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INTRODUCTION TO THE INSTRUCTIONAL DESIGN PROCESS

“Why examine the teaching/learning process?”

“How does curriculum planning differ from instructional design?”

“What are the components of a comprehensive instructional design plan?”

“What premises underlie the instructional design process?”

“What benefits can result from applying the instructional design process?”

“What is the value of instructional design to teachers?”
The preceding questions represent the important concepts treated in this introductory chapter. Understanding them is the basis for systematic instructional planning.

**WHY EXAMINE THE TEACHING/LEARNING PROCESS?**

The United States is moving toward a global, information-based economy, with an increasingly diverse work force. One result of these changes is a need for better-trained, competent managers, professionals, and technicians who are capable of using complex technologies to improve services, increase quality, and raise productivity. Also, more jobs require individuals to reason in high-level, abstract terms in order to make inferences and solve intricate problems.

The conventional structure and delivery of education, however, are at odds with these societal changes. Learning must be more effective and efficient. This
need has given rise to the instructional design process, a planning method that results in successful learning and performance. Learning is haphazard; instruction is planned. Thus, our goal as designers is to create sound instruction that will lead to appropriate learning.

Before examining the elements of the instructional design process, it is useful to have a basic understanding of curriculum and its relationship to instructional design. Developing curriculum is often considered the starting point for instructional planning.

A DEFINITION OF CURRICULUM

The purpose of education or training is to provide a series of structured learning experiences. These may involve classes in an elementary school, courses in a secondary school or a higher education institution, or a training program in a business setting.

The term curriculum refers to the subject content and skills that make up an educational program. A school or curriculum includes the course offerings; at a company, the training programs may represent the curriculum. Curriculum design is a process of formulating a specific educational platform that defines the beliefs of what should be in the curriculum (Henderson & Hawthorne, 1995).

The emphasis of a curriculum depends on philosophical, social, and cultural forces that affect the school in terms of the broad society and the specific community it serves. For a business concern, a training curriculum reflects the organization’s management policies, strategic plans, and identified needs. One caution we offer is to avoid building a curriculum in business that serves no other purpose than to offer a series of courses. All courses should serve to improve employee performance, thus supporting the mission and goals of the organization. The following questions help determine a curriculum:

1. What is the purpose or mission of the institution or department or the strategic plan of the organization?
2. What goals for education or training are necessary to serve the mission or plan?
3. How can instruction be categorized and organized to accomplish the goals?

Answering these questions can help in selecting subject areas, courses, instructional themes, or content categories. See Figure 1–1 for examples.

THE ROLE FOR INSTRUCTIONAL DESIGN

The major goal of this book is to illustrate how to plan, develop, evaluate, and manage the instructional process effectively so that it will ensure competent performance by students. This systematic method is termed instructional design (often abbreviated as ID). It is based on what we know about learning theories, information
technology, systematic analysis, and management methods. Dewey (1900) saw a need in the early part of this century for a science that could translate what was learned through research into practical applications for instruction. This science would make decisions about instructional practices that are based on sound research rather than intuition. Snellbecker (1974) and others have proposed that instructional design is the linking science described by Dewey. We agree with Snellbecker and see instructional design as the process for designing instruction based on sound practices.

The ID approach considers instruction from the perspective of the learner rather than from the perspective of the content, the traditional approach. It involves many factors that influence learning outcomes, including:

- What level of readiness do individual students need for accomplishing the objectives?
- What instructional strategies are most appropriate in terms of objectives and learner characteristics?
- What media or other resources are most suitable?
- What support is needed for successful learning?
- How is achievement of the objectives determined?
- What revisions are necessary if a tryout of the program does not match expectations?

There are other issues that also influence student learning. These issues are inherent in the instructional design process. This process is applicable for designing instruction in public education, higher education, and skills training.
The information, concepts, and procedures presented here can aid teachers and instructors, instructional designers, and planning teams—anyone who wants to develop effective, appealing instruction.

How would you answer this question: “If you were about to start planning a new unit in a course or training program, to what matter would you first give attention?” Here is how various individuals might answer:

**Primary grade teacher:** “I think first about the children. How important is the topic for them? Then, how well prepared are they to study it (physically, emotionally, intellectually)?”

