

Module 1: An Overview of Distance Education



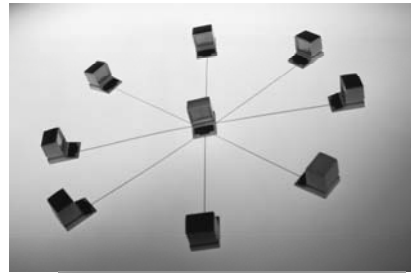
This document contains the content from the interactive instructional unit for the module.

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Introduction

In this course, and in your future career in the field of educational technology, it is likely that you will be expected to oversee and to design online workshops, tutorials, courses, and programs. Thus, this course focuses on instructional design in distance education.



Before we can discuss distance education instructional design, we need to define distance education and understand its unique characteristics. We also need to understand what constitutes effective distance education, especially since part of instructional design in evaluation. We begin our discussion in this course about distance education. Some of this may be a review from previous courses.

Objectives

By the end of this unit, you should be able to:

Unit Objectives:

- Define distance education
- Define e-learning and web-based learning
- Identify characteristics of distance education learning
- Describe the evolution of distance education and its definition of effectiveness



By the end of this unit, what would you like to learn? Write your personal objectives.

Personal Objectives:

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Distance Education: A Definition



Reflection 1.1

Think about your educational experiences, specifically you have been physically separated from your instructor and your classmates. In your own words, define distance education. Is distance education more than online learning and courses?

Distance education has been defined in numerous ways. Holmberg (1989), a pioneer in the DE field, stated that, “The term distance education covers the various forms of study at all levels which are not under continuous, immediate supervision of tutors present with their students in lecture rooms or on the same premises, but which, nevertheless, benefit from the planning guidance and tuition of a tutorial organization” (p. 5). Moore and Kearsley (1996), placing more emphasis on the educational system and administration, said,

Distance education is planned learning that normally occurs in a different place from teaching and as a result it requires special techniques of course design, special instructional techniques, special methods of communication by electronic and other technology, as well as special techniques of course design, and other technology, as well as special organizational and administrative arrangements.
(p. 2)



Keegan’s (1980) definition is the most commonly cited definition of DE throughout the literature. He distinguished DE from traditional education in terms of six characteristics:



1. teacher-learner separation,
2. educational organization influence in planning and student support
3. media usage,
4. two way communication,
5. participation in an industrialized form of education, and
6. learner as individual or privatization of learning.

Keegan's definition, although frequently cited, has been criticized because the last element appears to neglect the social nature of learning and to exclude synchronous modes of delivery such as teleconferencing and online chatting (Garrison & Shale, 1987). To address these excluded aspects, Harasim (1990) adapted Keegan's definition and described DE as having the following characteristics:

- multiple way communication,
- place independence,
- time flexibility,
- text-based communication, and
- Computer Mediated Communication.

Harasim concluded that active learner engagement, peer communication, and social knowledge construction were all important aspects of DE. Harasim recognized that the focus upon learning as a social process in DE was perpetuated by technological advancements and the most recent form of DE, online education: "Historically, the social, affective, and cognitive benefits of peer interaction and collaboration have been available only in face-to-face learning. The introduction of online education opens unprecedented opportunities for educational interactivity" (p. 42).

With the emergence of online education, definitions of distance education have expanded to accommodate its distinguishing features. Rekkedal and Qvist-Eriksen (2003) extended Keegan's definition and adapted it for online education by adding the following two components: (a) the use of computers and computer networks for the purpose of connection and distribution of material and (b) the use of the computer to facilitate communication and initiate dialogue.

Similarly, Paulsen (2003) adapted Keegan's definition of DE for online education and stated that online education is characterized by (a) teacher-learner separation, (b) educational organization influence in planning and student support, (c) computer network usage to disseminate educational material, and (d) two way communication via computers and computer networks.

The definition of distance education has evolved as different types of DE have emerged, and will continue to emerge as we progress toward mobile learning. DE has evolved through several generations.



Reflection 1.2

Look back at the previous definition you formulated for distance education. After reading the definitions from literature, how would you revise your definition? How do the current definitions need to be changed to accommodate the next generation of distance education- mobile learning. Or are they sufficient? (Consider posting your reflections about this on your blog)

The Five Generations of Distance Education

Over the past 150 years, as media has undergone transformations, DE has evolved through five generations (Taylor, 2001, 2007). All generations of DE still exist and are used today (Garrison & Anderson, 2003); however, online education is the most widely employed form of DE today (Lee & Nguyen, 2007). The five generations of DE they are foundational to understanding not only the evolution of the definition of DE but the evolution of the understanding of what constitutes effective, quality DE, especially quality and effective e-learning. In the learning unit, listen to a presentation to learn about the 5 generations of DE and the learning theories upon which they were based.

Researchers have said that, with each generation, education has become more flexible, interactive, and accessible (Hmm.. is this true? Something to think about.). Consequently, shifts in learning theory and pedagogy occurred, and the understanding of effective, quality education evolved. Before we end this unit, let's briefly review the major theories that are native to distance education and often used to evaluate the effectiveness of a distance education lesson, course, or program.

