Zahide Yıldırım

Instructional Media and Technologies for Learning

Seventh Edition

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PREFACE

Instructional Media and Technologies for Learning, Seventh Edition, presents a complete range of media formats in terms of how they can be integrated into classroom instruction using the ASSURE model of lesson planning. Written from the viewpoint of the teacher, the text shows specifically and realistically how media fit into the daily life of the classroom. This book is intended for educators at all levels who place a high value on successful learning. Its purpose is to help them incorporate media and technologies for learning into their repertoire—to use them as teaching tools and to guide students in using them as learning tools. We draw examples from elementary, secondary, and post-secondary education, as well as corporate training and development, because we know that instructors in these different settings have found previous editions of this book useful in their work.

This new edition is necessitated by the amazing pace of innovation in all aspects of media, particularly in those related to computers and computer networks, and especially the Internet. In the few years since the sixth edition, the digitization of information has accelerated rapidly and so has school use of new telecommunications resources, such as the Web.

Rationales

We share a number of convictions that have motivated us since we first contemplated writing a textbook. First, we believe in an *eclectic* approach to the design of instruction. Advocates cite an abundance of theories and philosophies in support of different approaches to instruction—behaviorist, cognitivist, constructivist, and so on. We view these contending theoretical positions as differing *perspectives*—different vantage points—from which to examine the large and complex world of teaching and learning. We value each of them and feel that each is reflected in the advice we offer.

Second, we have a balanced posture regarding the role of technology in instruction. Because of this perspective we consider each technology in light of its advantages, limitations, and range of applications. No technology can be described solely as being either "good" or "bad," so we strive to give a balanced treatment to the hard and soft technologies as well as to the simpler and more sophisticated media.

Third, we believe in the possibility of a rapprochement between the humanistic and technological traditions in education. We contend that technology and humanism are two separable dimensions. We demonstrate in Chapter 1 that it's easy to describe instructional arrangements that are high on both dimensions or low on both dimensions, as well as high on one and low on the other. We view them as complementary concepts.

Fourth, we believe that technology can best be integrated into instruction when viewed from the perspective of the teacher rather than that of the technologist. Therefore, throughout the book we attempt to approach media and technology solutions in terms of the day-to-day challenges of teachers and to avoid technical jargon as much as possible. Our examples deal with real, everyday teaching issues, in real content areas, involving real media and materials.

New to This Edition

Not only have we updated the technological information and methodological perspectives, but we have made a number of other changes.

- *New organization.* The text has been reorganized to facilitate understanding of chapter content. The chapter on Technologies of Instruction has been moved to the front of the text based on suggestions by a number of users.
- *Copyright Concerns.* The copyright information from the sixth edition has been updated based on new laws and interpretations. In addition, the copyright information has been moved from an appendix to individual chapters where specific topics are relevant.
- *New photographs and drawings.* Almost 100 new visuals have been added to this edition to update the materials and equipment presented in the text.

- *Updated Classroom Link.* The "Classroom Link Portfolio" CD-ROM that accompanies the text has been significantly updated and expanded. It features templates for lesson plans and materials evaluation, enabling you to develop your professional portfolios. In addition, everything is connected to the ISTE/NETS Standards. This CD-ROM is packaged in the back of your book.
- *Classroom examples.* We provide more examples of specific classroom applications of media and technologies across grade levels and subjects.
- *Media specialists' role.* We have made a special effort to draw the connections between the roles of teachers and school media specialists, portraying them as highly complementary and interdependent.
- *Expanded Companion Website.* The Companion Website (CW), at www.prenhall.com/heinich, has been expanded and is integrated with the text and the CD-ROM to create a complete learning package.
- *Flashbacks.* These brief historical vignettes that lend a sense of perspective to today's technologies have been moved from the text to the Companion Website.

Text Organization

Introductory Information. The book begins with a visual introduction—a series of vignettes that depict the many applications of media and technology in enhancing learning. The first two chapters parallel the title of the text. Chapter 1 discusses instructional media, and Chapter 2 introduces technologies for learning. Chapter 1 identifies the purposes served by media and technology and provides theoretical grounding in communications and in the psychology of learning and instruction. Chapter 2 describes programmed instruction, programmed tutoring, learning centers, cooperative groups, games, and simulations. Chapter 3 presents the ASSURE model for instructional planning. Readers who are already familiar with lesson planning procedures will find the ASSURE model more congenial than the more technical models associated with full-fledged instructional design. This chapter also presents general procedures for appraising, selecting, and using media.

Core Chapters. Media and instructional materials are described in Chapter 4. Topics include manipulatives, multimedia kits, field trips, printed materials, free and inexpensive materials, and display surfaces. Chapter 5 examines principles and procedures of visual design, an important foundation for use of the visual media discussed in Chapters 6, 8, and 9. The handling of color is a critical element in visual design. To portray the principles of color properly, we have included full-color photos and illustrations in Chapter 5.

Chapters 6 through 10 treat one by one the common formats of media. Chapter 6 deals with visual media. Chapter 7 features audio media and the listening process. Video is examined in Chapter 8. Chapters 9 and 10 focus on computer-based technologies, including computer-assisted instruction, integrated learning systems, computers as student tools, multimedia, and hypermedia.

Chapter 11 focuses on computer networks including the Internet, the World Wide Web, intranets, wide area networks (WANs), and local area networks (LANs). Distance learning is the focus of Chapter 12, with particular attention paid to broadcast radio and television, audio and video teleconferencing, online technologies, and distance learning issues.

