Analysis and Design of Distance Learning Systems:

Instructional Design Models

Contents

Reading Material
- Definitions
- Types of Instructional Design Models
  - Prescriptive vs. Descriptive
- Categories of Instructional Design Models: Conceptual vs. Procedural
- Examples of ID models
  - Rapid Prototyping
  - ADDIE
  - Hannafin Peck
  - Gerlach & Ely
  - Knrik & Gustafson
  - Kemp
  - Dick & Carey
- Discussion

Reading Material
- Simonson, M., Smaldino, S., Albright, M. and Zvacek, S. (2002). Teaching and Learning at a Distance: Foundations of Distance Education (Chapter 6).
- Summary of Instructional Design Models (βλ. Site μαθήματος)
- Web site of University of Colorado Denver
  http://carbon.cudenver.edu/~mryder/itc_data/idmodels.html

Definitions
- Design is a rational, logical, sequential process intended to solve problems.
- Instructional Design is the systematic process of transplanting general principles of learning and instruction into plans for instructional materials and learning.

Instructional Design as a:
- Process. The analysis of learning needs and goals and the development of a delivery system to meet those needs.
- Discipline. That branch of knowledge concerned with research and theory about instructional strategies and the process for developing and implementing those strategies.
Definitions (cont.)

- **Models** are structures that help us visualize problems and to break them down into discrete, manageable units.
- **Instructional Science** is the science of creating detailed specifications for the development, implementation, evaluation and maintenance of all situations that facilitate learning.
- **Instructional System** is an arrangement of resources and procedures to promote learning.
- **Instructional Technology** is the systematic and systemic application of strategies and techniques derived from behavioral, cognitive, and constructivist theories to the solution of instructional problems.

Types of Instructional Design Models

- **Fixed.** They prescribe the same method variable regardless of what the learner does (prescriptive)
- **Adaptive.** They prescribe different method variable depending on learners actions or responses (descriptive)

Prescriptive vs. Descriptive

- Uses sets of conditions and desired outcomes to prescribe the best methods
- Goal oriented
- Optimal methods are the variable of interest
- Described whole models that will be optimal for given sets of conditions and desired outcomes.
- Take sets of conditions as given and describe the likely outcomes as the variables of interest
- Goal free
- Outcomes are the variable of interest
- Concerned with describing the likely outcomes of using whole models under varying sets of conditions.

Categories of ID models: Conceptual vs. Procedural

- Time-focused: Opportunity oriented providing ample room for student perseverance
- Task-focused: Emphasize the processes that facilitate learning, prescriptive and generalized
- Learner-focused: Make recommendations for instructions based on differences in the learner, primarily prescriptive
- Identify steps, not relationship among variables; serve as a translation from theory to practice, generally very linear
- Models built on general systems theory
- Models based on learning and instructional theory—used as project planning tools; not as guidelines for specific instructional activities
Rapid Prototyping Design Model

ADDE Model (Analysis, Design, Development, Implementation, Evaluation)

Hannafin Peck Design Model

Gerlach and Ely Design Model
The real value of models

Under which circumstances you will use an instructional design model?

Comparisons among the various ID models