

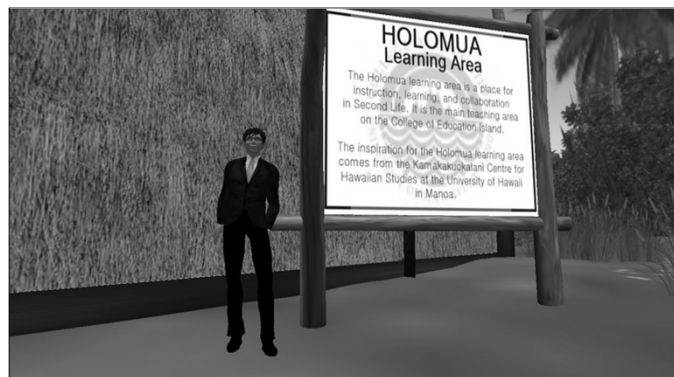
Using Virtual Environments to Model Inclusive Design in Distance Education

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Importance of Universally Designed Distance Education

- Technologies used to deliver distance education are constantly changing.
- Innovations include web conferencing, social networking, and multi-user environments that take advantage of the internet and multimedia tools.
- Section 508 of the Vocational Rehabilitation Act to emphasize information technology accessibility for individuals with disabilities.



Benefits and Challenges of Distance Education

According to the U.S. Department of Education, in 2006-2007, 65% of postsecondary institutions offered distance education credited courses and 23% offered non-credit distance education courses.

The estimate for the total number of students registered in online and blended courses was 12 million (U.S. Department of Education, 2008)

Universal Design for Learning (UDL) and Distance Education

- UDL is based on the *architectural concept of Universal Design* that means the environment is usable by everyone (Roberts, Park, Brown, & Cook, 2011).
- Assistive Technology Act of 1998, UDL is defined as: “A scientifically valid framework for guiding educational practice that –
 - (A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and
 - (B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient” (quoted in Edyburn, 2010).

Description of *Accessibility and Distance Education* Second Life Instructional Unit

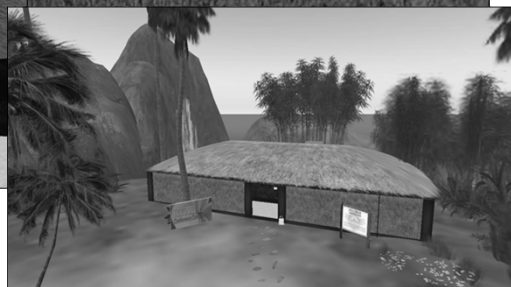
Accessibility and Distance Education is a 3-D world educational unit created in Second Life (SL) to educate postsecondary stakeholders about accessibility issues and solutions in distance education. The unit is housed on the University of Hawai‘i, College of Education’s Virtual Island in SL.

Through its use of multiple means of representation, expression and engagement, *Accessibility and Distance Education* also demonstrates how Universal Design principles can be applied in a distance education context. SL allows users to participate in a number of simulations that give them hands-on experience with accessibility issues and tools.

Builders of Accessibility SIM

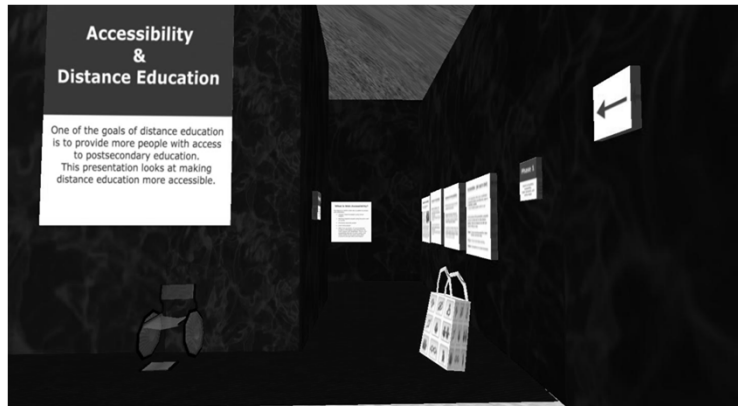
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Description of *Accessibility and Distance Education* Second Life Instructional Unit

Phase One: definitions and issues of accessibility for online education



Description of *Accessibility and Distance Education* Second Life Instructional Unit

Phase Two: media tools for online learning



Description of *Accessibility and Distance Education* Second Life Instructional Unit



Phase Three: digital tools for multi-user virtual environments (MUVE).

Implications for Future Innovation

Preparing for New Technology

A majority of the students who are currently pursuing their postsecondary degrees have come of age in a time of rapidly developing and changing technology. As discussed in this paper, distance education is rapidly gaining ground as a viable means of mainstream instruction. Instructors need to understand multi-media of all kinds, including MUVE, in order to engage present students and to prepare to engage them in the future.

Engaging Faculty and Students in Innovative Ways

When considering inclusive design we must recognize the growing application of Virtual Environments to provide “real life” experiences and tools. These educational materials must be presented in a format that is as cutting edge as the new technology that instructors are being asked to apply in the classroom.

Summary

The innovative professional development module created in Second Life, *Accessibility and Distance Education*, described in this paper is intended to exemplify how inclusive design in higher education includes careful attention to distance education and related new technology such as Second Life (SL). We provided an overview of Universal Design for Learning in Distance Education, stressing the need for innovative curriculum such as *Accessibility and Distance Education*, and giving examples of techniques for utilizing SL as an educational tool that is inclusive of all learners. We conclude that the field of disability and higher education must pay keen attention to new developments in technology so that students with disabilities will be full participants in modern education.

Questions?

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