Bill designed training programs in a mid-sized industrial plant in the upper Midwest region. Since training departments are normally one of the first places targeted in any budget cuts, in the face of a tightening economy the manager of human resource development directed Bill and his fellow designers to begin a process of redesigning their training into online formats that would allow for both individual learning modules as well as group courses. Bill was further directed to design the group courses to fit either synchronous or asynchronous delivery. Such changes in training were assumed by upper management to potentially produce major savings to the training budget. Such major redesign efforts were sure to place major stress on Bill and his limited design staff. To make matters even more stressful, Bill needed to implement the changes in an accelerated schedule that would insure that at least 50% of the plant’s training could move from a face-to-face format by the beginning of the following fiscal year, with a clear message that even faster transition would be appreciated.

Mary was in charge of an allied health two-year program at a community college. As both an instructor and course designer, Mary managed a program with a variety of courses, ranging from foundational theory courses, through a variety of laboratory and skill development courses, to advanced diagnostic problem-solving courses requiring analytical and synthesis skills. Recognizing that the teaching-learning process was different depending on the type of course, Mary sought to insure that each type of course was competently taught. About three months ago her dean, upon pressure from the provost and trustees, decided to move a major portion of Mary’s program into a distance education format. The courses would be redesigned and offered primarily through online learning using a course management system such as Blackboard. This radical shift was justified on the grounds that the online shift held the most promise for both expansion of enrollment and reduction of facility costs for the community college. Given the nature of Mary’s program, with a heavy focus on skill-based training, the question was how to best insure the development of important learner competencies outside the face-to-face environment. The broader question of how best to migrate courses into this online format, were left unanswered while the mandate for change was clear and not open to discussion. Mary began to read about distance learning and online course design, but quickly got lost in the maze of literature, feeling less certain daily that the transformed program would be successful.

Andy was a program designer for an agency that specialized in the development of continuing profession education courses and continuing professional development workshops and seminars for several large professional groups. The appeal of online designs for professionals who lost billing money whenever they were away at training was obvious. What was not so obvious was how mandated competencies could be achieved away from the face-to-face and hands on formats that characterized most of the previous decade of offerings. Andy was directed to “make it happen” and was asked for feedback on timetables for the required transitions. Of particular concern to Andy was the issue of interaction. Understanding
that discussion and interaction are critical components of the development of higher critical thinking skills, the question of how to realistically foster such interaction within an online environment continued to nag at his mind.

Bill, Mary, and Andy, although not real people, represent real situations in the world of education today, particularly in higher and adult education settings (education and training beyond the K-12 world). The growth of distance education has been astounding in the past decade, particularly online forms of distance education delivery. Educator and instructional designers in corporate training, higher education, professions, community agencies, and government and military settings are being charged with overseeing nothing less than a revolution in the educative process. Many charged with implementing the change feel ill-prepared for the task and uneasy (or worse) about the unique challenges of creating distance delivery of education and training. Perhaps you, the reader, are facing situations similar to Bill, Mary, and Andy. It is for people like you that this book has been written. Our goal has been to develop a practical tool to help you understand the nature of online learning and the central issues involved in effective online design. We also desire to help you recognize the distinctions in design when considering different course types, i.e., foundational courses, skill-based courses, analysis/synthesis courses, and finally, hybrid courses.

This book will present to you, the reader, a new lens to serve as a tool to assist in the planning, conducting and evaluation of online learning. While we address design considerations, we did not intend this book to replace classic instructional design model texts. We assume the reader already knows some of these classic instructional design models, or at least has some familiarity with curriculum development. We see this book as providing another way of understanding the course development and design process, drawing upon the research and theory foundations of distance education and the unique “lens” of the four course categories. We hope this approach will provide yet another tool to work alongside other models to assist course developers and instructors to better address the needs of their online students in education and training situations.

While some writers and theorists believed that the preactive (planning) and active teaching phases are unique in the online environment, we are convinced that many of the traditional principles in planning and teaching are still highly relevant. It is the intention of this book to engage the reader with those traditional principles that can best be integrated with the four course lens as a tool box of ideals that can increase the efficacy of any online program. We also provide a summary of important distance learning principles to supplement the traditional principles.

This book attempts to gather the traditional models of teaching and learning and present them in a way that is useful to both new and experienced online teachers in a manner that can assist in increasing the overall effectiveness of online courses and training sessions and provide a greater impact for both the teacher and the learner.

**ORGANIZATION OF THIS BOOK**

**Section One: Foundations For Designing Differentiating Instruction**

The book is divided into four major parts. Unit One deals with what we consider the proper foundations for a book on online distance education design. Chapter One explores the question of designing for learning outside the traditional classroom setting. We explore the nature of the distance education
phenomena and how Distance Education Programs are different from traditional face-to-face learning programs. Specific design implications are suggested, as well as reflections presented on some of the forms of distance education (or online learning) and some contemporary issues within distance education. Chapter Two identifies the primary lens for the book, which is the four course model for differentiating instruction. We address the four types of courses that create the reality of differentiating instruction. After defining the four types of courses, we look in more detail at each type, including the Foundation Courses, skill based courses, analysis/synthesis courses, and hybrid courses.

