Assignment 1:
The Tenets of Instructional System Design

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Instructional Design

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September 12, 2010
Introduction

In the United States, developing instruction and Instructional Design (ID) are interchangeable. Design or development includes previous research, delivery options, and evaluation. Instruction denotes an informative display, which may not be appropriate. Educational intervention actions by the teacher to improve student learning is preferable. However, Instructional Design (ID) is more convenient than intervention development because the learning process is difficult to portray entirely in an automated model. Studies take place within educative settings and focus on school subject domains; by placing the spotlight on educative settings as the principal research site, the connection between the teacher and the student disappear over a time (Barron, 1995, p. 193).

Cognitive Learning Theory

Cognitive learning theories place emphasis on factors emoting from the learner and less emphasis on variables within the environment than behavioral theories. The Cognitive Learning theory explicates the development of cognitive configurations, methods, and representations that mediate between teaching and learning. Behaviorist and cognitive learning models support how the learner obtains clusters of knowledge and from this derive a set of behavioral actions or skills. This set of exploits represents ambassadors of the learning occurrence. Schuell (1986) notes that best practices have led to the purposeful sense of prudent learning outcomes and “course syllabi outline an incremental and sequenced progression toward the achievement of learning objectives” (Schuell, 1986, p. 4). Schuell credits five major ways that cognitive psychology has influenced learning theory: (a) The view of learning as an active, constructive process, (b) the presence of high-level processes in learning, (c) The cumulative nature of learning and the corresponding role played by prior knowledge, (d) concern for the way
knowledge is represented and organized in memory, (e) Concern for analyzing learning tasks and performance in terms of the cognitive processes that are involved. (p. 415)

**Behaviorist Model**

Behavioral teaching and learning tends to focus on skills that will be used later. You learn facts about American history, for example, because it is assumed that knowing those facts will make you a better citizen when you are an adult. You learn basic mathematics computational skills because you may need them when you get a job. Behavioral learning does not, however, generally ask you to actually put the skills or knowledge you learn into use in a "real" or "authentic" situation. That will come later when you graduate and get a job (Baum, 2005).

Behavioral education habitually design skills for future use. Learning facts about The French Revolution helps students learn about the rise of Napoleon Bonapart. Learning text aid in in joining the workforce with basic knowledge. Behavioral learning offers tutorials about functions that will assist students in the work force at a later date (Mei, 2010).

The behavioral significance of dismantling complex reading undertakings into sub skills, taught separately, is widespread in the United States. The elementary classroom drill phonics skills such as consonant cluster, vowel digraphs, and diphthongs. Other literacy proficiencies offer different lessons initially for the whole group followed by individual routine activities (Skinner, 1981). The critics of this view note there are deficiencies.

The critics of these theory records learners are passive and cannot adequately explain higher-order functions such as language. Teaching occurs in massive measures versus intricate parts, and teachers rarely require influential factors of student behavior - peer acceptance and rejection. Classroom management lacks reinforcement schedules and ignores causes of misbehavior (Canell, D. et al., 2004).
Dick and Carey Models

When creating and scaffolding instruction, the Dick and Carey systematic process of instructional design model, a general procedural framework, blends wide variety of instructional design models - based on the learner and environmental research. Having an understanding of various theories, principles, and models, theorists will be able to meet the needs of any organization.

Many organizations provide the Dick and Carey Systems Approach Model as a template. Universally, the model's application permeate various educative core areas by beginners to seasoned instructional designers Tucker, 2004). This model supports most systematic processes. In education, teacher led classes generically is a triumvirate: material, instructor, and learner. The Dick and Carey model respects the role outside variables (environmental) contributes to learning (Dick & Carey, 1996). Instructional design systems take into account a collection of interrelated pieces, which together affect the learning goal (Hannafin & Peck, 1988). Walter Dick and Lou Carey (1996, p. 8) state the following three points as contributions to the success of systems approach models:

1. “The first is the focus, at the outset, on what the learner is to know or be able to do when the instruction is concluded. Without this…subsequent planning and implementation steps can become unclear and ineffective.”

2. “Instruction is specifically targeted on the skills and knowledge to be taught and supplies the appropriate conditions for the learning of these outcomes.”

3. “…the systems approach is…an empirical and replicable process.”
Instruction is designed not to be delivered once, but for use on as many occasions as possible with as many learners as possible.”

