INTRODUCTION

Robert A. Reiser
Florida State University

John V. Dempsey
University of South Alabama

Many of us who have been in this field for a while have had the experience of facing our parents and trying to explain our profession to them. Long explanations, short explanations—the result is always the same. Our parents go cross-eyed and mumble something like, "That's nice, dear."

How about your parents? How much do they know about the field you are now studying—the field this book is about? They probably can't describe it very well; perhaps they can't even name it. But that puts them in some pretty good company. Many professionals in this field have trouble describing it. Indeed, many of them aren't sure exactly what to call it—instructional technology, educational technology, instructional design, instructional development, instructional systems. We use all these terms and more in describing "our field." Just what is the nature of the field that practitioners call by many names? This is the gist of the questions that thirty-eight authors respond to in this book about a field that we, the editors, have chosen to call instructional design and technology (IDT).

This volume grew from each of our experiences in teaching a "Trends and Issues" course in our respective universities. For some time we have used an ever-changing collection of readings from a variety of sources. For all of the differences between our two courses, there were greater similarities. (Dempsey was, after all, a student in Reiser's trends and issues course shortly after movable type was invented.) So it was natural that we spoke together on several occasions about the kind of text we would like to have if we had our druthers.

When Debbie Stollenwerk at Merrill/Prentice Hall encouraged us in our delusions, our first idea was to produce a book of reprints from germane periodicals. As
CHAPTER 1

WHAT FIELD DID YOU SAY YOU WERE IN? DEFINING AND NAMING OUR FIELD

Robert A. Reiser
Florida State University

Editors' Introduction

As the title of this book indicates, the focus of this volume is on trends and issues in the field of instructional design and technology. What is the nature of this field? What are its boundaries? How shall we define it? Unfortunately, there are no generally accepted answers to these questions. At any one point in time, different individuals in the field have used different terms as the label for the field and have defined the field differently. Furthermore, the labels and definitions that have been used have changed from one period of time to the next. In light of all the differences of opinion concerning labels and definitions, we believe that it is important to begin this book by describing the general nature of the field and assigning a particular label to it.

Over the years, the term that has been used most frequently as the label for the field has been instructional technology. By focusing on some of the most prominent definitions of the past century, Bob Reiser describes how the meaning of that term has changed over time. He also presents a definition that is applicable today and indicates why, in this book, we have chosen to use instructional design and technology as the label for our field.
Knowledge and Comprehension Questions

1. From the early 1900s through the 1950s, the field that some call instructional technology (or, as is the case in this book, instructional design and technology) was usually associated with instructional media. What were some of the instructional media that were prominent during this period? What are some of the instructional media that are prominent today?

2. Describe some of the similarities and differences among the various process definitions of instructional technology.

3. Describe how the 1994 AECT definition of instructional technology is different from previous definitions. Also describe how it is similar to earlier definition statements.

4. Describe how the new definition offered in this chapter is similar to and different from the 1994 AECT definition.

What are the boundaries of the field we are in? How shall we define it? Indeed, what shall we call it? These are important questions that professionals in our field should be able to answer or, because there is no generally accepted “correct” answer, at least be able to discuss intelligently. This chapter is intended to provide you with information that should help you to formulate some tentative answers to these questions. The chapter will examine how the definition of the field has changed over the years, present a new definition, and discuss the term that we will use in this book as the label for our field.

Before we begin to examine the definitions of our field, it is important to point out that not only have the definitions changed, but the actual name of the field itself has often varied. Over the years, a variety of different labels have been used, including, among others, such terms as audiovisual instruction, audiovisual communications, and educational technology. However, the term that has been used most frequently has most likely been instructional technology. This is the term that will be used in the next few sections of this chapter. However, the issue of the proper name for the field will be revisited near the end of the chapter.

What is the field of instructional technology? This is a difficult question to answer because the field is constantly changing. New ideas and innovations affect the practices of individuals in the field, changing—often broadening—the scope of their work. Moreover, as is the case with many professions, different individuals in the field focus their attention on different aspects of it, oftentimes thinking that the work they do is at the heart of the field, that their work is what instructional technology is “really all about.”

Over the years, there have been many attempts to define the field. Several such efforts have resulted in definitions that were accepted by a large number of professionals in the field, or at least by the professional organizations to which they belonged. However, even when a leading organization in the field has endorsed a particular definition, professionals in the field have operated from a wide variety of different personal, as well as institutional, perspectives. This has held true among intellectual leaders as well as prac-
titioners. Thus throughout the history of the field, the thinking and actions of a substantial number of professionals in the field have not been, and likely never will be, captured by a single definition.