**High school teacher:** “I’d start by writing down what I want to accomplish in teaching the unit. This becomes the goal around which I’ll plan the instruction.”

**College professor:** “My approach is to list the content that needs to be covered relative to the selected topic. This would include the terms, definitions, concepts, and principles that I feel need to be communicated to my students.”

**Instructional designer in industry:** “It’s important to start by listing the competencies I expect trainees to have after receiving instruction on the topic. These would be the outcomes or objectives to be accomplished.”

The foregoing replies represent a sampling of approaches that might be taken as different individuals initiate their instructional planning. There could be other replies to the question. For example, one community college instructor always starts by writing the final examination for a new unit! He believes that passing the final exam is the students’ greatest concern. Therefore, he writes questions that indicate what should receive emphasis in his teaching. His reasoning seems plausible.

As you read the replies to the question, and formulated your own answer, two conclusions should have become apparent. First, a number of different considerations appeal to educators and instructional designers as each starts planning. Second, each of us selects an order or sequence of our own in which to treat these elements.

### Key Elements of the Instructional Design Process

Of the planning elements identified in the quoted statements, *four* are fundamental in instructional design. You will find them addressed in almost every planning model. They can be represented by answers to these questions:

1. For whom is the program developed? (characteristics of learners or trainees)
2. What do you want the learners or trainees to learn or demonstrate? (objectives)
3. How is the subject content or skill best learned? (instructional strategies)
4. How do you determine the extent to which learning is achieved? (evaluation procedures)

These four fundamental components—learners, objectives, methods, and evaluation—form the framework for systematic instructional planning (see Figure 1–2).
These components are interrelated and could conceivably make up an entire instructional design plan. In actuality, there are additional components that should require attention and that, when integrated with the basic four, form a complete instructional design model. The following section introduces nine elements of the instructional design process necessary for a comprehensive design plan.

**THE COMPLETE INSTRUCTIONAL DESIGN PLAN**

The following paragraphs describe the nine elements in a comprehensive instructional design plan:

1. Identify *instructional problems*, and specify goals for designing an instructional program.
2. Examine *learner characteristics* that should receive attention during planning.
3. Identify *subject content*, and analyze *task* components related to stated goals and purposes.
4. State *instructional objectives* for the learner.
5. *Sequence content* within each instructional unit for logical learning.
6. Design *instructional strategies* so that each learner can master the objectives.
7. Plan the *instructional message and delivery*.
8. Develop *evaluation* instruments to assess objectives.
9. Select *resources* to support instruction and learning activities.

The nine elements of this instructional design plan are illustrated in Figure 1–3.

The starting place for instructional planning should be to decide whether instructional design is appropriate for a potential project. The diagram shows this first element, *instructional problems*, at the twelve o'clock position.

Although the list of nine elements forms a logical, clockwise sequence as illustrated, the order in which you address the individual elements is not predetermined. It is for this reason that the oval pattern is used. An oval does not have a specific
starting point. Recall the answers to the question asked of various persons earlier in this chapter. Individuals may proceed through the instructional design process in their own preferred way, starting with one element or another and following whatever order they consider logical or suitable.

In Figure 1-3, the elements are not connected with lines or arrows. Connections could indicate a sequential, linear order. The intent is to convey flexibility yet some order in the way the nine elements may be used. Also, some instances may not require treating all nine elements. For example, in some programs evaluation instruments may not be necessary.

Another reason for using the oval form is that a flexible interdependence exists among the nine elements. Decisions relating to one may affect others. As instructional objectives are stated, items of subject content may be added or reordered. Or, while instructional delivery methods are being chosen, the intent of an instructional learning objective may become clearer than as initially stated and require revision. Consequently, the procedure permits and encourages flexibility in the selection of elements, the order of their treatment, and back-and-forth activity among the elements. This procedure allows for additions and changes as the instructional design plan takes shape.
Many instructional design models identify and use features similar to those described in this book. Such models are often represented by a diagram with boxes and arrows as a series of steps in a set order, as shown in Figure 1–4. The intent of such a model is to establish a 1-2-3 sequential order. In actual use, the process often is not so linear. The open, circular pattern seems more appropriate and useful.

