



Chapter VI

E-Simulations in the Wild: Interdisciplinary Research, Design and Implementation

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Abstract

This chapter examines the relevance of research on scientific discovery learning in simulations to professional legal education simulations. There are striking similarities between the research findings from this domain, and our experience of running simulations in law in the Glasgow Graduate School of Law. However, simulation learning depends on factors that arise not only from the design of the simulation, but also from the environment of implementation. We argue that, while the paradigm of simulation research represented by many of the studies on scientific discovery learning is a valuable one for law and other disciplines, the educational effectiveness of e-simulations also depends critically on three factors: design of learning outcomes, type of simulation field, and the organization of communities of practice around and within a simulation. These factors demonstrate a fundamental need to re-configure design concepts around the potentialities of the emerging new medium in the form of a new “trading zone.”

Introduction

The rise and rise of simulation as a form of entertainment is one of the Internet success stories in recent years. Massively multi-user online role-playing games (MMORPGs) have demonstrated the attraction of simulation as a form of social gaming (Castronova et al., 2003). The growth of simulation e-learning, though less developed as an industry, shows similar potential (Chapman, 2005; Gee, 2003) with one report claiming a two to three years' time-to-adoption for educational gaming applications (Horizon Report, 2005). This potential has been some time in gestation: the concept of computer-based simulation has been written about and researched for the last 20 years at least, in fields as diverse as business, mediation, engineering, and bioscience.

The value of simulations has not been lost on occasional commentators in the legal domain. One early commentator noted that simulation and gaming techniques could be used to teach problem solving; and he suggested that such techniques had potential as research and educational tools (Drobak, 1972). The first computer simulation game was used in the context of an urban legal studies program, and was built to enhance students' decision-making roles in a simulated city (Degnan & Haar, 1970). More recently, in their overview of computer simulations, Widdison, Aikenhead, and Allen (1997) observed that most educational computer simulations neglected substantive law, transactional settings, and abstract situations. The authors went on to discuss how these underdeveloped aspects might be expanded in the area of contract law (Aikenhead, Widdison, & Allen, 1999; Widdison et al., 1997). Even in these early papers there was an emphasis on the necessity for interdisciplinary work if computer simulation were to be realized as a viable form of legal education.

It is one function of this paper to explore aspects of that interdisciplinary context and its relevance to legal education—one version, as it were, of Unger's notion of expanded discourse (Unger, 1983). In the second section of the paper we briefly summarize a number of aspects of the research into what might be termed "scientific discovery learning" within the domains of science-based and medical education and draw out themes in user experiences. As we shall see, those themes revolve around the concept of the representation of reality. In a sense this should come as little surprise to anyone familiar with the literature of constructivism and project- and resource-based learning. Representation—literally, the re-presentation of reality—is a problem that surfaces in many educational approaches, including situated learning, problem- and scenario-based learning, constructivist learning, and much else (Herrington, Oliver, & Reeves, 2003; Petraglia, 1997; Shaffer, 2004). In the third section we shall briefly summarize how, on a practical level, we are dealing with these issues in a simulation environment within the GGSL. While a resolution of these issues is not possible in this chapter, in the fourth section of the paper we shall at least begin to sketch possible approaches to a number of these issues, which, on a theoretical level, address the concerns of educationalists and e-learning designers.

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