**The Constructivism Theory**

Constructivism definition is more than having the knowledge. It encompasses the ability to think and learn. Its opinion states that the learner will utilize information and hopefully will use the data differently. Several constructivist views exist, and the cloth that bind them together is the active process of thinking, that consist of building meaningful relationships based on the learner's past experiences (Salomon & Perkins, 1998). John Dewey (1966) mentioned the core ideas as early as 1910. Constructivism states that learners create awareness in a social manner and through unique experiences. The conduit of such constructs is the meaning. Plato noted that knowledge is not out there. Aristotle is to have said that knowledge is always an interpretation of reality, not a "true" picture of it.

**Principles of Constructivist Learning**

Lev Vygotsky's work, trailblazer for the science of learning research, argues fervently for students to demonstrate their knowledge explanatory and interpretive their charitable actions towards others. Vygotsky motivation of teachers to assist students in their own formulation of understanding is an unprecedented level of constructivism. Vygotsky believes students springs from a basic proficiency level. This lower circuit increases through repetition of what they know of their knowledge base. Interaction within a classroom environment supports the process of increasing the awareness simplicity (Dewey & Vygotsky, 1978).

- The learner uses sensory input and does something with it, ultimately making meaning of it.
• Learning consists of both constructing meaning and constructing systems of meaning. Learning is layered.

• Learning occurs in the mind. Physical activity may be necessary, but is not sufficient alone.

• Learning involves language. Vygotsky believed that language and learning are inextricably intermeshed.

• Learning is a social activity.

• Learning is contextual. We do not isolate facts from the situations and environments in which they are relevant.

• Knowledge is necessary for learning. It is the basis of structure and meaning-making. The more we know, the more we can learn.

• Learning takes time; it is not spontaneous. Learners go over information, ponder them, use them, practice, experiment.

• Motivation is a necessary component, because it causes the learner's sensory apparatus to be activated. Relevance, curiosity, fun, accomplishment, achievement, external rewards and other motivators facilitate ease of learning.

**ADDIE Model**

The generic term for the five-phase instructional design model consisting of Analysis, Design, Development, Implementation, and Evaluation. Each step has an outcome that feeds into the next step in the sequence. Several versions of the model exist.
The five phases of ADDIE are as follows:

Analysis

- During analysis, the designer identifies the learning problem, the goals and objectives, the audience’s needs, existing knowledge, and any other relevant characteristics. Analysis also considers the learning environment, any constraints, the delivery options, and the timeline for the project.

Design

- A systematic process of specifying learning objectives. Detailed storyboards and prototypes are often made, and the look and feel, graphic design, user-interface and content is determined here.

Development

- The actual creation (production) of the content and learning materials based on the Design phase.

Implementation

- During implementation, the plan is put into action and a procedure for training the learner and teacher is developed. Materials are delivered or distributed to the student group. After delivery, the effectiveness of the training materials is evaluated.

Evaluation

- This phase consists of (1) formative and (2) summative evaluation. Formative evaluation is present in each stage of the ADDIE process. Summative evaluation consists of tests designed for criterion-related referenced items and providing opportunities for feedback from the users. Revisions are made as necessary.
The Advantages of the ADDIE Model

By applying the systematic process of Analysis, Design, Development, Implementation, and Evaluation (ADDIE), one can find the true nature of the problem and devise a solution whether it is environmental, human performance, or training. ADDIE is the preferred and most effective instructional design tool for career and educational applications. ADDIE focuses on guiding students through constructive knowledge within the learning capacity of inputs, processes, and outputs. The input stage identifies variables for data, knowledge, and information. The method utilizes analysis and design for stimulating creative thinking. The output stage translates knowledge into action. Instructional design is a systematic, systems approach that fixates its direction on individual learning. The process requires a backward motion from expected outcomes or problem solutions (outputs) to processes and inputs.

Conclusion

ADDIE model is a simplified process of learning development for an efficient training program and projects. It is an instructional design that consists of five phases: the Analysis, Design, Development, Implementation, and Evaluation. It represents a framework or guideline to ensure the effectiveness of the instructional product and experience. ISD is central to distance learning environments, and ADDIE’s five-step process distinguishes the strengths and weaknesses of new and existing methodologies. Employing a systems approach, identifying all the components, and determining the exact contribution of each to the outcome ensures a stronger, more effective distance learning environment (Moore & Kearsley, 1996, p. 200).
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