Volume I

Section I. Fundamental Concepts and Theories

This section serves as the groundwork for this comprehensive reference book by addressing central theories essential to the understanding of instructional design. Chapters found within these pages provide a tremendous framework in which to position instructional design within the field of information science and technology. Insight regarding the critical integration of global measures into instructional design is addressed, while crucial stumbling blocks of this field are explored. The chapters comprising this introductory section, the reader can learn and choose from a compendium of expert research on the elemental theories underscoring the instructional design discipline.

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Francisco J. García, University of Salamanca, Spain
Ángela Barrón, University of Salamanca, Spain

Chapter 1.8. Instructional Design Methodologies
Irene Chen, University of Houston – Downtown, USA

Chapter 1.9. Contemporary Instructional Design
Robert S. Owen, Texas A&M University-Texarkana, USA
Bosede Aworuwa, Texas A&M University-Texarkana, USA

Chapter 1.10. Instructional Design Methods Integrating Instructional Technology
Paula Jones, Eastern Kentucky University, USA
Rita Davis, Eastern Kentucky University, USA

Chapter 1.11. Using Design Patterns to Support E-Learning Design
Sherri S. Frizell, Prairie View A&M University, USA
Roland Hübscher, Bentley College, USA

Thierry Nodenot, Université de Pau et des pays de l’Adour, France
Pierre Laforcade, Université du Maine, France
Xavier Le Pallec, Université de Lille, France

Chapter 1.13. History of Distance Learning Professional Associations
Irene Chen, University of Houston Downtown, USA

Chapter 1.14. Using Games to Teach Design Patterns and Computer Graphics
Pollyana Notargiacomo Mustaro, Universidade Presbiteriana Mackenzie, Brazil
Luciano Silva, Universidade Presbiteriana Mackenzie, Brazil
Ismar Frango Silveira, Universidade Presbiteriana Mackenzie, Brazil

Chapter 1.15. Using Video Games to Improve Literacy Levels of Males
Stephanie Hewett, The Citadel, USA
Section II. Development and Design Methodologies

This section provides exhaustive coverage of conceptual architecture frameworks to endow with the reader a broad understanding of the promising technological developments within the field of instructional design. Research fundamentals imperative to the understanding of developmental processes within instructional design are offered. From broad surveys to specific discussions and case studies on electronic tools, the research found within this section spans the discipline while offering detailed, specific discussions. From basic designs to abstract development, these chapters serve to expand the reaches of development and design technologies within the instructional design community.

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Henryk R. Marcinkiewicz, Aramco Services Company, USA

Chapter 2.2. Bringing Reality into the Classroom
Antonio Santos, Universidad de las Americas Puebla, Mexico

Chapter 2.3. Model-Facilitated Learning Environments: The Pedagogy of the Design
Glenda Hostetter Shoop, Pennsylvania State University, USA
Patricia A. Nordstrom, Pennsylvania State University, USA
Roy B. Clariana, Pennsylvania State University, USA

Chapter 2.4. Developing Learning Communities: Improving Interactivity of an Online Class
Pawan Jain, Fort Hays State University, Hays, USA
Smita Jain, University of Wyoming, Hays, USA

Chapter 2.5. Developing Prescriptive Taxonomies for Distance Learning Instructional Design
Vincent Elliott Lasnik, Independent Information Architect, USA

Chapter 2.6. Drawing Circles in the Sand: Integrating Content into Serious Games
Matt Seeney, TPLD Ltd., UK
Helen Routledge, Freelance Instructional Designer, UK

Chapter 2.7. A Model for Knowledge and Innovation in Online Education
Jennifer Ann Linder-VanBerschot, University of New Mexico, USA
Deborah K. LaPointe, University of New Mexico Health Sciences Center, USA

Chapter 2.8. A Large-Scale Model for Working with Subject Matter Experts
Judith A. Russo-Converso, CSC, USA
Ronald D. Offutt, Northrup-Grumman Information Technology, USA

