Chapter III

Interactive Multimedia for Learning and Performance

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Abstract

Developments in information and communication technologies (ICT) are rapidly transforming our work environments and methods. Amongst these changes, the advent of interactive multimedia technology has meant new approaches to instruction, information and performance support implementations. The available resources can be amalgamated in a suitable way to create an enabling environment for learning, training and performing. Concise descriptions of the salient aspects are presented along with basic design principles for communication and performance support. Guidelines for design and suggestions for implementation are provided for the benefit of the practitioners.

Introduction

Undoubtedly, the advent of computers and communication technology has forever changed our daily lives. Today, we have the fantasy amplifiers (computers), the intellectual tool kits (software and hardware), and the interactive electronic communities facilitated by the Internet that have the potential to change the way we think, learn, and communicate. However, these are only tools. The late Turing Award winner Edsger Dijkstra said, "In their capacity as a tool, computers will be but a ripple on the surface of our culture. In their capacity as intellectual challenge, they are without precedent in the cultural history of mankind" (Boyer et al., 2002). The onus is on us, our innovative ideas as to how we harness the technology for education, training, and business in order to lead or lag in the new social order. In this regard, we may remember that Charles Darwin said, "It's not the strongest of the species who survive, nor the most intelligent, but the ones most responsive to change."

In this chapter, we will review these current developments in teaching and learning from a broader performance support systems perspective. Then we will suggest a performance-centered design approach in support of developing teaching and learning solutions for the knowledge worker of today.

Lessons from the Past

There are many examples from the past indicating the rush to implement cutting-edge technologies (Marino, 2001). All of these began with a grand promise as a total solution to a long-standing problem. For example, in 1922 Thomas Edison predicted that "the motion picture is destined to revolutionize" the educational system and will largely supplement textbooks. Radio was hailed with the promise to "bring the world to the classroom." Similarly, educational television was touted as a way to create a "continental classroom" (Cuban, 1986). How much of these hopes have been met as of today?

On similar lines, recently, there has been much hype about interactive multimedia and the Internet as the remedies for all problems in training and education. However, as a knowledge resource, multimedia productions, the Internet, and a library have similar attributes. It is particularly wrong to assume that putting all the information on the Internet will make learning happen. The Internet is useful, but it does not guarantee learning any more than a good library ensures creating knowledgeable persons (Clark, 1983).

From a technocratic perspective, there is a tendency to assume that installing computers and networks will solve every conceivable problem. However, the

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