economic Development
- ▶ **Digital Media & Learning**
  - News & Information**
  - Recent Grants
  - Grantmaking Guidelines
  - Program Staff
- ▶ Juvenile Justice
- ▶ Mental Health
- ▶ Policy Research
- ▶ Research Networks
- ▶ Program-Related Investments

## INTERNATIONAL GRANTMAKING

## GENERAL GRANTMAKING

## MACARTHUR FELLOWS



RSS



PRINT PAGE

## MacArthur Island Opens in Virtual World of Second Life

May 18, 2009

[Digital Media & Learning, Press Releases](#)

(Chicago, IL) – The MacArthur Foundation Island opened today in the virtual world of Second Life. The island is a new laboratory for MacArthur's two-year exploration of virtual worlds, led by the [University of Southern California](#) and the nonprofit [Global Kids](#).

MacArthur Island is designed as an alternative space to educate grantees and others about the potential for philanthropy in virtual worlds and allow grantees and Foundation partners to showcase their work and connect with new audiences. The new island is located adjacent to an archipelago in Second Life dedicated to the public good, called the Nonprofit Commons. Visitors to MacArthur Island can interact with installations created about the work of MacArthur and its grantees. They include a giant pair of 3D headphones that visitors can use to listen to stories by independent radio producers as part of Public Radio

### For more information

[Digital Media & Learning Website](#) ▶

[MacArthur's grantmaking in virtual worlds](#) ▶

[MacArthur's grantmaking in digital media & learning](#) ▶



### Video



[Virtual Tour of MacArthur Island](#) ▶



[MacArthur President Fanton interviewed in Second Life by its Co-Founder, Cory Ondrejka](#) ▶

# Why MUVE?

Meaningful learning occurs through social interaction.

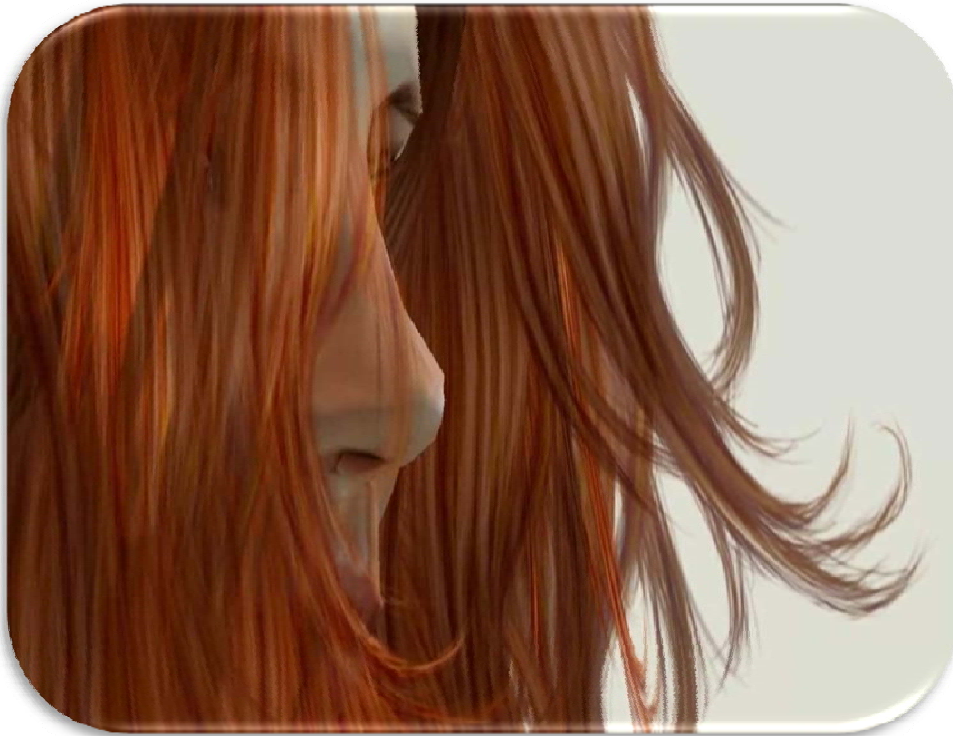
Educators see the need for synchronous communication skills to facilitate group problem-solving and real-time discussions.