**Early Definitions: Instructional Technology Viewed as Media**

Early definitions of the field of instructional technology focused on instructional media: the physical means via which instruction is presented to learners. The roots of the field have been traced back at least as far as the first decade of the twentieth century, when one of these media—educational film—was first being produced (Saettler, 1990). Beginning with this period and extending through the 1920s, there was a marked increase in the use of visual materials (such as films, pictures, and lantern slides) in the public schools. These activities were all part of what has become known as the visual instruction movement. Formal definitions of visual instruction focused on the media that were used to present that instruction. For example, one of the first textbooks on visual instruction defined it as involving "the use of all types of visual aids such as . . . flat pictures, models, exhibits, charts, maps, graphs, stereographs, stereopticon slides, and motion pictures" (Dorris, 1928, p. 6).

During the late 1920s through the 1940s, as a result of advances in such media as sound recordings, radio broadcasting, and motion pictures with sound, the focus of the field shifted from visual instruction to audiovisual instruction. This interest in media continued through the 1950s, with the growth of television. Thus during the first half of the twentieth century, most of the individuals involved in the field that we now call instructional technology were focusing most of their attention on instructional media.

Today many individuals who view themselves as members of the instructional technology profession still focus much, if not all, of their attention on the design, production, and use of instructional media. Moreover, many individuals both within and outside of the field of instructional technology equate the field with instructional media. Yet although the view of instructional technology as media has persisted over the years, during the past fifty years other views of instructional technology have emerged and been subscribed to by many professionals in the field.

**1960s and 1970s: Instructional Technology Viewed as a Process**

Beginning in the 1950s and particularly during the 1960s and 1970s, a number of leaders in the field of education started discussing instructional technology in a different way: Rather than equating it with media, they discussed it as being a process. For example, Finn (1960) indicated that instructional technology should be viewed as a way of looking at instructional problems and examining feasible solutions to those problems.
And Lumsdaine (1964) indicated that instructional technology could be thought of as the application of science to instructional practices. As you will see, most of the definitions of the 1960s and 1970s reflect this view of instructional technology as a process.

The 1963 Definition

In 1963, the first definition to be approved by the major professional organization in the field of instructional technology was published, and it too indicated that the field was not simply about media. This definition (Ely, 1963), produced by a commission established by the Department of Audiovisual Instruction (now known as the Association for Educational Communications and Technology), was a departure from the "traditional" view of the field in several important respects. First, rather than focusing on media, the definition focused on "the design and use of messages which control the learning process" (p. 38). Moreover, the definition statement identified a series of steps that individuals should undertake in designing and using such messages. These steps, which included planning, production, selection, utilization, and management, are similar to several of the major steps often associated with what has become known as systematic instructional design (more often simply referred to as instructional design). In addition, the definition statement placed an emphasis on learning, rather than instruction. The differences identified here reflect how, at that time, some of the leaders in the field saw the nature of the field changing.

The 1970 Definitions

The changing nature of the field of instructional technology is even more apparent when you examine the next major definition statement, produced in 1970 by the Commission on Instructional Technology. The commission was established and funded by the U.S. government to examine the potential benefits and problems associated with increased use of instructional technology in schools. The commission’s report, entitled To Improve Learning (Commission on Instructional Technology, 1970), provided two definitions of instructional technology. The first definition reflected the older view of instructional technology, stating:

In its more familiar sense, it [instructional technology] means the media born of the communications revolution which can be used for instructional purposes alongside the teacher, textbook, and blackboard... The pieces that make up instructional technology [include]: television, films, overhead projectors, computers, and other items of "hardware" and "software." (p. 21)

In contrast to this definition, the commission offered a second definition that described instructional technology as a process, stating:

The second and less familiar definition of instructional technology goes beyond any particular medium or device. In this sense, instructional technology is more than the sum of its parts. It is a systematic way of designing, carrying out, and evaluating the whole process of learning and teaching in terms of specific objectives, based on research on human learning and communication, and employing a combination of human and nonhuman resources to bring about more effective instruction. (p. 21)
Whereas the commission’s first definition seems to reinforce old notions about the field of instructional technology, its second definition definitely defines the field differently, introducing a variety of concepts that had not appeared in previous “official” definitions of the field. It is particularly important to note that this definition mentions a systematic process that includes the specification of objectives and the design, implementation, and evaluation of instruction, each term representing one of the steps in the systematic instructional design procedures that were beginning to be discussed in the professional literature of the field (e.g., Finn, 1960; Gagné, 1965; Hoban, 1977; Lumsdaine, 1964; Scriven, 1967). The definition also indicates that the field is based on research and that the goal of the field is to bring about more effective learning (echoing the 1963 emphasis on this concept). Finally, the definition discusses the use of both nonhuman and human resources for instructional purposes, seemingly downplaying the role of media.

