Chapter XIII

Computer-Supported Network-Based Learning Environment for the Workplace

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ABSTRACT

In this chapter we present our experiences in the field of computer-supported network-based learning over the last 10 years. We began our activities in this field with investigation of group communications and of generic models for online learning. Later we extended our interests to implementation of computer-supported network-based learning environments for different user groups and to measures that have to accompany introduction of new learning technologies to schools or workplaces.

INTRODUCTION

In the new economy, companies require employees who are willing and able to continue learning. Workplace learning is the key factor and an essential element in the personal and professional development of employees. It is the main means by
which they improve their work and it is a key strategic element in achieving organizational objectives and goals, leading directly to enhanced competitive advantage.

Workplace learning takes place on the job and on the Web; it takes place at home, at conferences, in training facilities and through virtual corporate universities, to name a few. It is a process that can be as individual or as collaborative as the situation requires. Outcomes should be the development of the employee’s knowledge, skills, values, attitudes, and actions in relation to the workplace environment.

Learning technology solutions have the power to integrate the process of work and learning to improve knowledge and hence job competence and performance. Learning technologies are not only about delivering education, learning or training electronically. The field of learning technologies is a multidisciplinary one that includes learning theory and instructional design, training, distance education, information communication, performance improvement, knowledge management and human resources.

Learning and training delivery solutions combine a variety of appropriate low- to high-end technologies with an assortment of suitable instructional designs and theories. The objective is to aid, improve or complement a person’s learning experience. Learning technologies have been and still are anything from a video, to a drill and practice computer tutorial, to a sophisticated business simulation or knowledge management tool. In the past, learning technology solutions included laser discs, audio, computer projection, and videoconferencing. Today they include these devices but also extend to highly interactive networked learning modules that are available to the desktop. Learning technologies include information retrieval systems, productivity and communication tools, and cognitive tools for just-in-time learning such as electronic performance support.

Today’s networking technologies help to turn work environments into open systems where the sharing and accessing of expertise and knowledge is commonplace (Osgoode, 2000). Under these circumstances, individual employees are responsible for driving their own learning and do not have to wait until the next time a course they require becomes available. The course is available anytime they need it, as many times as they need it. If this system works, individuals can learn faster, allowing organizations to learn more quickly.

**ONLINE LEARNING ENVIRONMENT**

Traditional arguments for in-class training versus technology-based (online) learning have included the immediate availability of an instructor for the students and the higher status that formal certificates have when delivered through classroom training. Until recently, these pros on the classroom side have addressed weaknesses on the technology side. With improvements in technology, these weaknesses are rapidly disappearing. Computer-based training weaknesses often include the fact
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