**Section Two: Frameworks For Designing Differentiating Instruction**

In Unit Two we move from “laying foundations” to providing some important frameworks that organize the research and theory on distance education and its most contemporary expression in online learning. We intend this summary organization of information to provide an easy to use and practical tool for program designers to better understand the nature of the adult learner (most online programs focus on adults), the nature of interaction in online learning, the importance of the development of social presence within learning communities, and some important administrative concerns that impact effective online designs. Specifically, Chapter Three addresses the nature of the adult as a learner. We examine some general characteristics of adults as learners; why adults tend to participate in learning efforts, what we know from research about the relationship between age, learning, and intelligence, the possible relationship between adult development and adult learning, and finally, what we know about adult learners in distance education.

Chapter Four turns our attention to interaction in online learning. The term “interaction” refers to the broad spectrum of learning activities that engage students. In many distance education courses, online interaction promotes achievement and community beyond the expectations of both the students and instructors. We examine the forms such interaction can take, concentrating on learner-content, instructor-learner, learner - learner, and learner- interface interactions. The goal is to demonstrate the need for designing interactivity into courses and the keys to insuring such interactivity. Recent studies show that there is a correlation between interaction levels among students and the students’ levels of satisfaction, learning, and retention. Therefore, it is of paramount importance to promote active learning that requires students to engage in the coursework and collaborate with one another to increase the effectiveness of the learning experience.

In Chapter Five we turn attention to social presence in online courses. Closely related to the content, instructor, and learner interaction that occurs in distance education courses is the concept of social presence. As online students increase the amount and types of course interaction in which they engage, they also increase their social presence or the recognition that they are communicating with “real” people. Ideally, students feel that they are part of a collaborative learning community that interacts to build knowledge and meaning. Social presence is the amount to which a person feels “socially present” in their environment, the degree of feeling, perception, and reaction to being connected by technology, or the degree to which a person is perceived as ‘real’ in mediated communications. After carefully defining social presence, we focus on the benefits of establishing a social presence within the course. The various dimensions of social presence are identified and suggestions given for fostering meaningful social presence. Guidelines for assessing the level and nature of social presence within course and discussion of design issues linked to social presence are provided.
Chapter Six addresses a number of administrative issues impacting instructional design for online learning. We argue that, in the context of most education environments, program designers must learn to think more like administrators. Designers must clarify their own philosophy of design and understand how to integrate their philosophies with the sponsoring organization’s philosophies. Designers are also alerted to a number of inescapable administrative realities for program designers, including confronting inevitable ethical issues when designing programs, improving program staffing and on-site coordination, program promotion, and learner support services.

Section Three: Developing Differentiating Instruction - The “Tool Box”

In Unit Three we get into the nuts and bolts of designing differentiated instruction through detailing the design process with foundational courses, skills-based courses, and analysis/synthesis courses. Chapter Seven begins our look at the “Preactive stage” of design by examining needs assessment. In addition to discussing the purposes and importance of needs assessment, we identify the main strategies to approach needs assessment and the primary tools and techniques employed in the needs assessment task. Finally, needs assessment is discussed within the context of each of the four course types.

Chapter Eight continues our look at the “Preactive Stage” of design by examining the need for creating measurable behavioral learning objectives, as well as the roots of lesson planning. You will discover how to align uncovered needs with specific behavioral objectives. You will also learn how to expand such objectives into cognitive, psychomotor, and affective domains. Of course we also discuss creating behavioral learning objectives within the context of each of the four course types.

Chapter Nine concludes our look at the “Preactive stage” of design by examining lesson and program evaluation. Summative and formative evaluation is explained and specific tools for each are described. Four common traps to avoid in evaluation are identified and explained, as well as some common pitfalls and ethical issues in program evaluation.

Chapter Ten begins our examination of the “Active Teaching” phase of design with a discussion of active teaching phases in foundational courses. The pedagogies employed in foundational courses are identified and the importance of instructor presence is underscored. The core cooperative learning techniques used in foundational courses are explained. The use of online direct teaching methods, as well the use of asynchronous discussion boards and synchronous virtual chat rooms, round out the practical suggestions for foundations courses.

Chapter Eleven examines the “Active Teaching Phases” of design within the setting of skills based and analysis/synthesis courses. The pedagogies used in Skill-Based courses, as well as the synchronous and asynchronous communications employed in Skills Based Courses are identified. Facilitating analysis/synthesis courses through such tools as online debates and Socratic methods of facilitation in discussion boards provides yet further practical help to any designer. Perhaps most importantly, empathetical pedagogies are discussed in light of each course type.

Section Four: Designing Differentiated Course Pedagogies

In Unit four we begin to look at specific examples of online course lessons specific to each of the four course categories. Chapter Twelve continues our look at the nuts and bolts of instructional design by examining the development of effective foundation courses in light of the previous principles. Drawing upon examples from an online anatomy and physiology course, an online economics course, and an
online sexual harassment course, rationales and guidelines are shown to guide the reader in developing foundation courses within his/her professional context.

Chapter Thirteen continues this nuts and bolts approach by focusing on the issues tied to effective design of skill based courses. The chapter presents three course examples, including an online science course, an online research course, and an online hybrid course. Implications for improving skill development within the online context are underscored.

Chapter Fourteen concludes our book with a focus on the design of analysis/synthesis courses and some actual design examples. Examples from healthcare, management leadership, and education provide insights into the design issues and best practices.

It is our hope as authors that you will find this book useful as a lasting resource as you attempt to assist your agency or organization in the exciting transition to distance education and online learning as a major component of your education and training enterprise.

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