Chapter 8.2
Informal Adult Learning in Simulated and Virtual Environments

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ABSTRACT

Sophisticated uses of Information and Communication Technology (ICT) have enabled informal learning in simulated and virtual environments. This chapter proposes a four-part informal learning model and explores adult learning in simulated and virtual environments, namely Inter/Intranets, Simulation, and Robust Virtual Environments. The chapter discusses using logic models for assessment and describes future trends of informal learning mediated by ICTs.

INTRODUCTION

Advances in Information and Communication Technology (ICT) have enabled a new world of exploration and learning in the Knowledge Society. The Knowledge Society is fraught with many paradoxes (Bennett & Bell, 2010), one of which is the seeming contradiction of deliberately designing virtual environments to enhance the freedom and user control needed for informal learning. Specifically, ICT has created many virtual spaces for learning that are highly collaborative and intellectually engaging (Fitzger-

ald, 2005). Unlike earlier forms of information technology, these spaces are appealing because of the rich resources available to users and because they allow a certain amount of chaos when users control these resources. Despite a clear need to understand this engagement, attention has been placed far more on how technology assists formal learning, such as distance education, rather than on informal learning.

Distance education, as well as many other Web-based resources, often provides one-way content delivery that constrains the contact between instructors and students rather than fostering a socially interactive approach (Redfern & Naughton, 2002). Attention is starting to shift to more natural forms of adult learning embedded in everyday experiences this captures the essence of informal learning. Informal learning is now being seen as not just incidental, but an essential part of innovative and authentic learning in all environments. It is also an important foundation for adult education tenets.

Fundamentally, learning is about change. It is a concept that is at the heart of human existence, yet learning is a mysterious and difficult concept to explain. Since it is an internal process of the brain and body, how we determine what has changed through learning processes and how these changes have occurred is a difficult task. To add to this complexity, groups such as organizations or communities are said to learn as well as individuals. ICTS can provide avenues for change stemming from individual and organizational learning.

Since learning is difficult to observe, it must be conceptualized through proxies. Such proxies help scholars and practitioners view learning from a particular lens, design instruction consistent with envisioned outcomes, and to test the effectiveness of the instruction. By its very nature, informal learning is hard to observe and utilize by instructors, yet it is what adults do continually everyday. It is also increasingly mediated by the ICTs that enable virtual environments. There are two main proxies for informal learning in this chapter.

The first proxy is theory. Learning must be theorized to promote understanding of how people engage in learning processes in simulated and virtual environments. Theories of learning frame research studies but they also provide a basis for why a design or learning approach is effective. This chapter addresses basic adult learning tenets and informal learning constructs. The second proxy for this chapter is assessment strategy. Assessment is focused on providing evidence that a student learned. This usually requires a self-report, measurement tool (as with a test), or observation of change. While assessment is typically focused on formal education environments, it is an important consideration for informal learning. This is especially so as more educational institutions and professions hope to understand the value and impact of informal learning. Some educational institutions evaluate life experiences of adults for college credit. In the workplace, organizations increasingly recognize that knowledge and learning processes are integral to a firm's success in a knowledge-based economy. Assessing what informal learning has occurred, however, is a challenge and it requires some thoughtful discussion.

Virtual environments have become incredibly sophisticated in their use of ICT. Despite the advances of virtual technologies, there is much work to be done to understand informal learning in simulated and virtual environments. For the purposes of this chapter, the definition of virtual environment is a computer enabled space that represents aspects of real life. This is a broad definition that allows us to look at three areas, namely Inter/Intranets, Simulation, and Robust Virtual Environments (RVE). The aim of this chapter is to explore informal learning in simulated and virtual environments and present initial thoughts on assessment strategies that can be translated from formal education to informal learning. The chapter will address the background and critical issues, discuss informal learning within the framework of adult education tenets, describe

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