

Chapter 15

Crossing the Chasm: Hurdles to Acceptance and Success of Serious Games

Theresa M. Vitolo
Gannon University, USA

ABSTRACT

Serious games are technology with unrealized potential as an innovation for reasoning about complex systems. The technology is enticing to technologically-savvy individuals, but the acceptance of serious games into mainstream processes requires addressing several systemic issues spanning social, economic, behavioral, and technological aspects. First, deployment of gaming technology for critical processes needs to embrace statistical and scientific methods appropriate for valid, accurate, and verifiable simulation of such processes. Second, identifying the correct instance and application breadth for a serious game within an organization needs to be articulated and supported with research. Third, funding for serious-games initiatives will need to be won as the funding will displace monies previously allocated and championed for other projects. Last, the endeavor faces the problem of negative connotations about its appropriateness as a viable technology for mainstream processes rather than for entertainment and diversion. The chapter examines the chasm serious games must traverse by examining the issues and posing approaches to minimize their effect on the adoption of the technology. The histories of other technologies that faced similar hurdles are compared to the current state of serious games, offering a perspective on the hurdle's resolution. In the future, the hurdles can be minimized as curricula are developed with the solutions to the issues incorporated in the content.

INTRODUCTION

Serious games is seeking to transform organizational critical thinking from passive dialogues confounded with rhetoric and partisan bias into active investigations based on shared, synthetic experiences. As the serious games community

states on its website: “The appreciation for the ideas, skills, technologies, and techniques used in commercial entertainment games is at an all time high” (see <http://www.seriousgames.org/about2.html>). To any individual embracing the mobile, distributed, interactive culture of today’s technological society, this transformative goal is rational and timely.

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However enticing the proposition is to technologically-savvy individuals, acceptance of serious games into mainstream processes requires addressing several systemic issues spanning social, economic, behavioral, and technological aspects. First, deployment of gaming technology for critical processes needs to embrace statistical and scientific methods appropriate for valid, accurate, and verifiable simulation of such processes. Second, identifying the correct instance and application breadth for a serious game within an organization needs to be articulated and supported with research. Third, funding for serious-games initiatives will need to be won as the funding will displace monies previously allocated and championed for other projects. Last, the endeavor faces the problem of negative connotations about its appropriateness as a viable technology for mainstream processes rather than for entertainment and diversion.

As a new technology, serious games must cross the “chasm” of the “landscape of technology adoption life cycles” into full acceptance by an organization as viable technology (Moore, 1995). Adoption of technology is a consensus by an organization to accept the risks of supporting the technology for the organization’s needs. Serious games needs to answer the systemic issues mentioned in order to transverse the chasm. The chapter examines the chasm serious games must traverse by examining the issues and posing approaches to minimize the issue’s effect on the adoption of the technology.

Background

Serious games shares a history with various environments seeking to mimic reality, incorporating protections for the users, and allowing the users to experiment and to realize simulated consequences. Key to the field is the concept of simulation. Simulation and its properly-configured use have been well documented; (see Ziegler, 2000, as a hallmark, newly re-edited text encompassing the

field). However, serious games has not embraced the entire connection it has with simulation. In fact, Aldrich (2009) dismisses traditional simulation and its benefits by stating that the approach may not lead to learning and requires 100% predictive accuracy. First, every simulation is a learning experience about the relationships of the underlying system. No simulation can be built and relied upon without rigorous analysis and modeling. Second, no simulation can guarantee its results once incorporated into a real-world system. The real-world is still an open, dynamic, system embedded in a variable environment. The rigor of simulation’s experimental method allows decision-makers to trust their understanding of the model of the real-world. Third, for serious games to become a serious contender as a decision-making technology, its implementations need to address represent reality validly as simulations do.

Serious games and all of its associated labels from “immersive learning simulations” to “social impact games” expect their uses to have embraced digital environments. Individuals born after 1960 have experienced a technical world imbrued with digital technology (Coates, 2003; Sternberg, 1997; Tapscott 1993, 1998). In fact, their extraordinary capability with digital artifacts has led researchers to investigate the nature of digital literacy as a competency to be measured and taught (Eshet-Alkalai & Amichai-Hamburger, 2004). The competency should not be ignored by organizations. Through it, these individuals as employees can offer a significant talent, if organizations understand how to tap and how to utilize the skill. Serious games would be an excellent candidate for harnessing the skill and converting it to productive work.

Finally, serious games is an innovation like a thousand other innovations since time immemorial. As such, its progression from inception to sunset faces the same modifying facts: effect of diffusion, influence of communication channels, and participation of cultures (Rogers, 2003). The opportunity for serious games is burgeoning, but it cannot discount the documented hurdles faced

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