Preface

Instructional design integrates the burgeoning field of Information Technology with the global development of educational theory and practice. Through development and analysis of cognitive load and learning design theories, and ADDIE, Gagne, and constructivist models, instructional design has advanced greatly since its inception during World War II.

The constantly changing landscape of instructional design makes it challenging for experts and practitioners to stay informed of the field’s most up-to-date research. That is why Information Science Reference is pleased to offer this three-volume reference collection that will empower students, researchers, and academicians with a strong understanding of critical issues within instructional design by providing both extensive and detailed perspectives on cutting-edge theories and developments. This reference serves as a single, comprehensive reference source on conceptual, methodological, technical, and managerial issues, as well as providing insight into emerging trends and future opportunities within the discipline.

*Instructional Design: Concepts, Methodologies, Tools and Applications* is organized into eight distinct sections that provide wide-ranging coverage of important topics. The sections are: (1) Fundamental Concepts and Theories, (2) Development and Design Methodologies, (3) Tools and Technologies, (4) Utilization and Application, (5) Organizational and Social Implications, (6) Managerial Impact, (7) Critical Issues, and (8) Emerging Trends.

Section 1, *Fundamental Concepts and Theories*, serves as a foundation for this extensive reference tool by addressing crucial theories essential to the understanding of instructional design. Chapters such as *Contemporary Instructional Design* by Robert S. Owen and Bosede Aworuwa and *Instructional Design Methodologies* by Irene Chen lay a foundation to some of the more basic and essential fundamentals of the field. Other chapters such as *History of Distance Learning Professional Associations* also by Irene Chen, give detailed, yet brief summaries of the history of the instructional design developments. Also of note, the final two chapters in section 1, *Using Games to Teach Design Patterns and Computer Graphics* by Pollyana Notargiacomo Mustaro, Luciano Silva, & Ismar Frango Silveira; and *Using Video Games to Improve Literacy Levels of Males* by Stephenie Hewett give introduction to a few video and serious game applications in the instructional design field.

Section 2, *Development and Design Methodologies*, presents in-depth coverage of the conceptual design and architecture of instructional design, focusing on aspects including online course materials and education, augmented and virtual realities architectures, and methodological frameworks for Web based instruction. Designing and implementing effective processes and strategies are the focus of such chapters as *Planning for Technology Integration* by Henryk R. Marcinkiewicz, and *Lessons Learned about Designing Augmented Realities* by Patrick O’Shea, Rebecca Mitchell, Catherine Johnston, and Chris Dede.

Section 3, *Tools and Technologies*, presents extensive coverage of the various tools and technologies used in the development and implementation of instructional design. This comprehensive section includes such chapters as *iPods as Mobile Multimedia Learning Environments* by Peter E. Doolittle,
which detail software and hardware developments (respectively) and their applications in the field of instructional design. Additional chapters on MOT+Visual, poEML, SEAMAN, and coUML describe some of the newest modifying languages and tools at the disposal of instructional designers. And perhaps of the most vital note to higher educators is the broad discussion over a few chapters on videoconferencing and its quintessential and technical role in pedagogy.

Section 4, *Utilization and Application*, describes how instructional design has been utilized and offers insight on important lessons for its continued use and evolution. Due to the breadth of this section’s subject matter, section 4 contains the widest range of topics, including chapters such as *Application of E-Learning in Teaching, Learning and Research in East African Universities* by Michael Walimbwa and *Internet Citizenship* by Henry H. Emurian and Malissa Marie Carroll. This section is also filled with international case studies and applications of new technologies in higher learning institutions. Also of note in section 4 is the treatment given to developments in course design for foreign language instruction, some of the most recent and relevant publication on the vital subject matter.

Section 5, *Organizational and Social Implications*, includes chapters discussing the organizational and social impact of instructional design. Overall, these chapters present a detailed investigation of the complex relationship between individuals, organizations and instructional design. The first 8 chapters of section 5 are about the challenges of culture on the ever expanding and diversifying global higher education system. *Behaviorism and Developments in Instructional Design and Technology* by Irene Chen, and *Addressing Emotions within E-Learning Systems* by Valentino Zurloni, Fabrizia Mantovani, Marcello Mortillaro, Antonietta Vescovo, and Luigi Anolli are examples of some of the psychological or behavioral impacts on instructional learning, developing the influence emotion and mental response have on learning styles and pedagogy. And aside from cultural and psychological adaptations of instructional design, there are also spots of interest in *Plagiarism and the Community College* by Teri Thomson Maddox.