Chapter 2.9. Instructional Challenges in Higher Education Online Courses Delivered through a Learning Management System by Subject Matter Experts
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  John Lee, National Center for Research on Evaluation, Standards and Student Testing (CRESST), USA
  Ellen Menaker, Intelligent Decision Systems, Inc., USA
  Kerry Moffett, BBN Technologies, USA
  Curtiss Murphy, Alion Science and Technology, AMSTO Operation, USA
  Kelly Pounds, i.d.e.a.s. Learning, USA
  Bruce Roberts, BBN Technologies, USA
  Jason Seip, Firewater Games LLC, USA
  Vance Souders, Firewater Games LLC, USA
  Richard Wainess, National Center for Research on Evaluation, Standards and Student Testing (CRESST), USA
Section III. Tools and Technologies

This section presents an extensive treatment of various tools and technologies existing in the field of instructional design that practitioners and academics alike must rely on to develop new techniques. These chapters enlighten readers about fundamental research on the many methods used to facilitate and enhance the integration of this worldwide phenomenon by exploring software and hardware developments and their applications—an increasingly pertinent research arena. It is through these rigorously researched chapters that the reader is provided with countless examples of the up-and-coming tools and technologies emerging from the field of instructional design.

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Renae Low, University of New South Wales, Australia
Putai Jin, University of New South Wales, Australia
John Sweller, University of New South Wales, Australia

Chapter 3.2. Simulating Teaching Experience with Role-Play
Scott J. Warren, University of North Texas, USA
Richard A. Stein, Indiana University-Bloomington, USA

Chapter 3.3. Impact of Podcasts as Professional Learning: Teacher Created, Student Created, and Professional Development Podcasts
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Chapter 3.4. Modelling Spoken Multimodal Instructional Systems
Niels Ole Bernsen, NISLab, University of Southern Denmark, Denmark
Laila Dybkjaer, NISLab, University of Southern Denmark, Denmark

Chapter 3.5. Applying the ADDIE Model to Online Instruction
Kaye Shelton, Dallas Baptist University, USA
George Saltsman, Abilene Christian University, USA
Chapter 3.6. E-Learning with Wikis, Weblogs and Discussion Forums: An Empirical Survey about the Past, the Presence and the Future

Reinhard Bernsteiner, University for Health Sciences, Austria
Herwig Ostermann, University for Health Sciences, Austria
Roland Staudinger, University for Health Sciences, Austria

Chapter 3.7. Integrating Blogs in Teacher Education

Yungwei Hao, National Taiwan Normal University, Taiwan

Chapter 3.8. iPods as Mobile Multimedia Learning Environments: Individual Differences and Instructional Design

Peter E. Doolittle, Virginia Tech, USA
Danille L. Lusk, Virginia Tech, USA
C. Noel Byrd, Virginia Tech, USA
Gina J. Mariano, Virginia Tech, USA

Chapter 3.9. Telementoring and Project-Based Learning: An Integrated Model for 21st Century Skills

Joyce Yukawa, St. Catherine University, USA

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Chapter 3.10. Developing Educational Screencasts: A Practitioner’s Perspective

Damien Raftery, Institute of Technology Carlow, Ireland

Chapter 3.11. Teaching IT Through Learning Communities in a 3D Immersive World: The Evolution of Online Instruction

Richard E. Riedl, Appalachian State University, USA
Regis M. Gilman, Appalachian State University, USA
John H. Tashner, Appalachian State University, USA
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Robert Sanders, Appalachian State University, USA
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Michel Léonard, Télé-université Université du Québec à Montréal, Canada
Karin Lundgren-Cayrol, Télé-université Université du Québec à Montréal, Canada

Chapter 3.13. poEML: A Separation of Concerns Proposal to Instructional Design

Manuel Caeiro-Rodriguez, University of Vigo, Spain
Section IV. Utilization and Application

This section discusses a variety of applications and opportunities available that can be considered by practitioners in developing viable and effective instructional design programs and processes. This section includes over 30 chapters which review certain utilizations and applications of instructional design, such as Internet citizenship and expanded access for the visual and auditory impaired. Further chapters show case studies in Africa and Australia, and the impact of globalization and standardizing languages for instructional design. The wide ranging nature of subject matter in this section manages to be both intriguing and highly educational.

