Sarah Grabowski September 4, 2002
EDIT 6170 Baseline Activity

Part 1

Chapter 1: Introduction (51)

Instructional designs main purpose is to support the process of learning, especially that of an individual. It can have either short or long-range purposes and is systematic in its approach to understand human learning. The intention of instruction is to purposely organize external events such that internal learning processes can occur.

Chapter 2: Designing Instructional Systems (44)

Instructional design is an iterative process of planning performance objectives, selecting instructional strategies, choosing media and selecting or creating materials, and evaluation. Types of analysis include needs or front-end, instructional (i.e. content or task), and learner. Other considerations include resources, teacher preparation, and diffusion.

Chapter 3: The Outcomes of Instruction (50)

Curricula are usually structured around content rather than human capabilities resulting in gaps between broad goals and specific objectives. Designers should work backwards from desired outcomes of human performance using a taxonomy of learned capabilities to group and sequence objectives, then plan external conditions to support internal conditions for learning.

Chapter 4: Varieties of Learning: Intellectual Skills and Strategies (50)

Intellectual skills can be divided into a hierarchy of subcategories: discrimination, concrete and defined concepts, rules and higher order rules. Each is associated with a different set of internal and external conditions of learning. Cognitive strategies are divided into two distinct relations: specific domains of knowledge and more general knowledge.

Chapter 5: Varieties of Learning: Information, Attitudes, and Motor Skills (48)

Verbal information is learned as a network of organized knowledge. Attitudes are manifested in personal choice and learned through human modeling. Motor skills are broken into executive subroutines and part skills; and are learned through practice. Each is depicted by definition or explanation, performance, internal, and external conditions.

Chapter 6: The Learner (49)

Individual learning is affected by learner characteristics such as prior learning and memory organization. A schema is an organization of knowledge. Abilities are stable characteristics related to reasoning, spatial orientation, etc. Traits are personality characteristics. Designers should arrange external learning events that support individual learner differences in internal processing.

Chapter 7: Defining Performance Objectives (50)

Performance objectives must be clear to both the designer and the implementer and are specific statements of a learning outcome. Objectives have five components: situation, learned capability (verb), object, action, and tools or constraints. The verb designates the learning outcome and the action designates specifically how this outcome is expressed.

Chapter 8: Analysis of the Learning Task (43)

Analysis begins with target objectives, whether it being information-processing or learner-task. Information-processing can reveal mental operations that may not be otherwise detected. Learner-task analysis identifies the prerequisites of both target and enabling tasks. Prerequisites can then be classified as either essential or supportive.

Chapter 9: Designing Instructional Sequences (50)

There are four different levels in Instructional Sequences: Course, topic or unit, lesson, and lesson component. Sequencing decisions are usually based upon learning hierarchies that are derived from working backwards from target objectives. Learners

use goal schemas to relate their goal with the already acquired prerequisites to completing that goal.

Chapter 10: The Events of Instruction (49)

The events of instruction include: gaining attention, informing learner of the objective, stimulating recall of prerequisite learning, presenting the stimulus material, providing learning guidance, eliciting the performance, providing feedback, assessment, and enhancing retention and transfer. Different situations may call for different amounts of emphasis on each of these events.

Chapter 11: Selecting and Using Media (50)

Media includes: verbal speech, printed text, sound, animation, video recordings, etc. There are many factors in selecting media: nature of the learning situation, conditions for instructional development, culture, accessibility, feasibility of use, and costs. Based on the work of Reiser and Gagne, a model of instructional media selection is described.

Chapter 12: Designing the Individual Lesson (46)

The 4-step lesson is discussed: 1. listing the objectives, 2. listing desired instructional events, 3. choosing materials and activities, 4. noting roles for teachers and designers. Lesson sequencing can be planned for a course, unit, or topic. Learning hierarchies play an important role in lesson sequencing.

Chapter 13: Assessing Student Performance (49)

The *how well* aspect of learning is addressed here. Two types of assessment are criterion-referenced and norm-referenced tests. Criterion-referenced tests deal with accomplishing objectives individually, whereas norm-referenced tests compare large groups of people to one another. Either way, the type of test should be decided upon prior to starting.

Chapter 14: Group Instruction (50)

There are 3 different group sizes: 2 person, small (3 – 8), large (15 +). The larger the group, the more margins for error exist and also less management over instructional events. Also, large group success depends highly upon the individual's ability of self-instruction. Mastery learning improves success in large-groups instruction.

Chapter 15: Individualized Instruction (50)

The delivery system is a major difference, distinguishing the design of modules from that of lessons. Individualized instruction provides more feedback, less classroom control problems, and allows the learner to set his own pace. New technologies offer a wide variety of opportunities for the delivery of instruction for the individual.

Chapter 16: Evaluating Instruction (51)

Student performance is measured before and after implementation. Formative evaluation is conducted during development, prior to implementation; summative evaluation is conducted after implementation. Scientific methodology can be used to compare programs. Ideally, all variables will be the same except the one difference in question. There must be a control group present.

Part 2 (230)

The author's most important principle in instructional design is that performance objectives should be stated clearly, containing the five necessary components in order for the lesson to run smoothly. I believe this to be true because there is an entire chapter on performance objectives and their importance, as well as the principle being mentioned several times throughout the entire book (it even has 23 entries in the index).

An important step in instructional design is the identification and definition of performance objectives. These objectives will serve as guides for instructional development and assessment design. Much confusion can arise from an objective that is not stated clearly, especially between teacher and learner. The objective should be able to convey to another person what would need to be completed in order to observe that a stated lesson purpose has been accomplished. If this task cannot be carried out,

there is a problem with the stated objective, and confusion can occur. The five necessary components are: situation, learned capability (verb), object, action, and tools or constraints. Each component is essential and "serves an express purpose" (127).

There are several other places in the text were the importance of performance objects appears. One major such place is the chapter on assessing student performance. Clear and unambiguous performance objectives are a necessity for the evaluation of student performance and the success of newly designed instruction.

Part 3 (230)

A. Instructional Situation or Performance Discrepancy

At Campus Transit, I train students to drive a bus and help them obtain their CDL. In Road 5, trainees learn all the routes on campus and all pertaining information. After approximately two weeks in Road 5, trainees go into Line-training where they drive the real routes with a licensed driver. While all the trainees are ready to leave Road 5, most are not successful in the first week of Line-training (i.e. they cannot keep the route on schedule, listen attentively to the two-way radio, handle mass amounts of passengers, etc.). There is where the discrepancy lies.

B. Relevant Instructional Design Principle(s)

Performance objects need to be stated clearly and have the five necessary components. Also, both the instructor and the learner need to fully understand each objective.

C. Application of each Principle

- Trainers, recent trainees, and supervisors will meet and discuss appropriate objectives for Road 5 and Line Training.
- Trainees will receive objectives for both sections prior to either lesson.
- Trainer and trainee will go over objectives right before lesson and then at the end of the lesson. They will go over which objectives were actually covered and which are yet to be accomplished.
- Trainer, trainee, and supervisor will meet and discuss if the trainee is ready for Line Training by making sure all Road 5 objectives were completed.