Chapter 15

Using a Distributed Learning Environment Model to Foster Learner–Educator Interaction

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ABSTRACT

With the advancement of information technology, computer networks, mobile devices, wireless networks, smart phones, the Internet, and the use of social networking tools, learning modalities have greatly expanded, allowing for increased activity between the learner and the educator, and also among learners. This chapter presents a Distributed Learning Environment (DLE) model that can be used to help educators design, implement, and assess learner interaction in an online course while keeping the learner at the center of the learning process. Outlined in this chapter are strategies for fostering learner-educator and learner-learner interaction while also keeping in mind the need for assessment of the learner in a distributed learning environment.

INTRODUCTION

A distributed learning environment model is presented in this chapter to assist educators in designing, implementing and assessing learner interaction in an online course while keeping the learner at the center of the learning process. To begin the chapter, the authors provide a brief overview on the status of learning technology today along with terms to frame the chapter. The next section outlines the authors’ Distributed Learning Environment Model (DLE) describing the main components of the model as well as how to use the DLE model to design courses to foster interaction with learners while integrating assessment strategies in an online distributed learning environment. The authors have provided a number of strategies, including rubrics, to assist the reader in designing an interactive online distributed learning environment. To conclude
the chapter is a discussion about the future of teaching and learning and how mobile devices will impact the learner and the development of learning environments.

BACKGROUND

Today’s learners expect to have at their fingertips information with which to construct knowledge. The advancement in mobile devices such as smart phones allows learners to literally access information at any time in any place as long as the learner has the ability to connect to the Internet. This advancement in communication technology impacts instructional technology and the fields of education and training in an immense way. With the demands of learners and the changing landscape of instructional technology available, educators are being pushed to re-examine the way courses are designed and delivered and how learning is assessed.

Since the late 1960’s, and with the proliferation of technologies made available to approach learning, there has been an influx of terms in the literature primarily addressing variations in method, media or approach (Moore, 2013; Moore & Kearsley, 2005, 2012). In the current literature one can find the terms distance education, e-learning, online learning, mobile learning and distributed learning to name a few. We have outlined definitions for each term to help frame the discussions in this chapter.

- **Distance Education:** Distance education has been defined by Newby, Stepich, Lehman and Russell (2000) as “an organized instructional program in which teacher and learners are physically separated.” (p. 210)

- **Electronic Learning (e-Learning):** This type of learning is Internet-based which includes content delivery in multiple formats, management of the e-learning experience, and a networked community of learners, content developers and experts (Smaldino, Lowther, & Russell, 2012).

- **Online Learning:** According to Smaldino, Russell, Heinich, and Molenda (2008), online learning is “[t]he result of instruction that is delivered electronically by computers and computer-based technology.” (pg. 387)

- **Mobile Learning (m-Learning):** O’Malley (2003) defined mobile learning as “Any sort of learning that happens when the learner is not at a fixed, predetermined location, or learning that happens when the learner takes advantage of the learning opportunities offered by mobile technologies.” (p. 6)

- **Distributed Learning:** Distributed learning as defined by Oblinger, Barone, & Hawkins (2001), “refers to technology-mediated instruction that serves students both on and off-campus, providing students with greater flexibility and eliminating time as a barrier to learning.” (p. 1)

Although the concept of distributed learning has been around for some time there remains an absence of clarity on this subject (Dede, 1995, 1997, 2004; Havice & Havice, 2005; Oblinger et al., 2001). According to Khan (2007), “…no single learning delivery method is capable of supporting the kind of flexibility that learners need” (pg. 6). Thus, there is a need for a distributed learning environment model to guide the discussion for educators in designing the best learning environment to assist learners in meeting learning objectives (Clark, 1983, 1994).

A DISTRIBUTED LEARNING ENVIRONMENT (DLE) MODEL

As educators, the primary goal is to engage learners with the content of a subject matter and the associated learning activities. To promote this engagement, the educator must make a myriad
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