When starting to design instruction, if you feel somewhat insecure with the open, flexible format, follow the logical arrangement, starting with instructional problems. Then move to learner characteristics, and proceed clockwise through the nine elements.

As you gain experience with using this instructional design plan, you no doubt will establish your own arrangement of components for the design of a course. But even when following a sequence with which you are comfortable, you will need to make adjustments. Romiszowski (1981) refers to this as a heuristic, problem-solving approach. With each project, you modify your strategy, based on how things work in each situation.

The word element is used as a label for each of the nine parts of our instructional design plan. This term is preferable to the terms step, stage, level, or sequential item, which are expressions in keeping with the linear concept.

Another part of our diagram is the indication of revision around the elements. The two outer ovals illustrate the feedback feature, which allows for changes in the content or treatment of elements at any time during development. The treatment of elements may require revisions when, for example, data about learning are collected during instructional tryouts (called formative evaluation) or at the end of a course offering (called summative evaluation). If you want learners to succeed, accomplishing instructional objectives at a satisfactory level of proficiency, then you will want to improve any weak parts of the program as they are discovered.

Various expressions are used to label systematic instructional planning. In addition to the term instructional design used in this book, you will find reference to the following in the literature:

- Instructional systems
- Instructional systems design
- Instructional systems development

**Figure 1–4**
A typical instructional design model
Learning systems design
Competency-based instruction
Criterion-referenced instruction
Performance technology

Another expression, *instructional development*, represents the management function in systematic instructional planning. This term includes assigning and supervising personnel, handling allocated budgets, arranging for necessary support services, and checking time schedules for compliance.

Thus, the instructional *development* procedure is used to direct and control projects, while the instructional *design* procedure plans instruction. The chapters that follow will focus mainly on the instructional design elements shown in Figure 1-3. But in Chapter 14, "Managing Instructional Development Services," the instructional development category receives attention.

**PREMISES UNDERLYING THE INSTRUCTIONAL DESIGN PROCESS**

We have identified seven basic premises to help you understand the ID process and apply it successfully. These premises can influence both your thinking and your treatment of the instructional design plan.

*Premise 1:* The instructional design process requires attention to both a systematic procedure and a specificity for treating details within the plan.

The term *systematic* refers to an orderly, logical method of identifying, developing, and evaluating a set of strategies aimed at attaining a particular instructional goal. This task is accomplished using the nine interrelated elements of the instructional design plan.

Treating each element requires exacting mental effort. Each element of the plan must be applied with attention to precise details. This means being *specific*. For example, an instructional objective is a statement that includes a particular verb that guides the development of an instructional strategy and indicates how achievement will be evaluated. The details of the instructional strategy—with the description of certain required student participation—that you choose to accomplish an objective are another indication of the specific treatment required when implementing the instructional design process.

Attention to detail is critical for the success of any instructional design work. By applying *systematic* procedures and being attentive to *specific* details, you can design effective instruction.

*Premise 2:* The instructional design process usually starts at the course development level.

Decisions about curricula and broad goals for a school or training program precede the design of specific courses. Although instructional designers can help administrators, managers, and committees make decisions about the purposes,
directions, and emphasis of a program, instructional design work usually starts with identification of the instruction or training needs to be served. Units or topics comprising a course are then selected. This selection is followed by the development of instructional components related to the various planning elements.

**Premise 3:** An instructional design plan is developed primarily for use by the instructor and planning team.

Some people believe that all details developed during planning (instructional needs analysis, instructional objectives, content sequencing, etc.) are to be given to learners, often in the form of a study guide. This assumption is not true. The learners will use many of the items written as elements in the plan, but not always in the form or order in which they are being developed and stated. We distinguish between the planning documents (instructional needs, instructional strategies, etc.) and the instructional materials the learners will actually see and use. The design team uses planning documents to design and develop the instructional units. Once the instructional materials are in final form, the planning documents lose their value and usually are filed.

