Teaching Health Care in Virtual Space
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Why Virtual Worlds?

As long as there has been imagination, there have been virtual worlds. J. R. R. Tolkien’s Middle-earth, C. S. Lewis’ Narnia, the islands of Odysseus’ journey—these are all places well known by readers transported to them through alchemy of word, imagery, and imagination. We know these places by sight and sound and smell. Wholly fictional, they are real to us. Computer-generated worlds are the most recent iteration in a long history of virtual worlds, created by human imagination and inhabited through spoken story, printed book, video film, or computer-generated images.

Imagination is the best friend of learning. When imagination is alive, learning is active, energized, and vital. As new technology has evolved, imagination-fueled learning has become funded in new ways. As soon as there was writing, narrative evoked imagery. When motion picture filming became possible, stories played out through visual images themselves. With the advent of computer-generated three-dimensional worlds, new generations of students can walk, talk, and interact with others in rich sensory virtual learning environments. Computer-generated three-dimensional virtual environments, inhabited simultaneously by many users, are rich with imaginal possibility. There, students can learn business practices by running a business. They can learn genetics on an island dedicated to genetics education. They can practice health care skills by interviewing patients in a virtual hospital. They can interact with patients in a nurse practitioner’s clinic or practice interdisciplinary teamwork through interactions with other professionals. These learning activities are easy to create and access, free of charge, in virtual worlds accessible to any student anywhere who has a computer and Internet access.
Why Me?

What I bring to this work is the experience of teaching hundreds of learning activities in Second Life®, a public and free multi-user virtual environment (MUVE) created in 2002 and now used by millions of people worldwide. For over seven years I have had the pleasure of using Second Life® to teach undergraduate and graduate student nurses, other health care providers, non-medical undergraduate students, and interdisciplinary teams. Introducing students and teachers to MUVE learning has become an important part of both my own teaching practice and my research into innovative methods to support student learning.

For Geeks Only?

You may assume that I am a computer geek, an expert on all things computer. Cue the gales of laughter arising from our school’s information technology (IT) department! They are on my office phone speed dial. I suspect they draw straws to see who gets to field the next in my endless stream of questions. I am a teacher, not a “techie” or education innovation specialist. If I can teach in the MUVE setting, anyone can do it. Truly I am “one beggar telling another where she found bread,” sharing a methodology that has transformed my own teaching and offered my students learning activities that have energized and inspired them. Findings from my own research as well as that of others across many disciplines have provided evidence for the effectiveness of MUVE learning. As I and others “on the ground” who are committed to MUVE learning have discovered, the ease and effectiveness of this novel approach transform both students’ experience of learning and instructors’ experience of teaching. It epitomizes a kind of learning many teachers have always hoped and believed was possible.

What Is the Purpose of This Book?

The purpose of this book is to present a handbook of best practices for MUVE teaching, illustrated with examples from teaching in Second Life®, the first and one of the largest public (free) MUVEs. Although this book was written for nurse educators, instructors from other disciplines can benefit from the best practices this handbook identifies and describes. The chapters on teaching pedagogy, the history of Second Life®, MUVE learning, orientation to Second Life®, and the problems/pitfalls common for MUVE teaching are not discipline specific. Although the sample learning activities included in the text were designed for nurses, instructors outside of nursing, both those in other
health care disciplines and those outside of health care, could easily adapt them for use.

Second Life® is a great teaching tool. It is free, easy to learn, and easy to use. This handbook offers specific, step-by-step suggestions for developing MUVE learning activities and samples to illustrate these steps. Second Life® is referenced frequently throughout the book because it is the MUVE I use for both teaching and research. Most of the best practices described within the text apply to teaching in any MUVE. The sample learning activities described within the text can be used in any MUVE, including Second Life®, other public MUVEs, or private (purchased or independently built) MUVEs. All of the sample learning activities in the text have been used in some form with a wide range of students across disciplines. Readers are invited to use, adapt, and share all materials included in the text.

Sometimes a story is the best teacher. “Talking Story” is a Hawaiian tradition honored at the University of Hawai‘i, where I am a tenured professor. Stories of my own successes and failures and also student experiences that have inspired me are included.

Who Is This Book For?

This book is for instructors looking for new and better ways to teach, to expand their pedagogical menu. This book is not for programmers interested in building multi-user virtual environments or creation of land, islands, or structures for use in MUVE learning. The MUVE learning activities I describe do not require building skills or advanced computer expertise. This text is designed as an entry-level, basic, “how-to” handbook for instructors interested in using MUVE technology in their teaching.

Talking Story: How It Began for Me

I discovered Second Life® as I was looking for ways to teach emotional intelligence ability, my academic research focus and primary passion. After only a cursory orientation to Second Life®, I immediately appreciated what MUVEs could mean for student learning. What happened next was unexpected. I began using Second Life® in the classes I was already teaching: physical assessment, medical ethics, advanced pathophysiology, emotional intelligence, development of interdisciplinary teams, and research methodology. My students were undergraduate and graduate nursing students from both health care and non–health care disciplines.

The students’ responses stunned me. Students not only excelled in these learning activities but also described their learning experiences as deeper,
more engaged, and more lasting compared to traditional learning methods. I gradually increased both the frequency and complexity of MUVE learning activities across all the classes I taught and eventually taught a course entirely in a MUVE. I applied for and received funding to study MUVE learning outcomes. I invited teaching professionals from the University of Hawai‘i Center for Teaching Excellence to evaluate MUVE learning in my classes. After one session, the evaluator became quiet. After a few minutes, she simply said, “You are an outstanding teacher in a classroom. However, from what I’ve observed, your students’ MUVE learning is exceptional. I would encourage you to cut back on class time and do more of these learning activities.”

I had hoped and expected to see a higher level of learning effectiveness demonstrated by students in MUVE learning activities. Existing research data supported this expectation. What surprised me was the extent to which MUVE learning enabled students to practice new behavior, to make mistakes in a safe place, and to overcome personal shyness and passive learning habits as well as cultural and even language obstacles. With MUVE technology, I could evaluate students’ application of course content in simulated situations to a degree and with an objectivity not possible using traditional methods. As an instructor chronically frustrated by the limits of test-taking evaluation, this was a turning point for my own teaching.

Even as I write this, more advanced and commercial MUVE education platforms are becoming available. We are on the brink of holographic virtual environments. Simulation technology will continue to develop, in computer simulation laboratories, online, and in holographic and other virtual applications. It is hoped that the best practices described in this handbook will provide a foundation for use of these future applications as well.

To those wishing to begin a journey of teaching transformation, this book is offered.