Preface

The majority of educators in pre-K-12 and higher education have access to some form of newer technology. We can make PowerPoint presentations, use email, design Web sites, or even author our own software. But many educators are unsure exactly how and why these newer technologies have any real impact on teaching and learning. The question is constantly raised: how do I connect my new skills to teaching? Is there a connection between technology and learning? Will my teaching change when new technology is introduced? How will I make the most of the technology in my school?

Most often, when forced to use new technologies in teaching, teachers will default to a technology-enhanced lecture method, rather than take advantage of the variety of media characteristics that expand the teaching and learning experience. For example, instead of presenting a static lecture on the laws of physics, we could design an interactive module that would allow students to experiment with physics without a large expenditure for elaborate equipment. For a small investment, science teachers can add various electronic probes to computers to read temperature, movement, heart rates and other measures critical to understanding physical and earth sciences, rather than have students read about such measures in books. How do teachers learn to take advantage of the expanded learning possibilities of technology in the classroom?

This book addresses the connection between technology skills and application of those skills in teaching and learning. Using sound instructional design principles, authors in this book guide the reader from focusing on the technology to focusing on the educational environment. Technology is presented as a tool, as a learning partner, and as an integral part of the classroom that supports and facilitates the teaching and learning experience.

The intended goal of this book is to pool the expertise of many practitioners and instructional designers and to present that information in such a way that teachers will have useful and relevant references and guidance for using technology to enhance teaching and learning, rather than simply adding technology to prepared lectures. The chapters, taken together, make the connection between intended learning outcomes, teaching strategies, and instructional media. This book is meant to be a resource for “teacher-designers” at beginning and intermediate levels of designing instruction that is enhanced by newer technologies.

In Section I: Instructional Design: An Overview of the Field, I
introduce the concept of “teacher-designer” and discuss how instructional
design is applied in real classrooms. I include a practical working model
adapted for teachers and provide a brief overview of the field.

Section II: Foundations of Instructional Design. The chapter,
written by J. Ana Donaldson and Nancy Nelson Knupfer, provides excellent
documentation of the history of instructional design, its origins in educational
psychology, developmental theory, and the field’s current orientation grounded
in constructivist theory. Several excellent Web sites are provided as resources
for teachers.

Section III: Designing for Learners in Primary and Secondary
Education. This section is dedicated to designing instruction for elementary
students, but as with all of the chapters in this book, there are many practical
and useful strategies and suggestions for designing for students at all levels. Sara
Dexter begins the section with eTIPS, a set of educational technology integra-
tion principles appropriate for integrating technology in classrooms. Next, Gay
Fawcett and Margarete Juliana discuss designing for middle school students
and describe the success of their university’s Ameritech classroom and provide
brief case studies of how teachers using the classroom have changed their
teaching strategies and how their students have gained new knowledge. Finally,
Diane Judd offers guidance on designing for elementary classrooms and
provides plans and activities for several tested projects for using computers in
the classroom. Diane has also built a Web site for resources for the projects
included in this book (see her article for specific URLs).

Section IV: Designing for Learners in Higher Education. The
higher education section begins with Lin Muilenburg and Zane L. Berge’s
article on designing for discussion in the online classroom. Many of us have had
difficulty with students having meaningful discussions in e-learning courses, and
this article offers sound advice for overcoming such problems. Next, Tracy
Chao and Bruce Stovel describe an undergraduate English course that focused
on blues lyrics as lyric poetry. Far more than a listening/writing course, the case
study described in this article is an excellent model of the vast possibilities of
online learning. Completing the chapter on higher education is Som Naidu’s
article on designing and evaluating e-learning. Since many institutions are
concerned about the quality and effectiveness of their online programs, this
timely article from an expert in evaluation should become a part of every
administrator’s reference list.

