Chapter LIV
Developing an Integrated Evaluation Framework for E-Learning

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ABSTRACT

The purpose of this chapter is to provide an integrated evaluation framework of e-learning based on the basic concepts of evaluation and previous evaluation models. Several evaluation models were reviewed in order to lay the foundation for our proposed model of e-learning evaluation. Stufflebeam (1983), Kirkpatrick (1987), Phillips (1997), and Holton (1996) were chosen as four representative training evaluation models. The frameworks developed by Rosenberg (2001) and Khan (2005) were also reviewed to address several evaluation design issues for e-learning. Based on six evaluation models, an integrated framework is suggested for comprehensive e-learning evaluation. This integrated framework consists of six stages (i.e., context, resources, process, product, implementation, and outcomes) and two levels (i.e., program and organization). The practical case is introduced as an example that uses the integrated evaluation framework.

INTRODUCTION

E-learning is defined as the delivery of learning, training or educational programs via electronic means (Stockley, 2003). E-learning involves the use of a computer or electronic device in ways to provide training, educational or learning material. Although computers and the Internet had been used for education and training for many years previously, the term 'e-learning' has existed for less than a decade, but its impact is prevalent in the education, business, and the public sectors. Our extensive literature review showed that the first books referring to e-learning were published in 2001 (Horton, 2001; Rosenberg, 2001). The e-learning handbooks of ASTD (Rossett, 2002) and the American Management Association (Piskurich, 2003) followed within the next years.

The Sloan Consortium's annual report (Allen & Seaman, 2007) showed the recent state of online learning in US higher education. For instance, almost 3.5 million students took at least one online course in the fall of 2006—a nearly 10 percent increase over the number reported the previous year. Improved student access was colleges' and universities' top reason for offering online courses and programs. A *New York Times* article titled, "High cost of driving ignites online classes boom" (Dillon, 2008) provides a testimonial of online learning's main advantage.

Another study of employee learning survey (Masie, 2008) reported on how employees in companies around the world learn at work, and how their learning preferences are changing. E-learning was ranked as the second most frequently used learning tool/method next to reading in the workplace. The majority of employees today rely heavily on self-directed and asynchronous resources, such as e-learning, to learn for work.

E-learning is believed to deliver various benefits, including cost-efficiency, convenience, interactivity, and flexibility in terms of easy updating and distribution, to name just a few (Rossett, 2002). In spite of these benefits of e-learning, there are quality issues involved: technology application-focus (Harris, 2005), a lack of learning experiences (Macpherson, Elliot, Harris, & Homan, 2004), and insufficient management support (Kim, Bonk, & Oh, 2008).

A discussion of the pros and cons of e-learning in terms of quality issues led us to look closely at the existing evaluation models and to serve as input for our integrated evaluation framework for e-learning. In this chapter, we intend to provide background information on e-learning evaluation; the concept of evaluation; existing evaluation models (i.e., four traditional models and two e-learning-specific models); our integrated evaluation framework for e-learning; a practical case-in-point; and our conclusion.

BACKGROUND

Evaluation is defined as "the process of determining the merit, worth, and value of things and evaluations are the products of that process" (Scriven, 1991b, p.1). Evaluation provides information to judge and assess an object's merit and worth (Stufflebeam, 2001). Focusing on programs in an educational context, Tyler (1991) identified the six purposes of evaluation: (1) to monitor current programs; (2) to select a better program to replace the previous one; (3) to assist in developing a new program; (4) to identify the effects of a program; (5) to estimate the costs and effects of a program; and (6) to test the relevance and validity of a program.

Purposes of E-Learning Evaluation

The definitions of evaluation need to be reexamined and clarified when using technology and e-learning in education and training. Organizations have recognized the usefulness of e-learning and have had high expectations of its quality, which