SECOND EDITION



Teaching and Learning in Physical Therapy

From Classroom to Clinic

Margaret M. Plack | Maryanne Driscoll

SLACK Incorporated

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Margaret M. Plack, PT, DPT, EdD

Professor of Physical Therapy School of Medicine and Health Sciences The George Washington University Washington, DC

Maryanne Driscoll, PhD

Educational Psychologist and Associate Professor School of Health Sciences Touro College New York, New York



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SECOND EDITION

Teaching and Learning in Physical Therapy

From Classroom to Clinic

Dedication

In memory of my best friend from the womb! I have never met a stronger, more kind-hearted woman, mother, daughter, aunt, sister-in-law, sister, and friend! To my twin sister, my soul sister, Kathy, who taught me more than she will ever know.

To my family, particularly my husband and soul mate, Tom, thank you. This would not have happened without all of the love and support that you have shown me throughout the years.

Margaret M. Plack, PT, DPT, EdD

I dedicate this book to my family, immediate and extended, for their love and support. Chuck, Meg, Mike, Chad, and Nicole, educators in their own right, demonstrate daily the importance of being creative and seeking the best way to reach and teach individuals in their charge.

Maryanne Driscoll, PhD

Acknowledgments

As with the first edition, countless individuals need to be acknowledged for their ongoing role in helping us learn. To the many students, faculty, and clinicians with whom we have interacted, thank you for your insights and for what you have taught us over the years. The teaching-learning experience truly is a two-way street, and at times we wonder if we gain more than we give! It is a true honor and privilege to work with students, faculty, and clinicians who value teaching and learning and view it as integral to the quality of care they provide. To our contributors, we thank you for your insights and for helping us continue to refine our own teaching philosophies.

In this, our second edition, there are 2 additional individuals in particular we would like to acknowledge: Kristen Wolf and Linda Cotton. Kristen is a doctor of physical therapy student at The George Washington University in Washington DC. She has been a dedicated research assistant over the past year, gathering articles, creating annotated bibliographies, referencing chapters, designing figures, and, most importantly, providing some exceptional insight into the process. Linda Cotton is a graphic designer who is a multimedia specialist and member of the health sciences instructional design team at The George Washington University. Linda's keen eye for and skill in designing figures has truly enhanced this edition. The work of these women has been invaluable; they have been perceptive, patient, persistent, and fun individuals with whom to work! To both of you: THANK YOU!

About the Authors

Margaret M. Plack, PT, DPT, EdD, is a professor in the Doctor of Physical Therapy (DPT) Program at The George Washington University School of Medicine and Health Sciences, Washington, DC. She received her baccalaureate degree in Physical Therapy and her master's degree in Physical Therapy with a specialization in developmental disabilities from New York University, NY. Once joining the academic community, she went on to obtain her EdD in adult education from the Department of Organization and Leadership at Teachers College, Columbia University, NY, and followed with her post-professional DPT degree from Nova Southeastern University, Fort Lauderdale, FL. With Dr. Driscoll, she coauthored and taught a course titled "Teaching in Physical Therapy Practice" in several entry-level and post-professional DPT programs. Currently, Dr. Plack presents annually at a faculty development workshop for new faculty with Dr. Driscoll. She has been involved in ongoing research related to adult learning principles, educational outcomes, and reflective practice. Dr. Plack has more than 40 publications on teaching and learning and has provided more than 135 educational presentations and workshops in physical therapy education, medical education, and higher education venues both nationally and internationally on topics to be discussed in this text. She has received a number of awards for her research related to the scholarship of teaching, including the Stanford Award from the Journal of Physical Therapy Education (2005 and 2007), the Emerald Literati Network from the Journal of Workplace Learning (2010), and the J. Warren Perry Distinguished Author Award from the Journal of Allied Health (2013) She also received the Award for Leadership in Education from the Education Section of the American Physical Therapy Association in 2011.