Bagi and Crooks

To new generations of students, learning environments are social

For educators, one solution to this is MUVE

# Social Gaming



## **Game theory**

field of applied mathematics but  
also seen in:

social sciences (most notably  
economics)

biology

engineering

political science

international relations

computer science

philosophy

# Game Theory

- attempts to mathematically capture behavior in *strategic situations*, in which an individual's success in making choices depends on the choices of others
- initially developed to analyze competitions in which one individual does better at another's expense (zero sum games), it has now expanded to treat a wide class of interactions, which are classified according to several criteria
- "game theory is a sort of umbrella or 'unified field' theory for the rational side of social science, where 'social' is interpreted broadly, to include human as well as non-human players (computers, animals, plants)"

# Why MUVE?

We must create environments that are

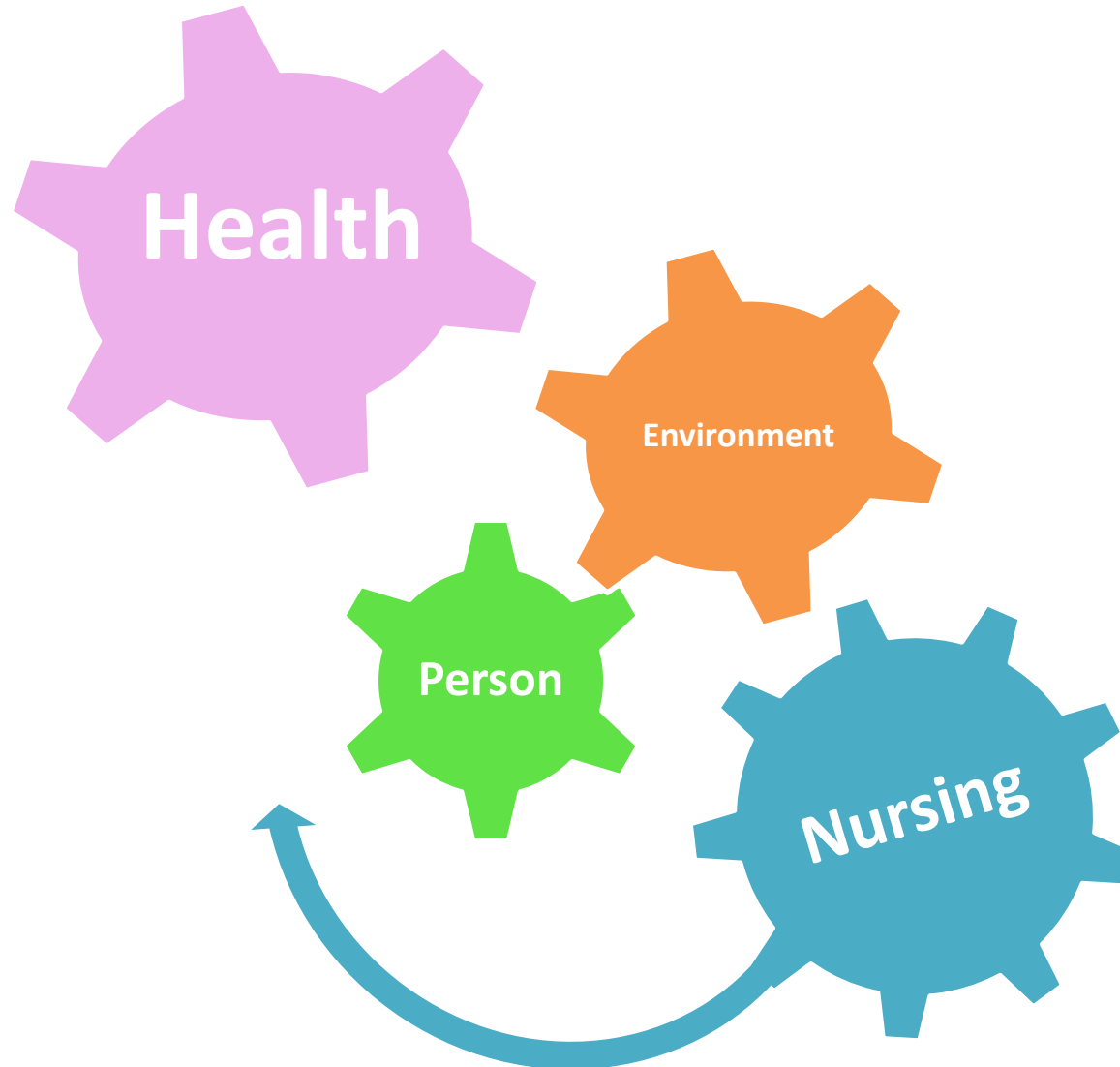
Immersive

Interactive

Engaging



# Why nurses should get involved



# Why SL?



Sense of community

Best realistic graphics in virtual worlds

Avatar becomes a visual representation of you in the online world

# SL Educational Use



- List serv for educators in SL has over 5000 members

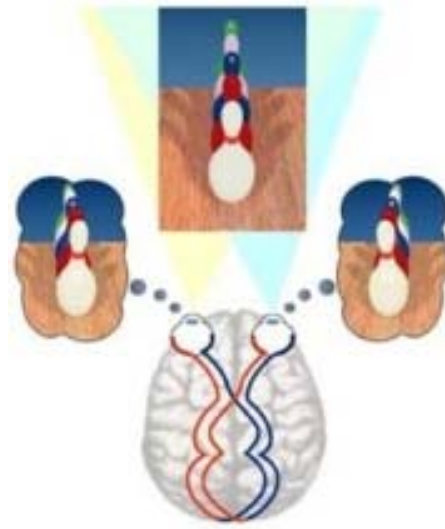
<https://lists.secondlife.com/cgi-bin/mailman/listinfo/educators>

<https://lists.secondlife.com/cgi-bin/mailman/listinfo/healthcare>

# Why SL?

3D Graphics provide depth which allows for a more realistic picture of the world

Creates depth and perspective



# The Avatar

Unlike a chat room, students are able to present themselves visually in a 3D world.