Section V: Designing for Learning Environments. This section
includes articles that address training and learning environments rather than
designing for just one course. This collection of articles should be required
reading for anyone planning to infuse technology in their curriculum. First,
Lorna Uden takes on the large and complex world of designing for hypermedia. Lorna’s article makes a strong connection between models of learning theories and how best to apply them in hypermedia design. Similarly, Anne-Marie Armstrong describes instructional design from the adult learning theory perspective in her article on training. Though she is focused on the very active field of workforce training, Anne-Marie’s insight and application of constructivist models in learning are appropriate for any level. Anne-Marie has also provided easy-to-read and practical methods of writing objectives, matching media to methods, and useful checklists for teacher-designers. Next, Barbara Rogers Bridges, Mary C. Baily, Michael Hiatt, Deborah Timmerman, and Sally Gibson describe a “paradigm shift” in a teacher education program. In the article, they document exactly what it takes to change a traditional campus-based program into a program for distributed learning. Brief narratives from key faculty and administrators are included.

Expanding the story of changing a university’s approach to teacher education, Sólveig Jakobsdóttir documents the journey from campus-based to distance education at the Iceland University of Education. This university is now graduating students from its successful program and is in the midst of an extensive internal and external evaluation. We know this model program is doing something right when we consider that their retention rate in distance education courses is consistently between 80 and 95 percent.

Finally, Cynthia Krey, Christopher Stormer, and Janet Winsand describe what to do with a C.O.W. in the classroom. Computers on carts (wheels) is not a new event in higher education, but the wireless, adaptable application of the C.O.W. described in this article will give school media specialists many great ideas.

I am very excited about this book and believe it will be of tremendous use to teachers and administrators alike. I agreed to this project for one reason: I wished for a solid, practical textbook for helping pre-service and in-service teachers and university teachers to understand how instructional design is used when creating effective instruction for e-learning. I wanted teachers at all levels to recognize their role as teacher-designers and to provide a resource for demystifying the instructional design field in such a way that a practical and relevant application of instructional design would be possible in the “real world” classroom. I believe my wish was granted. Thank you, everyone!

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April 2001
Completing a project like this one is a very big job and certainly more than I could handle alone. I am a typical American. When faced with trying to thank everyone involved in a project of this size, my tendency is to be a bit effusive and perhaps overwhelming in my praise. For the sake of our international group of authors and readers, I will be brief and straight to the point, though most Americans will understand the difficulty I have in doing so.

I would first like to acknowledge the considerable time and effort the authors have invested in this book. Because I had a vision of creating a book that would be very practical and accessible in scope and language, I had to be almost brutal in my editorial comments and guidance. These are very intelligent and seasoned authors whose patience, good humor, excellent dialogue, insights, and comments shaped that vision into reality. Thank you for being so gracious under fire.

Thanks also to the very small team who provided reviews and comments to the first drafts of the articles. Their careful attention to details made my job much easier and I thank them. I hope you enjoyed the chocolate.

Special thanks must go to the Idea Group Publishing team, and in particular Jan Travers and Michele Rossi, who had to put up with my unique long distance situation. Much of this book was written, reviewed, assembled, and finalized while I was completing a Fulbright project in distance learning in Iceland. Even with their busy schedule, the team devised a unique way for me to complete all of the tasks and stay on deadline. Jan and Michele deserve nomination to publishing sainthood. And a big thank you to Mehdi Khosrowpour for encouraging me to stop grumbling about wanting a practical instructional design book...and just build it!

Finally, I must thank my Icelandic hosts and colleagues at Kennaraháskóli Islands (Iceland University of Education) for their insights, support, and warm welcome. Their expertise with technology in teacher education and the opportunities I had to discuss the articles and purpose of the book helped me keep my plans focused while completing my Fulbright obligations, enjoying the countryside, and trusting in the Icelandic attitude that all will work out well in the end. I wish to thank Ólafur Proppé and Ingvar Sigurgeirsson for giving me the opportunity to become a member of the faculty. And I thank the many faculty and staff members who offered friendship and opened their homes to me during my visit. This birthday will never be forgotten. (I will stop there so as not to overstate the deep affection and appreciation I feel for these wonderful new friends.) And of course I especially wish to thank my very dear
friend Sólveig Jakobsdóttir, whose keen mind and warm heart kept me going through it all. You were right, Sólveig: þetta reddast!

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