A Vision for the Future. In Chapter 13 we consider the possible impacts of current trends in technology, training, and education. We discuss the emerging influences of computer-based media, telecommunications technologies, schools of the future, and workplaces of the future.

Appendixes. *Appendix A: Use of Standard Visuals* includes topics that have been around since the first edition, but which are still very important and useful to readers. *Appendix B: Equipment and Set-ups* provides nuts-and-bolts advice on setting up and handling media hardware, including setups for audio, visual projection, video, and computers. *Appendix C: Information Sources* provides the key for exploring other sources for instructional media beyond this book, giving names and addresses of specialized and comprehensive sources. Dozens more producers, vendors, and information centers are listed on our Companion Website. The text concludes with a glossary of more than 400 technical terms used in this book and in discussions of instructional media generally, followed by a thorough index.

Special Features

- **Advance organizers.** Each chapter begins with a photo essay giving a visual overview of the content and a brief verbal outline. To provide a more concrete notion of what knowledge and skills are featured in each chapter, we open each chapter with a set of knowledge objectives. Following the statement of objectives is the "Lexicon," a list of technical terms or terms used in a specialized sense in that chapter. All of these features are intended to give you a strong set of advance organizers, scaffolds for the main content of the chapter.
- **Appraisal Checklists.** The checklists are related to each of the media formats and are intended to make it easy to preview materials systematically and to preserve the information for later reference. Users have permission to photocopy these for personal use. The "Classroom Link Portfolio" CD-ROM computer software allows you to enter your appraisals directly into a template for storage and future use.

- **ASSURE Blueprints.** These model lesson plans appear at the end of Chapters 3 through 12. They demonstrate how the ASSURE model can be used to integrate media into instructional plans, thus serving as a concrete link with daily professional practice. As a convenience, they are also available on the "Classroom Link Portfolio" CD-ROM.
- **AV Showmanship.** These features give specific tips on using media with flair and dramatic effect.
- **Close-Ups.** These serve as miniature case studies of media applications in a variety of settings. Like the Blueprints, they show media and technology use *in context.*
- **How To . . .** Various media production and operation procedures are spelled out with illustrated step-by-step procedures. Troubleshooting suggestions are included as part of these how-to discussions.
- **Media Files.** Actual materials in various media formats are highlighted as concrete examples of the types of commercially available materials. The materials referred to are meant to be *typical* of a given format, not necessarily as exemplary. No endorsement is implied.
- **Classroom Link Portfolio Activities.** New to this edition, these activities tie together the book, the "Classroom Link Portfolio" CD-ROM, the Companion Website, and the ISTE and NETS-T standards. These activities and projects can be found at the end of each chapter and are indicated with both a CW and a CD-ROM icon.
- **Integration Assessments.** Each chapter concludes with a set of activities, which address the sorts of real-life skills typically cultivated in courses using this book as the textbook. Activities that can be completed on the Companion Website are indicated with a CW icon.

For Students

"Classroom Link Portfolio" CD-ROM. The companion CD-ROM, "Classroom Link Portfolio," will assist you in creating, maintaining, and printing lesson plans and evaluations of materials based on the ASSURE model. The resulting database can be the basis for a teaching portfolio that can grow throughout your career. The portfolio components are connected to ISTE and NETS-S standards. The CD is fully integrated into the text and the Companion Website with performance-based and reflection-based activities and projects. These activities and projects, found at the end of each chapter, are indicated with both a CW and a CD-ROM icon. The guide for using the "Classroom Link Portfolio" CD-ROM is located on the Companion Website; the instructions for using this software have been completely revised and simplified.

Companion Website (CW). The Companion Website, located at http://www. prenhall.com/heinich, includes study materials such as knowledge objectives for each chapter, chapter overviews and summaries, interactive practice quizzes with answers, portfolio activities, integration assessments, links to related web sites, flashbacks, a message board to encourage discussion, a chat feature, and a detailed guide for using the "Classroom Link Portfolio" CD-ROM.

The CW provides students with resources and immediate feedback on exercises and other activities linked to the text. In addition, these activities, projects, and resources enhance and extend chapter content to real-world issues and concepts. Each chapter on the CW contains the following modules (or sections) unless specified otherwise:

- Knowledge Objectives
- True/False—self-quizzes with automatic grading that provides immediate feedback for students
- Multiple Choice—self-quizzes with automatic grading that provides immediate feedback for students
- Web Links—links to WWW sites that relate to and enhance chapter content
- Portfolio Activities—performance-based and reflection-based activities and projects that are connected to the ISTE/NETS standards
- Integration Assessments—projects and activities that enhance students' understanding of chapter content as it relates to technology
- Message Board—serves as a virtual bulletin board to post—or respond to—questions or comments to and from a national audience
- Chat—allows anyone who is using the text anywhere in the country to communicate in a real-time environment—ideal for discussion and study groups, class projects, and so on
- Other Resources: In addition, users have access to PowerPoint Transparencies, Flashbacks, and links to dozens of Information Sources

For Instructors

Instructor's Guide. Ask your Merrill/Prentice Hall representative or contact the publisher directly for a copy of this comprehensive teaching guide, available to adopters without cost. The *Instructor's Guide* includes teaching tips for each chapter, suggestions for different ways to organize an Instructional Media course, and overhead transparency masters on perforated pages.

Computer Test Item Bank. Adopting instructors can obtain a set of computer disks, available in either Windows or Macintosh format, containing a test item bank with instructions on how to create their own tests. Contact your Merrill/Prentice Hall representative.