# Dare Daines



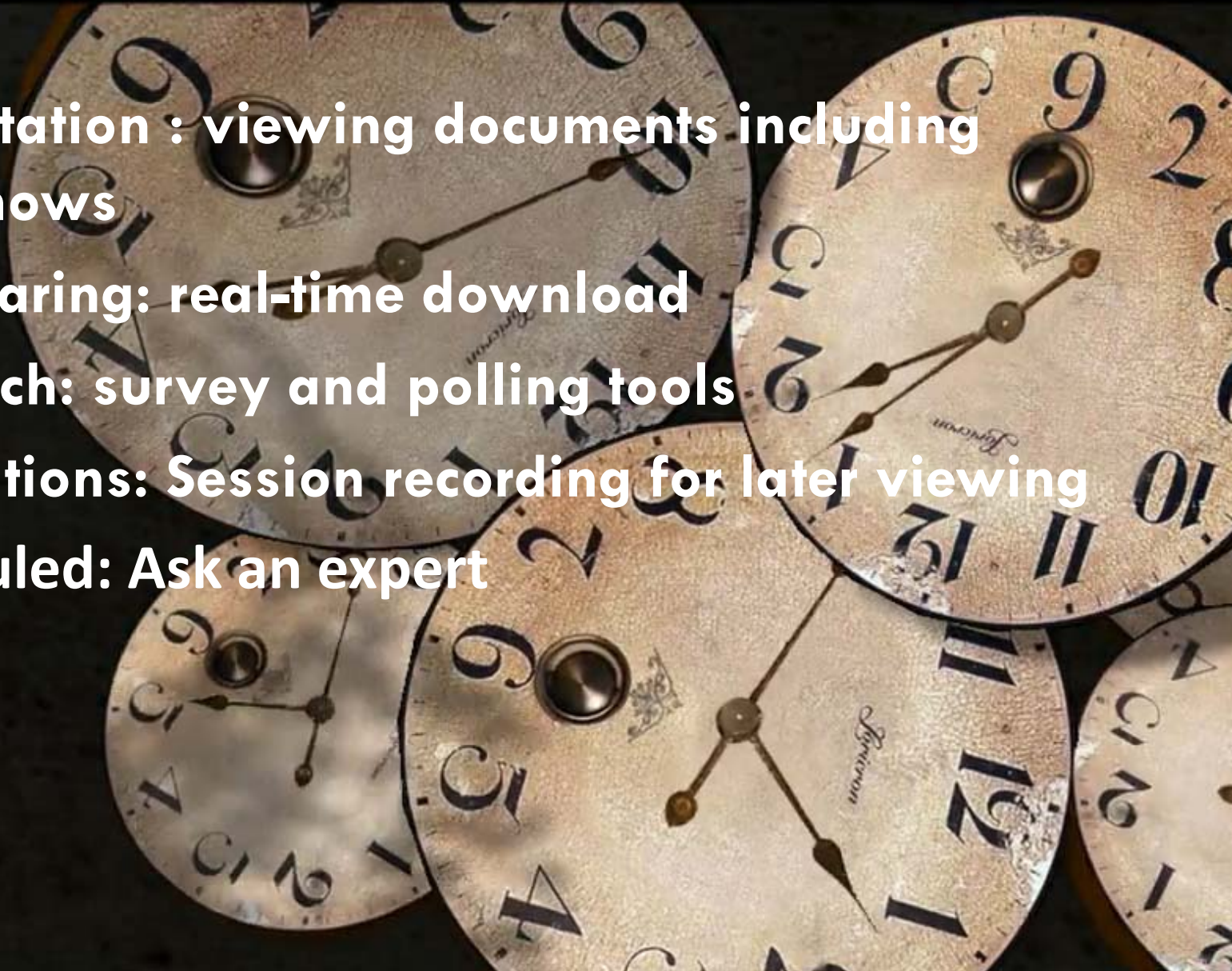
# Learning in SL

- Live interaction in real-time
- Individual and group work
- Varied presentation formats
- Learning from instructor and peers
- Resources that can be easily shared
- Student activity can be monitored
- Engaging and motivating



# General Education Uses of SL

- **Presentation** : viewing documents including slideshows
- **File-sharing**: real-time download
- **Research**: survey and polling tools
- **Simulations**: Session recording for later viewing
- **Scheduled**: Ask an expert



# Communication in SL

- **Whiteboards**
- **Application sharing**
- **Desktop sharing**
- **Co-browsing**
- **Remote keyboard and mouse access**



## Q&A: What is swine flu? Slide 7

- "If you have got an epidemic that affects several countries in the world then it becomes a pandemic.
- "But at the moment it is a problem in Mexico and people who have travelled to Mexico have carried it elsewhere. We have to assess it on an hour-by-hour basis." Is it safe to eat pork products?
- Properly handled and prepared pork products are safe to eat, according to the WHO. The swine flu virus is killed when cooked at temperatures of 160 F/70 C or higher.



## The AMMC project

- At this point AMMC has around 20 physicians, 30 interns
- a nursing staff, a psychology staff and
- last but not least our general staff.
- Believe it or not but no one gets paid to be in AMMC!!
- So why the staff is there in the first place???
- Simple we all adopted Ann and her ideas and became part of AMMC.