A Conceptual Framework for Effective Distance Education

In 1980, Keegan defined DE in terms of six characteristics. His definition, specifically the last characteristic (e.g. learner as individual), reflects the philosophy underlying the early approach to DE and the early understanding of effective DE. Written materials and technologies were used to transfer information to individual students; communication infrastructures were used to broadcast lectures and educational information via the television and the computer. Online video lectures were used to disseminate information to students. Learner independence and the privatization of learning was emphasized (Keegan, 1980), and interaction among students and faculty was NOT deemed essential.

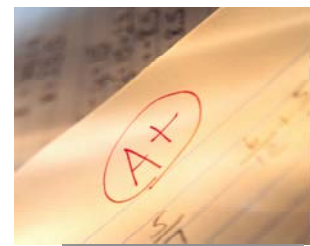
This traditional DE approach was based upon behavioral theories of learning (Duffy & Jonassen, 1992; Skinner, 1974) with the underlying assumption that objective knowledge should be transmitted to individual students for absorption and recall. The entire learning process was



Self-Reflection 1.3

Each generation of DE has had its advantages and disadvantages. Based on your experiences taking DE courses, specifically online or mobile courses, make a lists of advantages and disadvantages.

Does this list change based on the instructor, the learner, or the design of the course?



faculty-centered. Effectiveness was determined by the teacher's ability to communicate information through the selected medium and the student's ability to recall the information on objective, criterion based tests (Jonassen & Land, 2000). Measures of distance education effectiveness including grades and criterion-based tests were primarily measures of *surface learning* (i.e. understanding and absorbing existing information; lower levels of thinking).

At the end of the 1980s and into the 1990s, researchers and educators recognized that learners were not responding favorably to traditional instructional methods, and the employment of behavioral strategies in the online environment resulted in unsatisfied learners, frustrated faculty, and high attrition rates (Carr, 2000; Conrad, Donaldson, & Knupfer, 2001; Prensky, 2001).

Consequently, the faculty-centered, lecture-based model was exchanged for the student-centered learning model (Dobson & Grosb, 2001; Offir, Lev, & Bezalel, 2008), and a shift from seeing the learner as a passive obtainer of information to an active gatherer and constructor of

knowledge was made. Educators adopted distance education teaching strategies based upon the theories of constructivism and social constructivism. For example, technologies, such as discussion forums and blogs, were used to facilitate online discussion and interaction among students and teachers.

Although some researchers still suggest that some students prefer to work individually and that interaction may simply be an aspect of the classroom associated with well-being rather than learning (Garrison & Anderson, 2003; Olofsson & Lindberg, 2006), critical effectiveness research has emerged to demonstrate that internal and socially negotiated dialogue is vital for the advancement of higher order learning, and interaction is essential to the promotion of deep learning (Garrison & Anderson, 2003; Jonassen & Lard, 2000;).

Interaction, sense of community, social presence, critical thinking, and deep learning are constructs that have been identified as crucial measurements of quality and effective online teaching and learning (Garrison & Anderson, 2003; Moore, 1993; Rovai, 2002). Let's look at several frameworks have been used to study effective distance education.

Moore's Model of Interaction

A point of consensus among many DE researchers and practitioners is that interaction is a crucial element for learning; and thus, for effective online education (Bannan-Ritland, 2002; Gunawardena & McIsaac, 2004; Moore, 1993). Interaction among students enhances the learning experience and increases students' satisfaction with the course (Bull, Kimball, & Stansberry, 1998; Palloff & Pratt, 1999). Furthermore, interaction among learners and instructors increases learners' positive attitudes toward and motivation to learn (Fulford & Zhang, 1993; Ritchie & Newby, 1989). In one of the few theories native to distance education, Moore (1993) explained how interaction and structure are critical to success in online education.

White, Roberts, and Brannan (2003) acknowledged that "unless the [online] course is reconceptualized using an interactive learning pedagogy, the results are nothing more than a correspondence course via e-mail and that simply transferring a traditional classroom-based course to an online format is doomed to failure" (p. 172).

In his model of *transactional distance* (TD), Moore contended that DE is “the mutual action between teachers and students, in environments whose uniqueness is separation from each other, and as a result exhibit unique behavior patterns of distance education” (Moore & Kearsley, 2005, p. 224). The physical distance in DE, not present in traditional education, results in a communication and a psychological gap with the potential for disrupted communication and misunderstanding among learners and the educator. Dialogue and course structure, both adaptable to learner needs, are two of the variables that decrease TD and increase learning effectiveness (Moore, 1993).

Effective teaching and learning at a distance depends upon the nature of an interaction and how interaction is facilitated through a technological medium (Moore & Kearsley, 2005). Moore (1989, 1993) noted three types of unidirectional and bi-directional interactions necessary for effective online education:

- Learner-content interaction is considered a distinguishing strength of all DE and refers to students’ intellectual interactions with content that result in changes in understanding, perceptions, and cognitive structures. When a student reads a text and engages in an internal dialogue about its content, a student practices *guided didactic conversations* or interaction with the content (Holmberg, 1983; Moore, 1989).
- Learner-learner interaction is a newer dimension of DE because earlier generations of DE did not readily support collaboration among peers (Garrison & Anderson, 2003; Haythornthwaite, 2002; Taylor, 2001). It is both cognitive and social in nature and refers to communication between and among peers with or without the teacher present (Moore, 1989).