Also, the order in which elements are treated during planning may differ substantially from the order in which they are eventually presented to learners. For example, a pretest might be developed after the final examination is devised even though students will complete it prior to the start of instruction.

**Premise 4:** While planning, every effort should be made to provide for a level of satisfactory achievement for all learners.

A study by Bloom (1976) concluded that up to 95% of all public school students can accomplish what is required of them if each individual has suitable academic background, appropriate instruction, and sufficient time for learning. Other research has shown that if a student is prepared to learn and puts forth the effort to study but is unsuccessful in learning, a more careful design of the instructional plan can help overcome this shortcoming. This conclusion applies to training as well as to education. It justifies the need to test a plan before its implementation, as indicated by the revision oval in Figure 1-8.

**Premise 5:** The success of the instructional product is dependent on the accuracy of the information flowing into the instructional design process.

To solve a performance problem, the designer must identify what the exact training needs are through the use of needs assessment, goal analysis, and/or performance. Creating instruction for a task that is not a performance problem is not likely to lead to an improvement in learner achievement. Similarly, the designer must accurately identify the target audience to design materials that are appropriate for the audience's reading and skill levels. The information obtained from the subject-matter expert must be accurate and complete. Selecting an appropriate instructional strategy for the content and objectives is essential for both efficient and effective instruction. And last, accurate information is needed from the formative evaluation
of the materials to make appropriate modifications. Failure to obtain accurate information and to make the correct decisions can result in ineffective instruction.

**Premise 6:** The instructional design process focuses on the individual rather than the content.

Instructional design focuses on the individual and how to improve learner performance rather than on what content to cover. During learner analysis, the process focuses on individual characteristics. As we design the instruction, we consider these characteristics in the selection of the instructional strategies and delivery methods. The results can range from a highly adaptive computer-based instructional system that uses personalized information from each learner, responds in a different manner to each learner response, and is self-paced; to a group-paced classroom lecture that is carefully designed and incorporates media and supplementary materials to address the various learner characteristics. Throughout the design process, the designer focuses on the individual learner and what the learner must achieve to alleviate a problem rather than on what content to cover.

**Premise 7:** There is no single "best" way to design instruction.

Applying the instructional design process can reduce reliance on intuition or trial-and-error in planning. Yet the instructional design process has not reached a level of scientific exactness. Many paths can be conceived to reach the same goals and objectives. Instructors and designers are unique individuals, just as learners are unique. Each designer will formulate activities and apply elements of the instructional design plan in an individual way. The proof of an instructional plan's success will be whether a satisfactory level of learning is achieved in an acceptable period of time.

**Benefits of Using the Instructional Design Process**

For any enterprise to be successful, those involved in the endeavor must derive some benefit. In a business operation the owner makes a profit, the customer is satisfied with the price and quality of the product or service, and the worker or craftsperson receives sufficient pay while feeling a sense of pride in workmanship. Those of us associated with teaching and learning must have equal benefits as well:

- The administrator or program manager wants evidence of effective, efficient learning within an acceptable cost base. The time is past when we could say, "It looks like a good program" or "It's acceptable because the students certainly enjoyed the course." We need hard evidence of success.
- The instructional designer wants evidence that a satisfactory program has been designed. The best indication is the accomplishment of program objectives by learners within an appropriate time period.
- The teacher or instructor wants to see learners achieve the required competencies and also wants personally to develop a positive relationship with learners.
- Learners want to succeed in their learning and also to find the learning experience to be pleasant and satisfying.
When the design of an instructional program follows the procedures outlined in this book or those of another suitable model, such benefits as these are realized. In other words, employing the instructional design process increases the probability of goal attainment.

In addition to enhancing learning of knowledge and skills, instructional design can foster a positive attitude toward the subject and better study habits. In our evaluation of a variety of instructional materials, we have found that well-designed instruction fosters a positive attitude and motivation. In many cases, the students inquire if more instruction will be available in the same format. We have also noticed similar responses when evaluating prototypes that present only a sample of the content.

**Applying the Process to Both Academic Education and Training Programs**

Specific job training has precise, immediate requirements with identifiable and often measurable outcomes. The program must stress the teaching of knowledge and skills for the performance of assigned tasks. Academic education, on the other hand, often has broad purposes and more generalized objectives. Application of the knowledge and skills to be taught may not become important until sometime in the future.