The 1977 Definition

In 1977, the Association for Educational Communication and Technology (AECT) adopted a new definition of the field. This definition differed from the previous definitions in several ways. Perhaps most noteworthy was its length: It consisted of sixteen statements spread over seven pages of text, followed by nine pages of tables elaborating on some of the concepts mentioned in the statements, as well as nine more chapters (more than 120 pages) that provided further elaboration. Although the authors clearly indicated that no one portion of the definition was adequate by itself and that the sixteen parts were to be taken as a whole, the first sentence of the definition statement provides a sense of its breadth:

Educational technology is a complex, integrated process involving people, procedures, ideas, devices, and organization, for analyzing problems and devising, implementing, evaluating, and managing solutions to those problems, involved in all aspects of human learning. (p. 1)

Much like the second 1970 definition put forth by the Commission on Instructional Technology, the 1977 definition placed a good deal of emphasis on a systematic (“complex, integrated”) design process; the various parts of the definition mentioned many of the steps in most current-day systematic design processes (e.g., design, production, implementation, and evaluation). It is particularly interesting to note that the 1977 definition statement was the first such statement to mention the analysis phase of the planning process, which at that time was beginning to receive increasing attention among professionals in the field.

The 1977 definition also broke new ground by incorporating other terminology that, within a period of a few years, was to become commonplace in the profession. For example, the definition included the terms human learning problems and solutions, foreshadowing the frequent current-day use of these terms, especially in the context of performance technology.

The 1977 definition also included detailed tables describing the various learning resources associated with the field. This list gave equal emphasis to people, materials, and devices, reinforcing the notion that the work of instructional technologists was not limited to the development and use of media.
The 1994 Definition: Beyond Viewing Instructional Technology as a Process

During the period from 1977 to the mid-1990s, many developments affected the field of instructional technology.1 Whereas behavioral learning theory had previously served as the basis for many of the instructional design practices used by those in the field, cognitive and constructivist learning theories began to have a major influence on design practices. The profession was also greatly influenced by technological advances such as the microcomputer, interactive video, CD-ROM, and the Internet. The vast expansion of communications technologies led to burgeoning interest in distance learning, and "new" instructional strategies such as collaborative learning gained in popularity. As a result of these and many other influences, by the mid-1990s, the field of instructional technology was very different from what it had been in 1977, when the previous definition of the field had been published. Therefore it was time to redefine the field.

Work on a new definition of the field officially commenced in 1990 and continued until 1994, when AECT published Instructional Technology: The Definitions and Domains of the Field (Seels & Richey, 1994). This book contains a detailed description of the field, as well as the following concise definition statement:

Instructional Technology is the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning. (p. 1)

As is evident in the definition, the field is described in terms of five domains: design, development, utilization, management, and evaluation, which are five areas of study and practice within the field. The interrelationship between these domains is visually represented by a wheel-like visual, with each domain on the perimeter and connected to a "theory and practice" hub (see Figure 1.1). This representation scheme was designed in part to prevent readers from coming to the erroneous conclusion that these domains are linearly related (Richey & Seels, 1994).

Unlike the second 1970 definition and the 1997 AECT definition, the 1994 definition does not describe the field as process-oriented. In fact, the authors of the 1994 definition state that they purposely excluded the word systematic in their definition so as to reflect current interests in alternative design methodologies such as constructivist approaches (Richey & Seels, 1994). Nonetheless, the five domains that are identified in the definition are very similar to the steps that make up the "systematic" processes described in the previous two definitions. Indeed, each of the five (design, development, utilization, management, and evaluation) or a synonym is used directly or indirectly in one or both of the previous two definitions.

