Chapter 11
Using Technology in Providing Effective Training

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ABSTRACT

The key to an organization's abilities to provide effective training in the 21st century is by infusing technology into their training programs. Before technology infusion can occur, there must be a clear understanding of the dynamics of learning with technology and of the instructional culture of the organization. Developers of effective training programs infuse technology based on four phases—development, integration, implementation, and evaluation. The development phase involves the analysis of the organization, the creation of training goals and objectives, and the design of the training program. The integration phase determines the organization's technology levels and allows developers and trainers to expedite training methods suitable for particular needs. The implementation phase consists of the actual delivery of the training. The evaluation phase is ongoing through formative evaluation, and it ends with a summative evaluation. Future trends of technology in training show promising models for effective individualized training in virtual environments.

INTRODUCTION

With buzzwords such as the "21st century digital economy" and "going global" floating throughout the media outlets, businesses and organizations reassess traditional means of preparing trainees for challenges in this digital age. From communication to providing services, technology has reshaped the business landscape. Traditional means of training are no longer satisfactory nor as effective or efficient when preparing organizations to do business in the current economy. To make training truly effective, businesses and organizations must utilize technology in providing training, but

technology infusion into a training program is not a simple matter. It requires an understanding of the role of technology in the learning process and the importance of instructional technology culture of the organization. With this proper understanding, business leaders, designers, developers and trainers can then infuse technology into the training program by going through the phases of development, integration, implementation, and evaluation outlined in this chapter.

Background of Effective Training

What is effective training? Multiple definitions for effective training exist. Some definitions could be as simple as teaching the trainee to master certain content. Others can include assisting with the removal of gaps or deficiencies in reaching specific organizational learning goals. For this discussion, effective training meets the needs of the organization, motivates the trainee, and utilizes the appropriate delivery system. Effective training is cost-efficient, knowledge building, and becomes a long-term asset by increasing the overall productivity and efficiency of an organization or agency (Machin, 2002). Most importantly, effective training provides positive outcomes for the organization.

Dynamics of Trainer, Trainee, Content, and Technology

Prior to developing a training program using technology, it is important to understand the role of technology in terms of the dynamics of the trainer, trainee, and the content. A full discourse about this topic would require an entire book to explore different views, perspectives, and the impact it has on the learning process. For the purposes of this chapter, there are three main components: (1) the trainer, (2) the trainee, and (3) the content (Brewer, Dejong, & Stout, 2001). Much of the discussion centers on the importance of each component and the utilization of delivery methods.

With the induction of technology and on-line learning, some pundits have touted that it would revolutionize the learning process by eliminating traditional methods for instruction and training (Siegler, 2010; Bonk, 2010; Knobel & Wilber, 2009). Similarly, claims like these have been around since the days of the advent of motion pictures and recording machines (Oppenheimer, 2003). Experts of that day pronounced new technologies were the gateways to revolutionizing education and training. The reality is that new technologies provided and supported additional methods to assist the learning process. Today, pundits say on-line training will supplant traditional classroom training environments, but, as history has shown, today's technology provides more avenues of support and additional methods of training to accomplish the organization's training objectives.

Fundamentally, technology is a tool to aid and support the learning process. Technology adds value by providing support to the dynamics of trainer, trainee, and content. Research on computer-assisted instruction shows that there are positive effects beyond simple traditional instruction (Blok, Oostdam, Otter, & Overmaat, 2002; Torgerson & Elbourne, 2002). Also, computer use for instruction typically supports existing teaching styles (Cuban, Kirkpatrick, & Peck, 2001). Understanding that technology is a support tool allows trainers to avoid adding technology to training just for the sake of technology. Instead, best practices of technology inclusion concentrates on finding the best training delivery system to assist in meeting the learning objectives. For example, just because on-line training is the most recent innovative instructional advancement does not mean that trainers should incorporate it into their particular training situation. Training developers need to ask questions, such as "Does the technology support the learning process?" or "Are learners better served by another method?" With the proper perspective about technology in the

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