Whether one is studying history or carpentry, the identical principles of learning apply to structuring experiences for individuals. While the emphasis, certain details, and terminology differ, both situations treat similar elements of the instructional design plan. Thus, the procedures presented in this book can be effective for either an academic or a training situation. Where particulars differ, special explanations and examples will be included in either the academic instruction or the planning for training.

**Benefits of Instructional Design in Business**

The benefits of the application of instructional design in business can take many forms. Results can vary from simply reducing the amount of time it takes to complete a course to solving a performance problem by designing effective instruction that increases worker productivity. In the late 1980s Motorola University conducted three limited studies of the benefits of training. They found that for every dollar invested in training, they realized a return on investment of $30 (The Value of Training, 1995). Although we do not have the specifics of how the return on investment was calculated, it is interesting to note that many corporations consider a return of 13% acceptable for most projects. The role of instructional design and training varies from company to company, as do the benefits. For example, Speedy Muffler King, which experienced high revenues and profits for 1994, made extensive use of training. During 1994, they provided more than 100,000 hours of employee training to improve customer satisfaction and loyalty (Canada NewsWire, 1995). Appropriate training can produce a return on investment for both tangible (e.g., increased output) and intangible (e.g., worker loyalty) measures.
Benefits of Instructional Design in P-12 Education

Do P-12 teachers have to be instructional designers in addition to their traditional roles of classroom managers, presenter-lecturers, and mentors? Our definitive answers are "to some degree" and "it all depends." By saying "to some degree," we mean that textbooks, workbooks, basal readers, and other standard instructional resources will rarely, if ever, be sufficient to satisfy formal curriculum objectives while keeping students occupied and interested. There will be numerous occasions (many teachers might say "every day") where the need for teacher-developed materials—drill-and-practice exercises, remedial lessons, or even full-fledged instructional units—will arise. Knowing the basic principles of instructional design (see the seven premises above) can help to ensure that what is produced serves a necessary purpose; meets the needs of students; is attractive and well organized; is delivered in an appropriate mode; and is continually evaluated and improved. Unlike professional instructional designers, however, the typical teacher is not likely to need formal expertise in the various instructional design processes. However, basic familiarity with major principles and procedures (e.g., how to present text, write and deliver a lecture, or prepare a test) can be extremely helpful, both for their own work and for evaluating commercial educational products.

How much teachers use instructional design will also depend a great deal upon situational factors. Teachers working in today's restructuring schools may find themselves increasingly involved in design activities. Specifically, in recent years, national initiatives for educational reform (Sarason, 1995) have generated support for activity-oriented, student-centered methods of teaching that stress meaningful learning applied to real-world problems. Following the classic ideas of Dewey and Piaget, modern constructivist theories view knowledge as primarily created (constructed) by the learner rather than transmitted by teachers (Prewat, 1995).

To promote active learning both school-wide and district-wide, comprehensive restructuring models, such as those developed by New American Schools (Kearns & Anderson, 1997), are being disseminated nationally. Nearly all of these models emphasize extensive use of project-based activities in which learners integrate concepts and skills across multiple subjects to develop products, perform experiments, and solve problems. One example is the Expeditionary Learning–Outward Bound model (Campbell, Farrell, Kamii, Lam, Rugen, & Udall, 1997). By participating in learning expeditions around the school and community (e.g., interviewing local police and citizens about neighborhood crime and presenting the findings in a group report and exhibition), the students acquire opportunities to connect learning and curriculum objectives to real-world events.

Implementing these approaches obviously requires well-designed expeditions and projects. Where do they come from? For the most part, that responsibility falls on the individual teachers. Not surprisingly, however, many find themselves unprepared for the task, and the implementations of the new strategies suffer as a result (see Bodilly, 1996). By learning more about instructional design, teachers should become better equipped to either create high-quality student-centered lessons or adapt commercial materials to fit their course needs.
Who’s Who in the Instructional Design Process

As you prepare to study the instructional design process, you will want to view it from your own perspective. What role or roles will you assume in planning? What specific responsibilities might you have? What relationship do you have with other persons in your organization who are involved in aspects of teaching or training? These are all matters to keep in mind as you study the elements of instructional design.