- Learner-teacher interaction, a factor that distinguishes online education from independent studies, refers to all communications between the teacher and the student that occurs throughout the course (Moore, 1989). It also refers to the organization that the educator provides to guide learning throughout the course (i.e. curriculum development) and the role that the educator plays in motivating and supporting students’ learning (Moore, 1989).

A lack of teacher-learner and learner-learner interaction is deemed problematic, and opportunities for high levels of teacher-learner, learner-learner, and learner-content interaction improve the learning process in DE (Baggerly, 2002; Moore, 1989).



Think About It 1.1

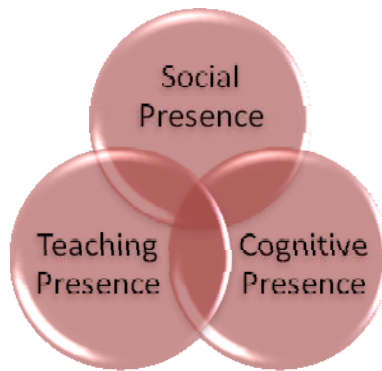
Think about your experience with distance education. Is interaction enough to determine if a distance education course or program is effective? If you were a director of a distance education program, would you solely use interaction as a measurement of evaluation to determine the effectiveness of a course or program? If not, what other measures would you consider?

Instructor's thoughts: Although interaction is important in the e-learning environment, researchers agree that mere interaction does not guarantee that learners are engaged in higher-order thinking aimed at an educational purpose or that they feel a sense of belonging in their class (Piccianno, 2002). Effective e-learning requires more than interaction; Garrison and Cleveland-Innes (2005) noted that "it is valuable and even necessary to create a community of inquiry where interaction and reflection are sustained; where ideas can be explored and critiqued; and where the processes of critical inquiry can be scaffolded and modeled" (p. 134). Taking into account all the possible combinations of interactions among content, teacher, and learners and recognizing the importance of critical inquiry and presence, Garrison, Anderson, and Archer (2000) extended Moore's (1989, 1993) work and created the Community of Inquiry (COI) framework to define effective online education (Garrison, 1989; Garrison & Arbaugh, 2007). Let's look at this framework next.

Garrison et al.'s Community of Inquiry Framework

The Community of Inquiry (COI) framework was developed in the late 1990s to assess the teaching and learning process in asynchronous, text-based e-learning environments. Since its development, the structure of COI framework has been confirmed through factor analysis (Garrison, Cleveland-Innes, & Fung, 2004) and deemed useful in examining higher education (HE) environments including face-to-face (F2F) environments, blended learning environments, web-based synchronous environments, and Multi-User Virtual Environments (Arbaugh, 2007; Garrison, Cleveland, Innes, Koole, & Kappelman, 2006; McKerlich & Anderson, 2007; Nippard & Murphy, 2007; Vaughan & Garrison, 2005).

Based on John Dewey's (1933) practical inquiry model and consistent with many of the tenets of social constructivist theory, Garrison and Anderson (2003) noted that the COI framework is based on the notion that knowledge construction is a collaborative, continuous process. They stated that the community of inquiry is "a fusion of individual and shared worlds" (p. 23). The COI framework is also consistent with the values and the goals of education to promote deep learning and meaningful inquiry, for the construct of cognitive presence is concerned with higher-order thinking (Garrison & Arbaugh, 2007). According to the COI framework, effective learning occurs within a community in which three elements interact: social presence (SP), cognitive presence (CP), and teaching presence (TP).



Social presence is “the ability of participants in the Community of Inquiry to project their personal characteristics into the community, thereby presenting themselves to the other participants as *real people*”(Garrison, et al, 2000, p. 89).

Cognitive presence is “the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication” (Garrison et al., 2000,p. 89).

Teaching presence is the design and the facilitation that guides the cognitive and social processes for the purpose of educational meaningful learning outcomes (Garrison, 2000, et al.).

The underpinning assumption that the optimal educational experience occurs when there are interactions among these three elements is what makes it a useful tool for the evaluation of effective online education.



Think About It 1.2

Think about your experience with distance education. Are the constructs of the COI framework enough to determine if a distance education course or program is effective? If you were a director of a distance education program, would you solely use interaction as a measurement of evaluation to determine the effectiveness of a course or program? If not, what other measures would you consider?

Instructor’s thoughts: *Although the COI framework is more comprehensive than the model of interaction, I still wonder if there is a construct still missing- emotions?*

Summary

Now that we have defined distance education and reviewed a theories for identifying and evaluating effective distance education:

Now you should be able to:



- Define distance education
- Define e-learning and web-based learning
- Identify characteristics of distance education learning
- Describe the evolution of distance education and it's definition of effectiveness

Finally, have you met your objectives?

Personal Objectives:

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In the next module we will look at theories underpinning instructional design as well as take a look at the instructional design models that we will study in this course and use to guide the ISD project.