Section 6, *Managerial Impact*, presents focused coverage of instructional design as it relates to improvements and considerations in the workplace. In all, the chapters in this section offer specific perspectives on how managerial perspectives and developments in instructional design inform each other to create more meaningful user experiences. Typically, though the fields of industry and education are not always considered co-dependent, section 6 provides looks into how instructional design and the business workplace help each other. Examples include *Structuring a Local Virtual Work Ecology for a Collaborative, Multi-Institutional Higher Educational Project* by Shalin Hai-Jew; and *Improving Teachers’ Self-Confidence in Learning Technology Skills and Math Education through Professional Development* by Taralynn Hartsell, Sherry S. Herron, Houbin Fang, and Avinash Rathod. Section 6 is especially helpful as an addition to the organizational and behavioral studies of section 5, with diverse and novel developments in the managerial and human resources areas of instructional design.

Section 7, *Critical Issues*, addresses some of the latest academic theory related to instructional design. Importantly, this refers to critical thinking or critical theory surrounding the topic, rather than vital affairs or new trends that may be found in section 8. Instead, the section discusses some of the latest developments in cognitive load, social constructivist and pedagogy theories, as well as new approaches in faculty development, learning with visualizations, and implications of anonymity online. Within the chapters, the reader is presented with an in-depth analysis of the most current and relevant issues within this growing field of study. Chapters such as *Commodity, Firmness, and Delight* by Brad Hokanson, Charles Miller, and Simon Hooper show stylistic and business-savvy industry improvements, while *Ethics in Interactions in Distance Education* directs some of the latest scholarly publication on morality and its online legislation and execution. This section also asks unique questions about the role of business intelligence in developing countries and in linguistic confusion across cultures.
Section 8, *Emerging Trends*, highlights areas for future research within the field of instructional design, while exploring new avenues for the advancement of the discipline. Beginning this section is *Contemporary Issues in Teaching and Learning with Technology* by Jerry P. Galloway, detailing some of the most recent issues plaguing the IT side of online higher education. Closing out the book are two fascinating chapters of recent developments. First, in Patrick Parrish’s *Aesthetic Decisions of Instructors and Instructional Designers* comes a study of the effects of visual and graphic depiction on pedagogy and effectiveness. Second and finally, *The Pervasiveness of Design Drawing in ID* by S. Todd Stubbs and Andrew S. Gibbons closes out the book, with a last look at an instructional design topic that has recently found trending importance. These and several other emerging trends and suggestions for future research can be found within the final section of this exhaustive multi-volume set.

Although the primary organization of the contents in this multi-volume work is based on its eight sections, offering a progression of coverage of the important concepts, methodologies, technologies, applications, social issues, and emerging trends, the reader can also identify specific contents by utilizing the extensive indexing system listed at the end of each volume. Furthermore to ensure that the scholar, researcher and educator have access to the entire contents of this multi volume set as well as additional coverage that could not be included in the print version of this publication, the publisher will provide unlimited multi-user electronic access to the online aggregated database of this collection for the life of the edition, free of charge when a library purchases a print copy. This aggregated database provides far more contents than what can be included in the print version in addition to continual updates. This unlimited access, coupled with the continuous updates to the database ensures that the most current research is accessible to knowledge seekers.

As a comprehensive collection of research on the latest findings related to using technology to providing various services, *Instructional Design: Concepts, Methodologies, Tools and Applications*, provides researchers, administrators and all audiences with a complete understanding of the development of applications and concepts in instructional design. Given the vast number of issues concerning usage, failure, success, policies, strategies, and applications of instructional design in organizations, *Instructional Design: Concepts, Methodologies, Tools and Applications* addresses the demand for a resource that encompasses the most pertinent research in instructional design development, deployment, and impact.