The 1994 definitions statement moves in some other new directions and revises some old ones. For example, much like the 1963 definition statement, the 1994 statement describes the field in terms of theory and practice, emphasizing the notion that the field of instructional technology is not only an area of practice, but also an area of research and study. The documents in which the 1970 and 1977 definition statements appear also discuss theory and practice, but the definition statements themselves do not mention these terms. In at least two respects, the 1994 definition is similar to its two most recent predecessors. First, it does not separate teachers from media, incorporating both into the phrase "resources for learning." Second, it focuses on the improvement of learning as the goal of the field, with instruction being viewed as a means to that end.

Although the 1994 definition discusses instruction as a means to an end, a good deal of attention is devoted to instructional processes. The authors indicate that the "processes...for learning" (Seels & Richey, 1994, p. 1) mentioned in their definition refer to both design and delivery processes. Their discussion of the latter revolves around a variety of instructional strategies and reflects the profession's current interest in a wide variety of instructional techniques, ranging from traditional lecture/discussion approaches to open-ended learning environments.

A New Definition: Acknowledging the Roles of Media, Systematic Instructional Design, and Performance Technology

Earlier, we mentioned that as the nature of activities performed by professionals in the instructional technology field has changed, new definitions have been developed to reflect the changing nature of the field. During the past decade, professionals in the field of instructional

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1Many of these developments are discussed in detail in succeeding chapters of this book.
technology have been paying ever-increasing attention to how to improve performance in the workplace. Although such improvements may be brought about by using instructional interventions, careful analysis of the nature of performance problems often leads to noninstructional solutions, such as instituting new reward structures, providing clearer feedback to workers, developing electronic performance support systems (see Chapter 10), or creating knowledge management systems (see Chapter 9). This new emphasis (improving performance in the workplace) has been referred to as instructional design and technology. This movement has been discussed in greater detail in Chapter 9 and in several other chapters in this book.

As a result of the performance technology movement, new definitions of the field of instructional design and technology, incorporating some of the concepts associated with the movement, are necessary. We have developed the following definition, which will be used in this book:

The field of instructional design and technology encompasses the analysis of learning and performance problems, and the design, development, implementation, evaluation, and management of instructional and non-instructional processes and resources intended to improve learning and performance in a variety of settings, particularly educational institutions and the workplace.

In addition to mentioning the concepts addressed in the 1994 AECT definition (e.g., design, development, management, evaluation, research, and theory), this definition makes specific reference to some of the performance technology concepts that have recently expanded the nature of the field (e.g., attention to non-instructional solutions and performance in the workplace). Moreover, the definition highlights two practices that have, over the years, formed the core of the field: the use of media for instructional purposes and the use of systematic instructional design procedures (often simply called instructional design). Although many have argued about the value of employing these practices, they remain the key defining elements of the field of instructional design and technology. Individuals involved in the field are those who spend a significant portion of their time working with media and/or with tasks associated with systematic instructional design procedures.

Naming the Field: Why Should We Call It Instructional Design and Technology?

The definition proposed in this chapter also differs from most of the previous definitions in that it refers to the field as instructional design and technology rather than instructional technology. The most important reason is that instructional technology, as the term is typically used, is associated with the term instructional media. In other words, most individuals will equate the term instructional technology with the term instructional media. This is because, in spite of all the broadened definitions of instructional technology that have appeared over the past thirty to forty years, in light of this fact, perhaps it is time to reconsider the label we use for the broad field that encompasses the areas of instructional media, instructional design, and, more recently, performance technology. Any of a number of terms come to mind, but one that seems particularly appropriate is instructional design and technology. This term, which has been employed by one of the professional organizations in our field (Professors of Instructional Design and Technology), retains both of the areas on which earlier definitions focused: Performance technology, the most recent area to have a major impact on the field, is not directly mentioned because adding it to the term instructional design and technology would make that term unnecessarily large and because, in recent years, instructional design practices have been broadened so that many of the concepts associated with the performance technology movement are now regularly used by those individuals who call themselves instructional designers.

In this book, our field will be referred to as instructional design and technology, and we will define this term as indicated above. However, regardless of the term that is used as the label for our field, it is important that you understand the ideas and practices that are associated with the field and the trends and issues that are likely to affect it. The purpose of this book is to introduce you to many of those ideas, practices, trends, and issues. As you proceed through this book, we anticipate that your view of the field will evolve, and we are confident that your understanding of the field will increase. Moreover, we expect that you will be able to add your own reasoning to the ongoing debate concerning the "proper" definition and label for the field we have called instructional design and technology.

References


