Chapter 8
Factors Leading to a Quality E-Learning Experience

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ABSTRACT
The Internet became available to the general public in the mid 1990’s. At that time, a few institutions starting using the net as a vehicle for providing course credit. Since this early time, the number of institutions offering classes and full degrees online has grown exponentially. At one northeastern institution, the growth has been from 4 courses in 1996 to over 500 courses today. At the same time, most institutions now have updated their classrooms with ever more sophisticated technical capabilities, such as access to the Web for presentations, synchronous videos, and clickers for taking class polls. Others use technology as an add-on to the class room creating hybrid, blended, or e-learning experiences. In the late 90’s classes were primarily text based, using either in house developed web pages, and later using self contained course management shells such as WebCT and Blackboard, which required the users to create content, but the linkages and communication tools were self contained. Some authors have developed taxonomies to look at quality [media richness, student interaction, etc.], but not enough has been done to compare online learning and e-learning to traditional classroom based learning. The contribution of this paper will be to report on the findings of previous studies relating to the assessment of online course delivery and the online component of blended learning classes. The results of the research findings should provide significant contributions to the performance improvement of e-learning.

INTRODUCTION
The Internet and World Wide Web have provided many institutions with advantages as alternate instructional tools. The lines between electronic learning and classroom learning are blurring because more and more instruction has been delivered using computer-based information technology. The consideration of online and offline teaching as two separate entities is an outdated framework. Today’s instructors are asking themselves how to
use information technology to enhance classroom teaching and learning and how to combine activities based in technology to better student learning is an emerging paradigm. Teachers are demanding a more blended and flexible approach to create an effective teaching environment to improve the instructional quality. Coalescing the Internet and WWW with a variety of pedagogical strategies provides a promising vehicle for teachers to deliver their instruction with high quality.

In recent years, the academic community has seen an enthusiastic rush of faculty to the Web as the newest mode of interface with students. Syllabi, lecture notes, assignments, tutorials, and even full courses are being placed on the Web. It is a new mode of electronic learning. It also supplements traditional mode of face-to-face classroom teaching.

To accommodate this potential paradigm shift in education, we need to create a conceptually innovative technological and pedagogical basis for enhancing teaching and learning between teacher and students. This paper describes our effort of applying knowledge management approach to develop an integrated teaching strategy to enhance instructional quality. This teaching strategy is based on a set of essential learning theories. The knowledge management approach combines the most important knowledge management principles and course management applications into our regular curriculum.

This paper is organized by the introduction of learning theories, following by the discussion of types of e-learning. The next section presents the benefits of using knowledge management in education and how to apply knowledge management to increase the instructional quality. In the end, we will conclude our research with implications and future suggestions.

**LEARNING THEORY**

Curriculum design, combined with learning theory, defines how individuals learn and how instruction should be conducted to optimize the knowledge acquisition. There are two major learning theories that have influenced most modern teaching practices: behavioral learning theory and cognitive learning theory. With the development of learning environment and the focus of learning, several new theories have been established. Some are critical to the e-learning instruction and curriculum design.

**Behavioral Learning Theory**

Behavioral learning theory developed largely from Skinner’s model (1968) that learning is measured as change in an individual’s behavior. Behavioral learning theory focuses on modifying the learner’s behavior and provides instruction that involves a presentation of information, a question to seek a response from the learner, feedback to the learner’s response, and either positive reinforcement for a correct answer or a repeat of the cycle to learn correctly. A sequence of instructions is designed to assist learner to acquire more complex skill through broken down component skills. Mastery of the smaller units is a prerequisite for the larger units, and these gradual steps foster student success (Gagne & Briggs, 1979).

The behavioral learning model is best seen in objectivist methodology such as in direct lecture, where the objective is to have the student acquire and repeat factual information. According to the objectivist view, objects have intrinsic meaning, and knowledge is mirroring the reality. Jonassen (1991) defines objectivism, as that knowledge is stable because the essential attributes of objects are knowable and relatively unchanged. The fundamental metaphysical assumption of objectivism is that the world is real, it is structured, and structure...
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