

# Web-Based Learning

Gayle V. Davidson-Shivers • Karen L. Rasmussen  
Patrick R. Lowenthal

# Web-Based Learning

Design, Implementation and Evaluation

Second Edition

 Springer

Gayle V. Davidson-Shivers  
Department of Counseling  
and Instructional Science  
University of South Alabama  
Mobile, AL, USA

Karen L. Rasmussen  
Division of Research and Strategic  
Innovation  
University of West Florida  
Pensacola, FL, USA

Patrick R. Lowenthal  
Department of Educational Technology  
Boise State University  
Boise, ID, USA

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*To my husband, Joe Shivers.*

Gayle V. Davidson-Shivers

*To my husband, John Wells.*

Karen L. Rasmussen

*To my wife Alison, my partner in life.*

Patrick R. Lowenthal

# Preface

The first edition of *Web-Based Learning* was published in 2006. At the time, there was great interest in how the Internet and Web could be used for education and training for all kinds of learners—from public schools to postsecondary education to military to business and industry. Wherever learners were, the goal was to reach them. In many ways, not much has changed with how online learning is designed, developed, implemented, and evaluated. The biggest changes involve the technology used to develop, host, and deliver the instruction. Rather than creating web pages from scratch, creators of online instruction now work within an LMS. The underlying infrastructure of the LMS makes access, authentication, and assessment a relatively simple activity, regardless of whether a lone designer is offering the class or if a design and development team acts as the creative agent.

Although technologies have been transformative in the nature of infrastructure, the basic instructional design process has not changed. Also not changed is the host of theories that govern how environments can be designed. As we learn more about our learners and theories related to instruction, strategies, motivation, learning, teaching, and online environments, our practice and theory-building grows ever stronger.

## Our Approach

In this second edition, we have updated the conceptual framework for the Web-Based Instructional Design (WBID) Model to include new ideas and practices related to the juxtaposition of theory to application, from design and development to implementation and evaluation. Reframing of our original writings in terms of the transformation of emerging technologies and ideas has also been integrated into the new edition, which is divided into three parts.

## Target Audience

The primary audience for this book is instructors and students in instructional design and technology courses who are developing online learning environments. It can also serve as a reference tool for ID practitioners for creating and delivering online instruction. Educators in PK-12 school systems and other higher education instructors will find the book a useful resource for developing online instruction for their own classroom situations.

Instructors or designers within unique situations (e.g., continuing education or in nontraditional educational environments such as museums, health care settings, nonprofit organizations and so on) may also find this book useful. We hope that this book helps anyone who is trying to harness online environments for teaching and learning.

## Overview

This book is comprised of 10 chapters in 3 major sections. The flow of the text relates to the design, implementation, and evaluation of online learning.

### ***Part I (Chaps. 1 and 2): Introduction to Online Learning, Communities, and Instructional Design***

In Part I, we first guide those who want to create great online instruction through an overview of online instruction. In the discussion, we link online learning to communities and the basics of instruction to help the reader develop a broad view of online learning.

### ***Part II (Chaps. 3–8): The WBID Model for Creating an Online Community of Learners***

In Part II, the WBID Model is examined through the lens of creating an environment where a community of engaged learners participate in a learning experience that meets their needs and the goals of the instruction. The process starts with problem analysis. Throughout this process, learners and content serve as the focal point of identifying the goal, learners, content, and context of the instruction. The process serves as the foundation for later decisions made for concurrent design, implementation and evaluation (both formative and summative) of the online instruction. Evaluation takes a center stage throughout the process.

## ***Part III (Chaps. 9 and 10): Implementation and Evaluation of Online Instruction***

In Part III, we focus on the realities of implementation and how the summative evaluation and research is critical to articulating the impact and success of online learning. We have also included two different resources (Appendices A and B); these resources shed further light on data gathering methods and techniques/tools as well as identify various organizations related to standards, competencies, and codes of ethics associated with the design of quality online instruction.

### **Pedagogical Features**

In this second edition, our original features are updated, but are still designed to help readers learn and apply the WBID Model. They include advance organizers, chunking instructional content, presenting a main example, and discussions and additional case studies. Two appendices enhance the text.

#### ***Advance Organizers***

All chapters begin with an advance organizer in the form of a chapter overview, followed by the chapter's objectives, sequenced in order of discussion. A graphic organizer at the beginning of Chaps. 3 through 10 presents the WBID Model stage discussed in that chapter.

#### ***Chunking the Instructional Context***

Each chapter is presented in appropriately sized “chunks” that are followed by an opportunity for the reader to apply the content through “On Your Own” activities. The activities are designed around the premise that each reader will undertake a course-long project of his or her own choosing under the instructor's direction. This process is iterative until all of the chapter content has been presented and practiced and the project is complete. For example, in Chap. 1, we provide guidelines on how to select an appropriate project in the “On Your Own” following a discussion of how online learning is “right for you.” Instructors are, of course, at liberty to specify their own guidelines for student projects. The “On Your Own” activities can be used by instructors as assignments or to help guide students through the WBID Model.

In Chaps. 3 through 10, the case example, *GardenScapes*, appears between the chunked information and the practice exercises to further illustrate the progression in online learning. All chapters end with a brief summary followed by additional opportunities for extending the discussion and practice.

