

# Chapter 8

## Principles of Effective E-Learning

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### ABSTRACT

*What are the primary principles of effective e-learning and the subsequent impact on leadership in global business as digital technologies mediums continue to emerge within academia and the workplace? Maxwell (2013) defines this principle as “instructional practices and internet capabilities that direct learners toward a specified level of proficiency and competency in the shortest amount of time” (p. 89). Traditional learning measures that require extensive face to face interaction no longer fit Maxwell’s description and inhibit audiences that require flexibility in obtaining proficiency on tasks like annual training requirements and sustaining Continuing Education Units (CEUs) for certifications. This chapter introduces the foundation of e-learning parameters, Sharable Content Object Reference Model (SCORM), Instructional Management Systems (IMS), and how these mediums interact with learners in conjunction with its impact on leadership, business outcomes, and organizational value.*

### INTRODUCTION

Lim, Ripley and O’Steen (2009) define e-learning as the “utilization of a broad spectrum of learning and communication technologies in comparison to online learning that depend heavily upon the Internet and Web for learning delivery” (p. 209). The question posed is how the combination of digital technology and communication method factor in the design of an effective e-learning methodology.

When approaching e-learning from a composition standpoint, the blending of digital technology and communication methods can be categorized into three formats; technology-facilitated, blended/hybrid, and technology driven e-learning (Lim, Ripley and O’Steen, 2009, p.210). Technology facilitated courses utilize limited electronic content delivery only as a supplement to the traditional face to face classroom interaction. Similar to technology facilitated courses, blended/hybrid learning

DOI: 10.4018/978-1-4666-6134-9.ch008

incorporates electronic content delivery for up to 75% of the duration in conjunction with face to face interaction. Technology driven e-learning differs from both previous models as the majority of the course is delivered via electronic mediums with little to no face to face interaction.

The rapid increase of e-learning utilization has been widely acknowledged by educational and industrial educators at all levels, however; the quality of e-learning models, content delivery and organizational value have been noted (Lim, Ripley and O'Steen, 2009, p. 209). The two models that will be discussed in this chapter include Sharable Content Object Reference Model and the Instructional Management System. Rustici (2009) cites "SCORM was developed to provide an effective data and content structure in order to provide academia a way to construct similar content in an efficient, cost effective, and usable manner" (n.p.). As the most commonly utilized learning management system (LMS), SCORM has been noted as the benchmark for developing e-learning systems and implementing an LMS in school and professional organizations.

In contrast to SCORM, IMS was developed to advance learning objectives utilizing an agile methodology that focuses on "information rich educational technology integration" (Abel, 2010, n.p.). IMS development is more adaptable to both academic and practitioners that desire high content and context delivery of e-learning mediums across a variety of industries. The literature below will build upon the brief introduction provided regarding SCORM and IMS in relation to its content delivery, organizational value and impact on leadership in a culture of emerging digital technologies.

## **BACKGROUND**

In recent years e-learning has become more prevalent with SCORM and IMS serving as the benchmark for developing e-learning systems

in academic and professional organizations. Arman (2009) provides credence to this assertion citing, "the development of e-learning materials is typically acknowledged as an expensive, complicated, and lengthy process, often producing materials that are of low quality and difficult to adapt and maintain" (p.148). Arman's findings entail that proper development and implementation of SCORM or IMS can help to mitigate the aforementioned turmoil. Avoidance of turmoil is especially important in today's economic conditions as every business, and academic institution seeks to provide a more cost effective and efficient professional development model. Maxwell (2013) defines this shift towards web-based training as, "the integration of instructional practices and internet capabilities to direct a learner toward a specified level of proficiency in a specified competency" (p.89).

Many LMS implementation issues arise due to a lack of understanding how to target e-learning, development of relevant workforce content, measuring the "business impact", and maintaining effective reuse (King, 2013, p.5). The key to effective implementation either SCORM or IMS is its ability to target learners within the academic or industrial environment in which it's implemented. Poltrack et al (2012) cites, "SCORM was created prior to widespread use of other types of delivery platforms and learning environments such as mobile devices, intelligent tutors, virtual worlds, games, and other social networking tools" (p.3). In contrast, IMS is still an emerging technology that is highly customizable, however; it has the same inherent risks associated with implementation if the core competencies listed in the literature below are not followed. Both SCORM and IMS essentially reshape the distribution and accessibility of content based off the core competencies of IMS and principles of SCORM. The various pathways to and from the core LMS have been increased forcing the need to provide for a more "agile environment" as Poltrack et al (2012) defines it (p.3).

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