Chapter 12
Engaging Traditional Learning and Adult Learning via Information Technologies

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ABSTRACT

Student engagement is a key factor in learning whether it involves traditional or adult learners. While the role of the teacher may differ, it is primarily the responsibility of the teacher to engage the student by fostering a positive student-teacher relationship and supportive classroom culture conducive to engagement. Discovering a methodology that is effective with individual students can be challenging, but Information Technology provides a plethora of new tools to assist in achieving this goal. This chapter will illustrate the importance of engagement, provide several examples in various venues and investigate the role of Information Technology in this process.

INTRODUCTION

This chapter will build on the themes of traditional learning, adult learning and information technology from previous chapters but the theme of “engaging” adds a new and important dimension to the discussion. Good educational practice engages students. Information technologies have the capability to enrich that engagement or block it.

The responsibility for engaging the student is primarily that of the teacher who must create an environment that fosters a positive student-teacher relationship and that supports a classroom culture conducive to engagement. These two responsibilities can be compared to two general models for interaction. The concept of gravity can be explained by two different models proposed...
by two physicists. Isaac Newton’s explanation envisioned two distinct objects in the universe. The gravitational force between them depended on the mass of each object and the distance between them. Albert Einstein’s explanation involved a continuum of space. Any object in space distorts the space. A second object’s motion through the space was affected by the distortion of the space.

An analogy can be made to the teacher-learner relationship in which it is assumed that one object is the instructor and the other is the student. The Newtonian analogy considers the individual interaction between a student and an instructor in which each has an equal role in the process and responsibility for the outcome. This parallels an adult learning model or andragogy. The analogy to Einstein’s view sees the instructor as warping the space/time of the real or virtual classroom by setting up an environment conducive to learning. The effect is the attraction (engagement) of the student. This chapter will discuss both methods of engagement for both traditional and adult learning and then the influence of information technologies.

**LEARNING**

Research on the cognitive functions of the human brain have provided insights into the learning process and as such have informed the development of learning theories, inventories and the effective use of instructional technology. In a recent article in *Science*, Schneps, Griswold, Finkelstein, McLeod, and Schrag (May 28, 2010) explain that there is a disconnect between the linear traditional instructional methodology and the more haphazard process by which people really learn. They report that “our knowledge builds from conflicting ideas that we weigh, one against the other, so that the understanding that emerges is the weighted sum of probabilistic beliefs” (p. 1119). Yet, they point out that “all too often instruction assumes that students build knowledge sequentially, from one prerequisite idea to the next, in a linear, hierarchical manner that mirrors the design of traditional textbooks and lectures” (p. 1119).

Jarvis (2009) notes that “as a psychologist I recognized that all the psychological models of learning were flawed, including Kolb’s well-known learning cycle, in as much as they omitted the social and the interaction” (p. 23). However, Merriam, Caffarella, and Baumgarten (2007) note that learning styles inventories have “proved useful in helping learners and instructors alike become aware of their personal learning styles and their strengths and weaknesses as learners and teachers” (p. 409). They note that Kolb’s Learning Styles Inventory is the “most often used instrument to assess learning styles in adult education and classified learning styles into four different categories: accommodators, divergers, convergers, and assimilators” (p. 408). Honey and Mumford (1989) developed a learning styles inventory based on Kolb’s learning styles. Their four styles were labeled activist, reflector, theorist and pragmatist. They were motivated by the conviction that “people should be helped to learn effectively rather than be exposed to inappropriate learning experiences, or be given learning experiences without learning how to use their learning strengths” (p. 1). After they guide the learner through scoring the inventory, they then provide suggestions for the learner on selecting learning activities that would be consistent with their preferred style as well as suggesting how the learner might improve each style for which they had a lower score. Merriam, Caffarella, and Baumgarten (2007) also note that the Myers-Briggs Type Indicator is the “most often used measure to assess learning styles based on psychological type preferences” (p. 408). But, they also note that “learning styles may be in part culturally based” (p. 408).

Lee (2009) notes three approaches for learners: didactic, Socratic, and facilitative. The didactic is synonymous with lecture in which the instructor controls both the direction and content of the learning. In the Socratic approach, the instructor directs the learner by using a series of questions.