## ***Case Example: GardenScapes***

The case example, *GardenScapes*, is one of the main features of this text and is introduced in Chap. 2. This case example, which runs through the book, details an online learning project on developing a garden planning course for adults in a continuing education setting within a two-year college. The instructor (who does not have an ID background) works with an ID intern (a master's student) in a design team approach to design, implement, and evaluate the online learning experience.

We chose to keep this example, but provided some minor updates. As a reminder, using this example was a deliberate choice for several reasons. First, *GardenScapes* is not an example from more traditional settings that designers typically experience. Most ID students will choose their course project from one of these settings. We did not want to add undue emphasis on one setting over another and consequently leveled the playing field, so to speak, by using a nonconventional setting. Second, we believe that the content of garden planning is interesting and that most readers will have a basic understanding of the general concepts. Third, using this nonconventional ID scenario to exemplify WBID means that other professionals who do not have an ID background will be able to use our textbook for their own online instructional projects. Using this novel situation allowed us to apply theory to practice as we re-examined the WBID Model for this new edition. We were able to think and rethink the ID principles and the use of appropriate technologies to see what worked and what didn't. In other words, it helped us to think creatively as we modified the course example, updated the WBID Model, and revised this text.

## ***Expanding Your Expertise: End-of-Chapter Discussion Questions***

Discussion questions at the end of each chapter relate to the concepts and procedures presented. The questions go beyond recall of information by asking the reader to delve into trends and issues related to online learning and delivery. Instructors may use them as discussion starters or as additional course assignments; students may use them as study guides for a comprehensive understanding of online learning design.

## ***Extending Your Skills: Additional Case Studies***

This section, which appears at the end of Chaps. 2 through 10, provides additional case studies from four different workplace settings—K-12 education, business and industry, military, and higher education. By reading closely the *GardenScapes* case example and following these four case studies from one chapter to the next, the



instructor and students can examine and discuss how online learning may vary from one setting to another. In developing these cases, we varied them by instructional purposes, audiences, context, and of course, content. They also vary by type of online instruction (i.e., fully online, blended, and Web-enhanced). Again, in this new edition, these cases were only minimally updated and intentionally not developed in detail to allow instructors and students to work through or discuss as online instructional projects. The lack of details allows readers to come up with their own ideas or adapt the case to their own situation.

## *Appendices*

The Appendices contain additional information that readers may need to complete their WBI projects. Appendix A, “Methods and Tools for Gathering Data and Information,” presents information on various ways to conduct an analysis or evaluation. Appendix B, “Quality Online Instruction: Standards, Competencies, and Codes of Ethics,” provides additional information about the standards for quality online instruction as well as Professional Competencies and Codes of Ethics for ID professionals.

Mobile, AL  
Pensacola, FL  
Boise, ID

Gayle V. Davidson-Shivers  
Karen L. Rasmussen  
Patrick R. Lowenthal

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For me, Karen Rasmussen, I would like to thank my family and coworkers who so graciously gave up their time with me as I worked on this second edition.

For me, Patrick Lowenthal, I would like to thank the faculty in my department, my colleagues in the eCampus Center, and my students (especially those in EDTECH 512: Online Course Design) who continually help me to become a better online course designer and online instructor.

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## About the Authors

**Gayle V. Davidson-Shivers** is a professor in Instructional Design and Development at the University of South Alabama in Mobile, AL. She serves as the Foundations Area Program Coordinator in her department, Counseling and Instructional Sciences. She developed two graduate certificate programs, Human Performance Improvement and Instructional Design and Development, and now advises students about them. Being the first in her program to teach online courses, she continues to design and teach both online and blended courses in the areas of instructional design (ID) and organizational performance and change among others. She advises graduate students and serves as dissertation chair or committee member for many doctoral candidates.

Her publications and presentations focus on online and blended learning, instructional strategies, and needs assessment. Currently, she serves on committees at various university levels, the AACE Ed Media Executive Committee, AECT's Design and Development Board, its Strategic Planning Committee, and also its Definitions and Terminology Committee. Other service includes being on the review board for *Educational Technology Research and Development* and the editorial board for the *British Journal of Educational Technology*.

**Karen L. Rasmussen** is a professor and Associate Vice President at the University of West Florida, Division of Research and Strategic Innovation. She leads initiatives related to academic policy, innovative practice, and career and technical education. At the state level, Dr. Rasmussen works in the area of adult degree completion, leading Complete Florida, with the goal of helping adults who have some college but no degree, finish what they've started through support and interventions designed with the adult learner in mind. In addition, she led the launch of MyCareerShines, a state-wide career and technical education tool for K-20 students and citizens of the state of Florida interested in career readiness and awareness. She is a co-editor of the *Handbook of Research on Competency-Based Education in University Settings*.

Dr. Rasmussen works closely with teams on campus to implement innovative distance learning models taking programs to scale while maintaining high quality outcomes. She has served as Department Chair, Associate Dean, and Assistant Provost.

**Patrick R. Lowenthal** is an Associate Professor at Boise State University, where he teaches master's and doctoral students in fully online graduate programs in the Department of Educational Technology. Before moving to Idaho, Patrick worked as an Academic Technology Coordinator at the University of Colorado Denver as well as an Assistant Professor of Teacher Education at Regis University. His research focuses on how people communicate using emerging technologies—with a specific focus on issues of presence, identity, and community online. He has published over 50 articles and book chapters focused on instructional design and online learning. He also co-edited *Online Learning: Common Misconceptions, Benefits and Challenges* and is currently serving as the Senior Assistant Editor for *Online Learning Journal*.