Designing Online Learning Programs

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ABSTRACT

This article describes a design process for online learning programs that builds on a philosophical base grounded in learning theory, instructional design, and the principles of the process of change. This design process is a six-layered design approach that promotes congruency at the six levels of institution, infrastructure, program, course, unit /activity and student assessment. The conceptual framework for the design process is based on the Vygotskian theory of cognition that focuses on the four core elements of any teaching and learning experience — the learner, the faculty/teacher/mentor, the content /knowledge /skill to be acquired/or problem to be solved, and the environment or context within which the experience will occur. A set of principle-based questions for designing effective and efficient online learning programs assists in implementing this design approach.

INTRODUCTION

The importance of design for online instructional programs increases with the potential combinations of students, student goals, content, skills to be acquired and the particular teaching and learning environments.

Instructional design —as a profession and a process— has been quietly developing over the last 50 years. It is a multidisciplinary profession combining knowledge of the learning process, an understanding of people as learners, an appreciation for the particular characteristics of the content knowledge to be learned or acquired and the characteristics and capabilities of the teaching and learning environments. The learning philosophers and theorists that have most heavily influenced this design approach include Dewey (1933), Bruner (1963), Vygotsky, (1962), Knowles (1980), Shank (1996), and Bransford, Brown, and Cocking (2000). Additional key theorists include memory researcher Schacter (2001) and more recent researchers on online learning (Swan, 2004; Dziuban et al., 2007 Garrison, 2007)

The process of instructional design is bringing increasing value to online learning programs as it provides a structured approach to analyzing an instructional problem and creating a design plan for meeting the instructional content and skill needs of a population of learners usually within a specific period of time and within an institutional programmatic structure. The process of instructional design uses instructional design theories that offer explicit guidance on how to better help people learn and develop. (Reigeluth, 1999, p. 5)

BACKGROUND

This article describes a multi-level process for designing online learning programs. This design process builds on a philosophical base grounded in learning theory, instructional design, and the principles of the process of change. The roots of the traditional instructional design principles are based on the work of Gagne (1965); Dick & Carey (1989); and Moore & Kearsley (1996) integrated with the strategic planning principles and the structure of the institutional context as described in Kaufman (1992) and Boettcher & Kumar (1999) and the principles of technological innovation and the processes of change as described by E. M. Rogers (1995); and R. S. Rosenbloom (1998) and Lick and Kaufman (2000).

This approach to designing online learning is a six-level design process promoting congruency at the levels of institution, infrastructure, program, course, unit/activity and assessment. A set of principles and questions derived from that framework then guides the instructional design process.

SIX LEVELS OF DESIGN

Effective instructional design for online and distance learning benefits from instructional planning at six levels. Figure 1 summarizes these six levels of design, and identifies the group or individuals usually responsible for the design at that level and the length of the design cycle at each level. Ideally, the design at each of these six levels reflects philosophies of teaching and learning that are consistent with the institutional mission and consistent with the expectations of the students and society being served.

Level One: Institutional Design

The design work to be done at an institutional level complements the work of regular strategic planning and positioning of an institution. Institutional planning generally begins with an institution's current vision and mission statements and then proceeds through a data collection and input process that addresses a set of questions such as the following.

Institutional Questions

- What programs and services comprise our primary mission? For whom? To whom are we most accountable?
- To what societal needs and goals is our institution attempting to respond?
- What life goals are most of our students working to achieve?
- What changes in our infrastructure are recommended to match our desired services, programs and students?
- Does our institution have any special core competencies, resources, or missions that are unique to our region or nation that might form the basis for specialized online programs? What are the strengths of our mature faculty? Of our young faculty? Of our planned faculty?

Level Two: Infrastructure Design

People often think that buildings, classrooms, web applications, communication services and systems are neutral as far as having an effect on teaching and learning. Nothing could be more misleading. Design of the infrastructure includes design of all the elements of the environment that impact the teaching and learning experiences of faculty and students and the staff supporting these experiences. It includes design of the following:

- Student services, faculty services, and learning resources.
- Design of administrative services, including admission processes, financial processes and institutional community life events.
- Design of physical and virtual collaborative synchronous spaces for *program launching* events,

Figure 1. Six Levels of Design for Learning

Six Levels of Design	Design Responsibility	Sponsor/Leader	Design and Review Cycle
Institution	Entire campus leadership and community	Provost, CIO and Vice-presidents	3-5 Years
Infrastructure	Campus and Technology Staff	Provost, CIO and Vice-presidents	2-3 Years
Degree, Program	College/Deans/Faculty	Dean and Chairs	1-3 Years
Course	Faculty	Dept Chair	1-2 Years
Unit/Learning Activity	Faculty	Faculty and or Faculty team	1-2 Years
Student Assessment	Faculty	Faculty and or Faculty team	1-2 Years