# Communication in SL

- **Audio/video conferencing**
- **Real-time text chat or IM**



# Meetings in SL



# Simulations in SL

## **Jayhawk Community Living Center/Thomas Jefferson College**

Create a simulated community  
living center or houses

Home Safety

Falls Risk Assessment

## **University of Wisconsin, OshKosh**

[Scenario with Chest Pain](#)

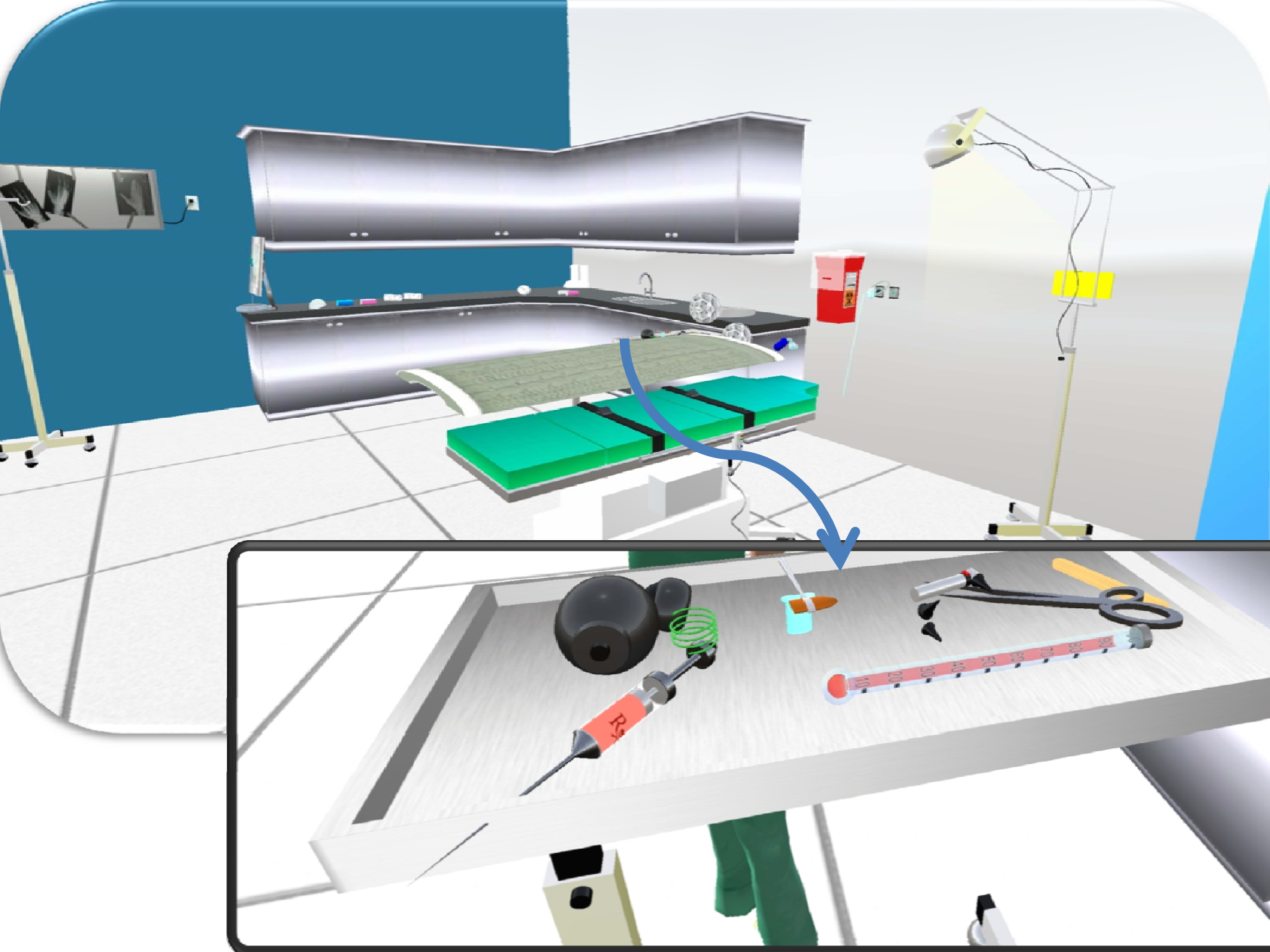
## **CDC**

Tox Town



# Simulations in SL





# Simulations in SL

## Duke University School of Nursing

[role playing](#)