In Chapter 13 we will examine in detail the roles and responsibilities of those persons engaging in instructional planning, development, implementation, and evaluation. At this point, however, you should recognize that four essential roles must be performed during instructional planning. You may be expected to fill one or more of these positions:

- **Instructional designer**: A person responsible for carrying out and coordinating the planning work; competent in managing all aspects of the instructional design process.
- **Instructor**: A person (or member of a team) for and with whom the instruction is being planned; well informed about the learners to be taught, the teaching procedures, and the requirements of the instructional program; with guidance from the designer, capable of carrying out details of many planning elements; responsible for trying out and then implementing the instructional plan that is developed.
- **Subject-matter expert (SME)**: A person qualified to provide information about content and resources relating to all aspects of the topics for which instruction is to be designed; responsible for checking accuracy of content treatment in activities, materials, and examinations. The teacher or instructor may also serve as SME.
- **Evaluator**: A person qualified to assist the staff in developing testing instruments for pretesting and for evaluating student learning (posttesting); responsible for gathering and interpreting data during program tryouts and for determining effectiveness and efficiency of the program when fully implemented.

Answering the Critics

"Isn’t the instructional design process actually a mechanistic rather than a humanistic method of instructional planning?" "Doesn’t this procedure discourage creativity in teaching?" "Isn’t teaching more of an art than a science?" These and similar questions are frequently raised and need to be answered realistically. After studying this book, you should make up your own mind about how to answer them. Following are our responses to such questions:

*Question*: “Isn’t the instructional design process actually a mechanistic rather than a humanistic method of instructional planning?”
As explained earlier, some ID models exhibit a rigidity when only a single, linear path for planning, as created with boxes and arrows, is followed without exception. Figure 1-4 illustrates this approach. The sequences should be flexible, with elements developed in different orders or arrangements as necessary. An instructional designer's style of working, the nature of a subject, or the learners' needs all can influence how the components are handled in planning. The ID process would only be mechanistic if elements were treated in a fragmented manner rather than following an integrated approach.

A humanistic approach to instruction recognizes the individual learner (student or trainee) in terms of his or her own capabilities, individual differences, present ability levels, and personal development. It should be apparent that these matters do receive attention in the instructional design process. Elements of the process include an examination of learner characteristics and an identification of readiness levels for learning. Furthermore, the application of systematic planning for designing various forms of individualized or self-paced learning also can allow for various individualized styles of learning.

Philosophically, as the planning starts, the instructional designer or instructor might have the following perspective: "I am designing a program of learning experiences for learners so that together we will be successful in accomplishing the stated goals and objectives. While it is important for each person to learn, it is equally important for me that the learner becomes proficient."

Therefore, a successful instructional program is one in which as many students as possible have succeeded, reaching a mastery level for accomplishing the specified outcomes. Grading on a bell-shaped normal curve and assigning letter grades would have no place in such instruction.

Question: "Doesn't the ID procedure discourage creativity in teaching?"

When a fine work of art is created, the artist has used a number of widely accepted design elements (unity, emphasis, balance, space, shape, color, etc.) creatively. This same principle applies to instructional planning.

Certain accepted learning principles, characteristics of individual components, and necessary relationships among elements require consideration in planning. These nine design elements, discussed earlier, can be developed and manipulated in imaginative and creative ways.

Two persons teaching the same subject or topic and targeting the same outcome goals might very well design different plans. Both can result in satisfactory student learning. The process demands dynamic interactions between students and instructor and between student and media, and different activities may be developed to satisfy those demands. This process encourages creativity, even to the extent of providing for open-ended or unanticipated learning experiences.

Question: "Isn’t the main attention in ID given to low-level, immediate learning outcomes rather than to higher-order, long-term outcomes?"

Examine the test questions in a typical unit or end-of-course examination. Frequently they are multiple-choice or true/false items that involve defining, labeling,
naming, recognizing, and other memory or recall of subject content. The ID process, in keeping with the goal to be accomplished, logically emphasizes more advanced intellectual thought processes that build on basic factual information. This emphasis may include learning related to comprehension, application, analysis, synthesis, and evaluation.

