

## Chapter 20

# Building Virtual Communities for Health Promotion: Emerging Best Practices through an Analysis of the International Health Challenge & Related Literature in Second Life

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### **ABSTRACT**

*Contemporary Multi-User Virtual Environments (MUVes) allow health educators, researchers, and practitioners (ERPs) to engage students, participants, and patients through innovative and uniquely rewarding methods. The technology's value lies in its access to non-traditional participant pools, novel forms of social interaction, and cost-effective improvements to existing methods. These benefits are built on key Web 2.0 principles, namely social networking, community synthesis, and collaborative content generation. In light of ongoing dynamic development of virtual platforms, advancements in networking and immersion technology, and sustained consumer interest, the appeal of these environments will likely increase. Linden Lab's Second Life (SL), a widely recognized and heavily populated MUVe, illustrates the technology's broad spectrum of possibilities through the documented efforts of early adopters involved in health promotion, research, and therapy. However, ERPs must be mindful of the medium's complexities, technological and social parameters, and weaknesses before considering development within virtual worlds (in-world). As these environments operate independently of the real world in some aspects, knowledge of gathering and creating relevant in-world and real-world resources, attracting and retaining project interest, and addressing common obstacles is essential. Through an analysis of*

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*the Texas Obesity Research Center at the University of Houston's International Health Challenge in SL and the documented findings of past and existing health-related programs in SL, the authors seek to provide best practices to overcome these challenges and establish realistic parameters for program design and implementation.*

## **INTRODUCTION**

The emerging best practices discussed herein are primarily derived from the observations of Texas Obesity Research Center (TORC) research team, through their development and implementation of the International Health Challenge (IHC) in the Multi-User Virtual Environment (MUVE) of Second Life (SL). The innovative intent of the IHC and fundamental lack of relevant literature has allowed TORC's undergraduate and graduate team and faculty co-investigators to test novel solutions based on health promotion and interventions in the real world and recent or on-going in-world projects. Therefore, the best practices we report herein reflect scholarly diversity and comparative study. Additional practices, many of which were tested in the IHC, are provided through a variety of scholarly and informal works, including peer-reviewed articles, in-world and real-world conference proceedings, published discussions of existing or past in-world projects, Linden Lab recommendations, and documentation collected by in-world health and education related organizations. This diverse array of sources provides a means to assess the validity and quality of our own practices in the IHC and those of others. Through these practices we seek to provide best practices for health educators, researchers, and practitioners (ERPs) to overcome these challenges and establish realistic parameters for program design and implementation.

## **BACKGROUND**

Multi-User Virtual Environments (MUVEs) are networked, synchronous, computer-simulated

environments which facilitate social interaction among uniquely identified users through rich visual, auditory, or textual interfaces. The technology is rooted in early text-based computer gaming applications known as Multi-User Dungeons (MUDs) (Bartle, 1990). In light of evolving computer processing and connectivity capabilities, these technologically simplistic networks began to incorporate two-dimensional images and audio, and later, animated three-dimensional models and larger numbers of users. Virtual worlds focused on role-playing gaming were informally labeled Massive Multiplayer Online Role Playing Games (MMORPGs), whereas those more interested in social interaction were designated MUVEs (Dieterle and Clarke, 2007). In the last five years, however, MUVEs have come to describe persistent, three-dimensional, mixed media virtual worlds, complete with monetary or commodity based economies and large populations of unique human-controlled characters, or avatars.

Contemporary MUVEs incorporate a number of core Web 2.0 concepts, namely synchronous social networking, organic community synthesis, and collaborative content generation. These principles lay the foundation for the technology's most attractive aspects, including participatory learning (Brown and Adler, 2008) and enhanced social presence (Schroeder, 2002).

Linden Lab's Second Life (SL), the most widely recognized contemporary MUVE, is home to over one million active residents (unique logins per 30 day intervals) and a robust cash-based economy with over \$100 million USD in quarterly transactions (Linden Lab, 2009a). SL is mechanically defined as an international multi-user, multi-sensory albeit image-centric, persistent, stigmergic, private ownership based,

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