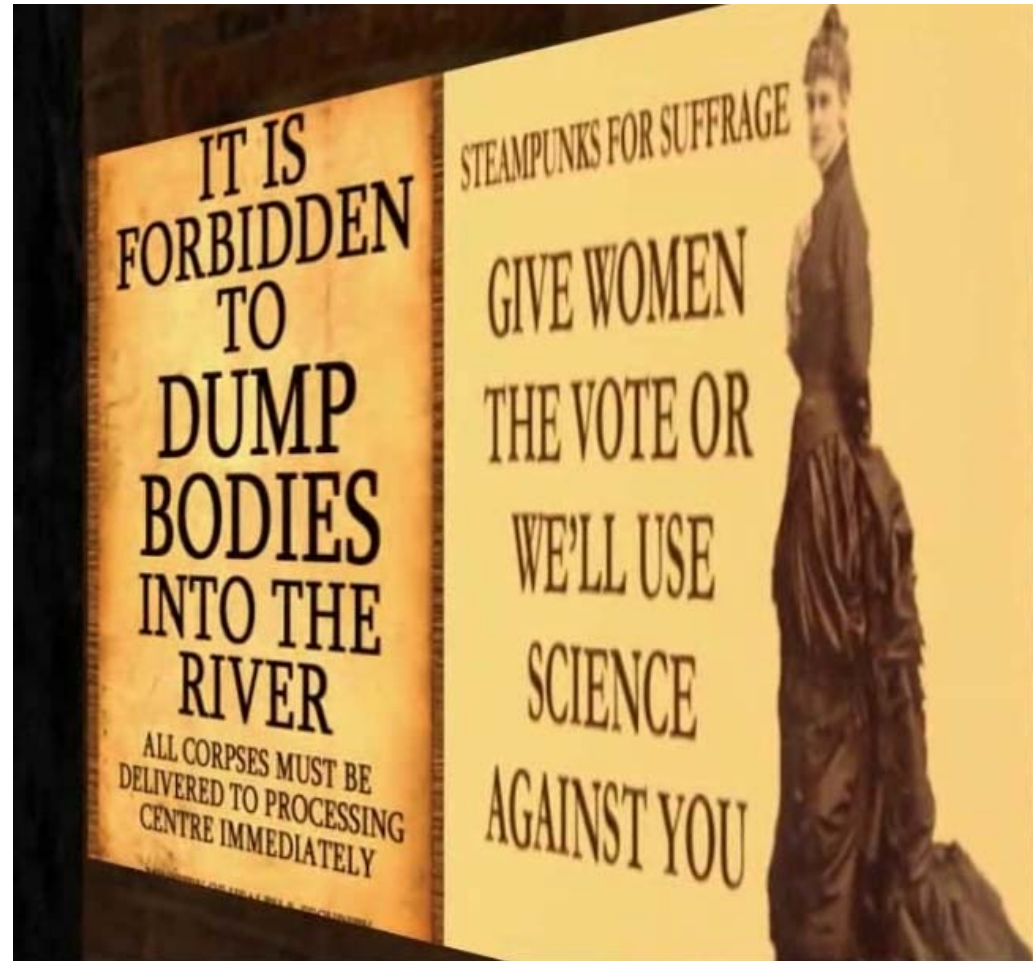
social interaction

## Glasgow Caledonian School of Nursing

[assessment](#) of different patients, for example, the elderly

## Government of Finland

Fire prevention in the home



# Facilitators and Barriers to SL

## Facilitators

- Interactive
- Immersive
- Virtually free
- Engaging

## Barriers

- Sharp but quick learning curve
- Online—which means sometimes the site is down
- Some things may cost money
- Hefty computer, RAM, and video card

## Solutions for barriers

Collaborate with other educators  
Always have a back-up plan  
Follow the site specs

# FUNDING

[MacArthur Foundation](#)

National Science  
Foundation



