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## Second Life virtual universities: A visual analysis

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# Second Life Virtual Universities: A VISUAL ANALYSIS

## ABSTRACT

General academic objectives include producing an educational experience that is engaging, interactive, collaborative, experiential and productive. The goal is to promote learner engagement through the visual power of a newly adopted medium in education – universities in the multi-user virtual environment (MUVE) of Second Life.

Attributes of the virtual reality aid visual learning in the online environment: (1) computer-generated content, (2) three-dimensional graphics, and (3) interactivity. Visual renditions of campus buildings and fellow students as avatars emotionally connect students to feel a sense of presence and community within the virtual learning platform. Additionally, the ability to see and hear their classmates' avatars, despite geographical distances, further encourages collaborative efforts of innovative experiments with others.

Second Life's non-linear media model presents a mediated environment where 3D animations replicate natural movements and scenery to visually render the abstract, creating a sense of realistic connection, ultimately fostering learner engagement and interaction.

Apparent in the virtual construction of people and places is the integrity in maintaining real-world physicality and functionality to provide a sense of realism.

### 3D Graphics

While virtual universities have the capability to fully reproduce their real life campus in 3D form, others defy convention and mix real with fantasy to create innovative architecture unfathomable in the physical world.

### Avatars

Virtual self-representations are called avatars, typically resembling the average human body. Users can customize their avatar to mirror their own appearance, adopt a different gender or alter body shape. Avatar gestures articulate facial and bodily expressions in instantaneously to imitate real life actions.

### Simulations

Simulations for practical classroom training are made possible by the physical 3D renditions and authentic avatar movements. Students in the mediated environment can visually communicate, attend class in the university's lecture hall or practice operational skills.

## Traditional vs. Virtual Visualization

### Linear Media

- > Structured
- > Predetermined
- > Inflexible
- > Requires active imagination

### Non-linear Media

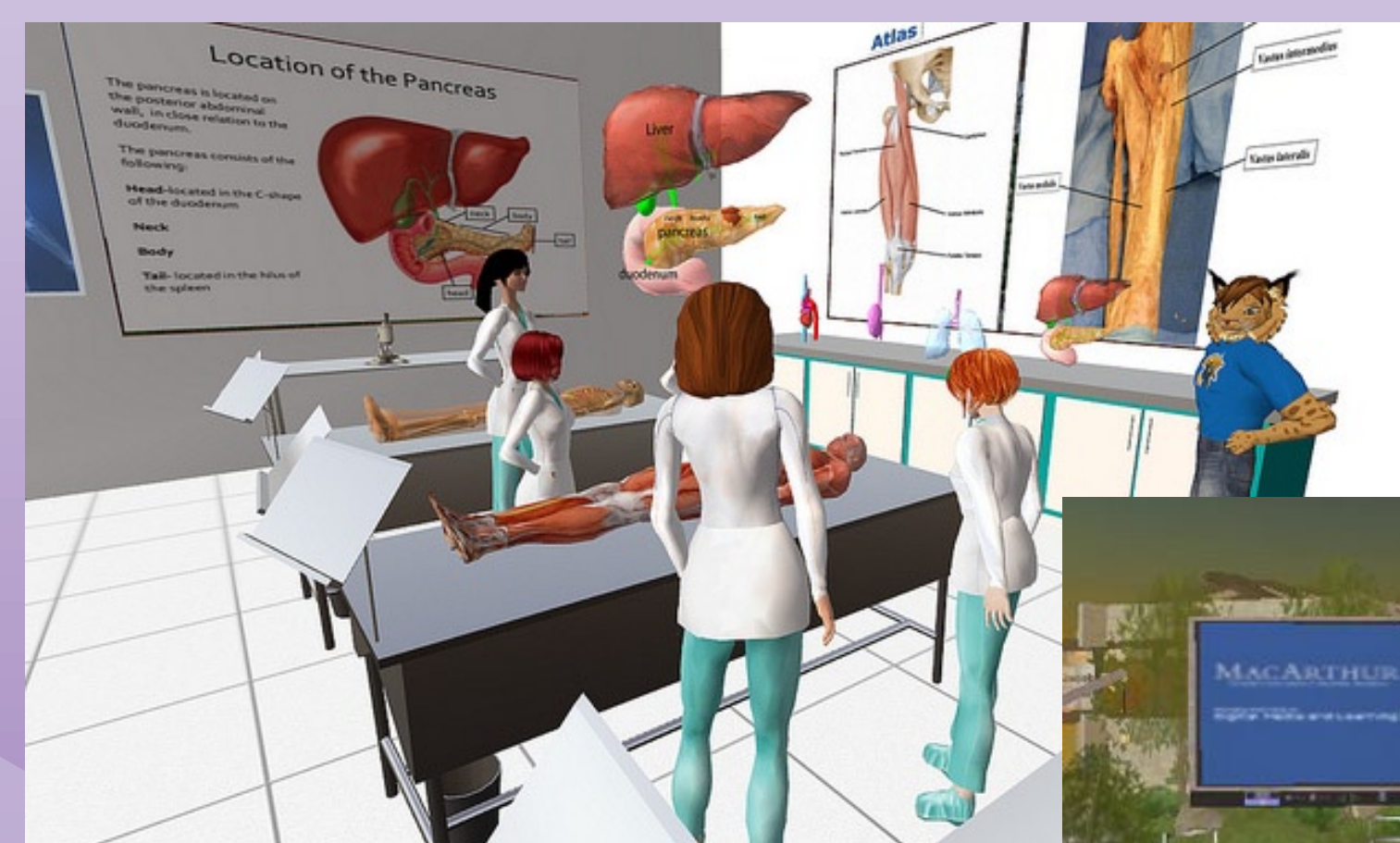
- > Multi-dimensional
- > Endless space
- > Hypertext – interactive weblinks
- > Mediated environment
- > Visual communication
- > 3D animation to replicate natural environment
- > Physical rendering of abstract information
- > Media convergence

### Virtual Reality Attributes

- > Computer - generated content
- > 3D graphics
- > Interactive medium

### Second Life Components

- > Simulation
- > Sense of presence and community
- > Immersive



Medical training simulation with laboratory equipment and apparel

Lecture hall enhanced with audio, video and visual capabilities



Replicated campus building for off-campus, distance education students

## CONCLUSION

Distance education has long been an acceptable mode of undergraduate and graduate studies but Second Life's virtual environment is a visually immersive virtual experience where students are not limited by physical barriers or distance to attend class. 3D visuals and animations give students a sense of realism and community, enhancing learner engagement for a fulfilling educational experience.

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\*Citations upon request



Vassar College  
> Re-creation of Michelangelo's 16th Century Sistine Chapel in Vatican City

University of Hawaii at Manoa  
> Diamond Head Crater lecture hall repurposes a natural landmark in Honolulu as an academic venue for video presentations



Avatar  
> Exact virtual replica is a user's self-representation in 3D form  
> Users can customize to resemble self-image or create an alter ego

## VISUAL APPLICATION