



## **Chapter XIV**

# **Educating in the Information Society**

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### **Abstract**

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*As educational institutions struggle to accommodate the widespread social uses of digital media, tensions emerge between traditional and innovative school practices, resulting in unforeseen opportunities to rethink the design of physical spaces, curriculum resources, and pedagogical approaches. This chapter investigates digital literacy in pervasive computing environments as a driver for designing contemporary learning environments. Combined with open pedagogies, innovative resources, and well-designed virtual and physical learning spaces, technological advances have the potential to transform education. In the process, policymakers must reflect on the supports and challenges related to the social uses of pervasive, ubiquitous computing in the built world.*

## Introduction

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Digital literacy tools and multimedia texts are increasingly ubiquitous in the world outside the classroom. Integrated into the environment in a seamless way, these resources are construed as a normal and unremarkable part of the landscape for contemporary students. Dramatic changes in the social uses of digital tools require schools to rethink—not simply to retool—the systemic design of learning spaces with new literacy tools as the pivotal, operational concept. These changes are architectural in nature, requiring different environments for the conceptual design of both physical and virtual spaces.

Learning is accomplished through the mastery of cognitive or skill-based tasks, designed for (more or less) specific outcomes. Some of these outcomes are less transparent than others. Values-based assumptions about the role and priorities of schooling tend to cloud the assessment of outcomes related to skill and knowledge acquisition across disciplines. But design is the central premise at both the micro and macro level of implementation.

Traditionally, a combination of three design elements provides the foundation for task mastery: pedagogy (how we accomplish tasks), intellectual resources (tools, texts, and people needed to complete tasks) and sensory aspects of the learning environment (how the environment supports or inhibits the tasks at hand). Environmental supports combine contextual elements related to the way that people interact with the world, for example, gathering, creating, working, socializing, documenting, watching, and so forth. These drive design features such as lighting, scale, modularity, seating, and traffic patterns. For centuries, alphabetic literacy and orality were crosscutting features in the curriculum that signaled entry into the learning context, thus creating some semblance of continuity and interdisciplinary coherence between various pedagogies, resources, and environments.

As digital media are used to apprentice learners into multimedia literacy practices, alphabetic literacy is now only one of a constellation of useful communication practices. When learning spaces are designed in a piecemeal way, instead of systematically, it is akin to stepping on a balloon. As one problem is addressed, pressure and tensions arise in other areas of the learning environment. Without a coherent design, built on some community consensus about the mission of schooling, experiments with the uses of new literacies in schools can result in a hodge-podge of old and new design elements.

At best, it can be said that an ad hoc approach to educational design is flexible, incremental, and rewards practitioners' creativity and strengths. At worst, the approach reveals redundancy, gaps, and incongruities in a curriculum that is increasingly divorced from real world literacy practices. As communities grapple with the design of socially responsive educational environments, it quickly becomes apparent that tweaking the system is no longer an option.

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