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Marcello Mortillaro, CESCOM, University of Milan - Bicocca, Italy, & CISA - University of Geneva, Switzerland
Antonietta Vescovo, CESCOM, University of Milan - Bicocca, Italy
Luigi Anolli, CESCOM, University of Milan - Bicocca, Italy

Chapter 5.10. Behaviorism and Developments in Instructional Design and Technology

Irene Chen, University of Houston Downtown, USA

Chapter 5.11. Harnessing the Emotional Potential of Video Games

Patrick Felicia, University College Cork, Ireland
Ian Pitt, University College Cork, Ireland

Chapter 5.12. Students’ Attitudes toward Process and Product Oriented Online Collaborative Learning

Xinchun Wang, California State University, Fresno, USA

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Chapter 5.13. Plagiarism and the Community College

Teri Thomson Maddox, Jackson State Community College, USA

Section VI. Managerial Impact

This section presents contemporary coverage of the social implications of instructional design, more specifically related to the corporate and managerial utilization of information sharing technologies and applications, and how these technologies can be facilitated within organizations. 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. 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. The interrelationship of such issues as educational design, quality improvement, work ecology, teacher self-confidence, technology skills, and professional development are discussed. 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.

Chapter 6.1. Prevention is Better than Cure: Addressing Cheating and Plagiarism Based on the IT Student Perspective

Martin Dick, RMIT University, Australia
Judithe Sheard, Monash University, Australia
Maurie Hasen, Monash University, Australia
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Section VII. Critical Issues

Section 7 details some of the most crucial developments in the critical issues surrounding 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. This section also asks unique questions about the role of business intelligence in developing countries and in linguistic confusion across cultures. 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.
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  Sean D. Williams, Clemson University, USA
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Section VIII. Emerging Trends

The final section explores the latest trends and developments, and suggests future research potential within the field of instructional design while exploring uncharted areas of study for the advancement of the discipline. Introducing this section are chapters that describe some of the most recent issues in technology-assisted education, followed by new topics on adult education and virtual inquiry. Of special note to those looking for the design portion of instructional design, two of the final chapters discuss aesthetics and new practices in instructional design. These and several other emerging trends and suggestions for future research can be found within the final section of this exhaustive multi-volume set.

Chapter 8.1. Contemporary Issues in Teaching and Learning with Technology ............................ 1840
  Jerry P. Galloway, Texas Wesleyan University, USA & University of Texas at Arlington, USA
Chapter 8.2. New Directions in the Research of Technology-Enhanced Education ....................... 1847
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  Christine Browning, Western Michigan University, USA
  Shannon O. Driskell, University of Dayton, USA
  Susann M. Mathews, Wright State University, USA

Chapter 8.3. Emerging Edtech: Expert Perspectives and Design Principles ............................ 1880
  Ching-Huei Chen, Center for Educational Technologies®, Wheeling Jesuit University, USA
  Manetta Calinger, Center for Educational Technologies®, Wheeling Jesuit University, USA
  Bruce C. Howard, Center for Educational Technologies®, Wheeling Jesuit University, USA
  Anna Oskorus, TiER 1 Performance Solutions, USA

Chapter 8.4. Rapid E-Learning in the University ......................................................................... 1892
  Ivy Tan, University of Saskatchewan, Canada
  Ravi Chandran, National University of Singapore, Singapore

Chapter 8.5. The Innovative Production Machines and Systems Network of Excellence .......... 1899
  D. T. Pham, Cardiff University, UK
  E. E. Eldukhuri, Cardiff University, UK
  A. Soroka, Cardiff University, UK
  V. Zlatanov, Cardiff University, UK
  M.S. Packiananther, Cardiff University, UK
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  Patrick Parrish, University Corporation for Atmospheric Research, USA

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