In many academic subject areas, learners achieve major learning outcomes only after they have completed a class and enroll in an advanced course or begin working on the job. Instructional design includes procedures for directly and indirectly evaluating postcourse behavior and content application outcomes.

These answers to the critics may seem unconventional. Many educators and trainers, based on their beliefs and experience, might not accept them. Often people must become dissatisfaction with present practices or results before they recognize the need for change and improvement (e.g., getting beyond passive learning and rote memorization to attaining higher-level objectives and providing more meaningful educational experiences). At that point, they are probably ready to explore a fresh approach to instructional planning. Providing explanations and offering opportunities, as described in this introductory chapter, can help counter criticism of the instructional design process.

**QUESTIONS . . . QUESTIONS . . . QUESTIONS**

As you read and study the following chapters, you will frequently see questions being raised or referred to in relation to the topic under consideration. Such questions may appear at the beginning of a chapter to indicate the important matters that will follow. Then, as the discussion proceeds, other questions help direct thinking toward decisions that must be made.

An instructional designer continually probes for clarification, explanations, and details. You must help the persons with whom you carry out instructional planning to communicate effectively with you. This can best be done by using questions. Therefore, pay particular attention to the questions raised throughout the book. Then let questioning become a common part of your behavior as you explore and eventually practice the instructional designer role.

**SUMMARY**

1. Curriculum includes subject matter, skills, and courses that comprise an educational program.
2. The key elements of ID involve learner characteristics, objectives, teaching methods and activities, and evaluation of learning.
3. A complete ID plan consists of nine elements arranged in a flexible configuration and formative and summative evaluations for potential revisions.
4. A number of expressions may substitute for the term *instructional design* in the literature and in practice. The expression *instructional development* applies to the management of ID projects.
5. The ID process has the following qualities: it follows a systematic procedure with specific details, it usually starts at the course development level,
it can enhance learning at a satisfactory level, and it may result in different planning results by different designers.

6. The ID process can benefit administrators and program managers, instructional designers, instructors, and learners.

7. The ID process applies to both academic education and industrial training programs.

8. Roles involved in the ID process include instructional designer, instructor, subject-matter expert, and evaluator.

9. Criticism of the ID process that must be answered includes the opinions that it is a mechanistic rather than humanistic planning method; it discourages teacher creativity; and main attention is given to low-level, immediate outcomes.

10. Asking questions during all phases of the ID process can help direct thinking toward decisions.

From Here to There

At last, you have finished your degree and you are now ready to start practicing instructional design at your new job with a corporation in the top Fortune 25. Your first day on the job, however, has a few surprises. Of most concern is that the manager you thought you were going to work for has transferred to a different division. Your new manager does not have a background in instructional design, but rather has worked as a chemical engineer and project manager for this corporation for the past 15 years. Needless to say, you are a little apprehensive about your predicament, considering that you are the first instructional designer hired by this corporation.

Shortly after the morning coffee break, your manager invites her staff in for an introductory meeting. The staff includes three trainers who have more than 35 years combined experience in teaching courses for the corporation, an administrative assistant who schedules and makes arrangements for courses, two engineers (who have worked in the department for four years each) who write new curriculum, and you. The meeting starts with each individual describing his or her background and role in the department. The other staff members can easily impress the new manager with their mastery of company lingo and number of hours of training they produce each quarter.

Turning slowly, the manager sizes you up and asks you to describe your background and your role in her new department. The manager and other staff members are not impressed by your degree in instructional
design or the fact that you received it from a leading program in the area—probably because they have never heard of instructional design. After a brief pause and a few frowns, one of the senior trainers asks you to explain exactly what it is that you do—seems they all thought you said “interior design” and thought you were there to spruce up their offices and classrooms.

The next few minutes are critical. You can either win this manager and staff over to a new way of viewing training, or you can overwhelm them with your knowledge so they decide you are one of those intellectual types. What will you say to this group that will help ensure your longevity with the company?

REFERENCES


