Chapter IV
E−Learning Spaces

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ABSTRACT

This chapter analyzes the state of learning spaces as they impact career and technical education. Relevant theories and models about physical learning spaces transfer to e-learning spaces. Critical features for planning e-learning spaces are detailed, and current trends in designing e-learning spaces are noted.

INTRODUCTION

Space impacts teaching and learning, whether that space is explicitly considered or not (Strange & Banning, 2001). Indeed, educator John Dewey stated back in 1933 that "whether we permit chance environments to do the work, or whether we design environments for the purpose makes a great difference" (p. 22), asserting that educational settings are better served by specificity rather than serendipity. In his meta-analysis of environmental impact on human behavior, Moos (1986) determined that "the arrangement of environments is perhaps the most powerful technique we have for influencing human behavior" (p. 4).

Traditionally, higher education has thought of learning space in terms of formal education: classrooms and lecture halls that fostered one-way communication. Even some professionals in career and technical education (CTE) think of training rooms with presenters or self-paced learning modules. Informal CTE often used an apprenticeship model, whereby the novice shadowed the master craftsman within a physical space. However, today's administrators are realizing the impact of informal, social learning and the spaces wherein that occurs: cafeterias, halls, even parking lots (Jamieson, 2003; Johnson & Lomas, 2005). Be it in the classroom or in the parking lot, during office hours or during a weekend theatrical

event, CTE learning occurs and is shaped by the environment.

Lombardi (2005) asserts that post-secondary campuses offer prospective students an experience of education. They "promote themselves, first and foremost, as *places with people* [author's emphasis]. The physical campus sets up the enabling conditions for a complex social ecology to emerge over time" (p. 1). Similarly, professional work settings exemplify complex social structures that impact induction into the field.

With the advent of the Internet, and more specifically Web 2.0, the world of pre- and in-service CTE has changed dramatically. Increasingly, adult students are learning at a distance, often using course management systems. Likewise, companies are developing digital corporate intelligence infrastructures. Although millions of adults, especially the millennial generation, engage in social networking, those connections largely consist of personal connections. Paradoxically, online environments can inhibit social learning, particularly individuals who are new to the field and have not developed professional social networks. Older adults, in particular, can feel isolated and alienated from their peers and supervisors when learning and working online. Certainly it makes sense to examine and plan e-learning spaces purposefully in order to optimize CTE experiences.

BACKGROUND

With the incorporation of digital technology, the definition of learning spaces has changed. Increasingly, the space in which learning occurs has broadened to include cyberspace as well as physical space. Indeed, several scholars focus entirely on virtual learning spaces (e.g., Bayne, 2004; Sheremetov & Nunez, 1999; Stauss, 2002).

Definitions

Brown (2005) defines learning spaces as spaces that encompass the full range of places in which learning occurs, from real to virtual, from classroom to chat room (p. 12.4). Nevertheless, at this point, no single definition captures all of the nuances of technology-impacted learning spaces.

The notion of space versus place deserves consideration. Goodyear (2002) asserts that "space is abstract, but place is concrete and real" (p. 7). Harrison and Dourish (1996) contended that "space" is a three-dimensional environment, while "place" has temporal properties and a social meaning; it is a "space which is *invested with understandings* of behavioral appropriateness, cultural expectations, and so forth." They posit the analogy of a "house" versus a "home." Therefore, in the discussion below, the concept of e-learning spaces has as one of its objectives, the intent of enabling the CTE community to create a sense of place within these intentional virtual surroundings.

Kolb and Kolb (2005), leading researchers in the area of experiential learning, expound on the importance of situated learning theory, and use the term "microsystem" to describe immediate environments (e.g., classroom or course online environment) and "mesosystem" to describe other concurrent settings in their lives (e.g., cafeterias or corporate digital identity).

Marmot (2005) suggests the terminology of "learning complexes", whereby different types of learning correspond to different types of learning spaces. Depending on the tasks (reflecting, conversing, doing), learning spaces may consist of:

- Group teaching/learning
- Simulated environment
- Immersive environment
- Peer-to-peer and social learning
- Learning cluster
- Individual learning spaces
- External spaces

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