Maryanne Driscoll, PhD, is an educational psychologist and associate professor in the DPT program at Touro College, New York, NY. Dr. Driscoll received her PhD in educational psychology from Teachers College, Columbia University, NY. She consults with schools and hospitals throughout the metropolitan New York region on effective instruction. With Dr. Plack, she coauthored and taught a course titled "Teaching in Physical Therapy Practice" for 2 post-professional DPT programs, and also teaches similar content in 2 professional DPT programs. Dr. Driscoll has implemented the strategies to be used in this text in a number of teaching and learning venues, including the American Physical Therapy Association's Combined Sections Meetings and Annual Conferences and various other conferences on medical education. She has been involved in ongoing research related to adult learning principles and educational outcomes and has published several manuscripts on topics related to this text.

Contributing Authors

Heidi J. Dunfee, PT, DScPT (Chapter 12)

Operations Manager—Education

Mayo School of Continuous Professional Development

Rochester, MN

Susan Joy Leach, PT, PhD, NCS, CEEAA (Chapter 8)

Assistant Professor

Program in Physical Therapy

School of Medicine and Health Sciences

The George Washington University

Washington, DC

Laurie B. Lyons, MA (Chapter 13)

Director of Instructional Technology for the Health Sciences

School of Medicine and Health Sciences

The George Washington University

Washington, DC

Joyce R. Maring, PT, DPT, EdD (Chapter 8)

Associate Professor

Program Director and Chair

Program in Physical Therapy

Department of Physical Therapy and Health Care Sciences

School of Medicine and Health Sciences

The George Washington University

Washington, DC

Laurie J. Posey, EdD (Chapter 13)

Assistant Professor and Instructional Designer

School of Nursing

The George Washington University

Washington, DC

Aaron B. Rindflesch, PT, PhD, NCS (Chapter 12)

Assistant Professor of Physical Therapy

Director of Clinical Education and Assistant Program Director

Mayo School of Health Sciences

Rochester, MN

Elizabeth Ruckert, PT, DPT, NCS, GCS (Chapter 6)

Assistant Professor

Director of the Neurologic Residency with MedStar Hospital

Program in Physical Therapy

School of Medicine and Health Sciences

The George Washington University

Washington, DC

Foreword

Have you ever experienced one of the following scenarios?

- You are a faculty member with 15 years of full-time experience in a physical therapist education program, and now
 must teach in a content area that is outside of your comfort zone. You have spent a great deal of time ensuring the
 content you intend to present is contemporary and evidence-based, but have spent little time considering how to deliver
 the material beyond your PowerPoint slides.
- You are a physical therapist with 10 years of clinical experience with some experience as a part-time lab assistant in the local physical therapist education program, and have just accepted a full-time, tenure-eligible academic position in that program. You are not only expected to teach in that course where you were a part-time assistant, but be the primary instructor in 3 other courses. You have questions about how to design and deliver content in those areas.
- You are an experienced physical therapist clinician and just received your board certification as a Geriatric Certified Specialist. You have been asked to provide a lecture and lab to the second year students in the local physical therapist assistant education program on the normal changes in the aging process of older adults. You have been informed that the student body varies from a recent high school graduate, a mother in her 30s with 2 children, and a 42-year-old male who is changing his career path. You are thinking about how to engage this diverse audience.
- You recently began your first clinical position after graduating with your DPT and were asked to conduct an in-service to a select group of hospital personnel (orthopedic surgeons, radiologists, physical therapists, and occupational therapists) on the benefits and use of ultrasound for imaging in rehabilitation. You are considering what to include and how to conduct this session.
- You have just completed the first year of your physical therapist education program and are about to begin your first
 full-time clinical experience. You have done very well in your courses and are wondering how you can continue to
 excel in your clinical experience.

If you can identify with one or more of the above scenarios, reading this text is exactly where you should be! The excitement of a new endeavor can quickly change to a less than expected outcome if all the factors of the new experience are not considered, and steps are not taken to make this an effective experience. This text has been designed to address the knowledge, skills, and attitudes to provide effective instruction by a variety of individuals, to diverse learners, in a wide range of scenarios.

When the authors invited me to submit a Foreword on this second edition of their text, I was honored and delighted to accept. As an experienced faculty member, I have personally benefited from the expertise and talents of this team having attended 2 sessions on designing and implementing Systematic Effective Instruction (short and long versions) that they have presented over several years at the Combined Sections Meeting of the American Physical Therapy Association. The knowledge and skills that I learned from these presentations and this text certainly were instrumental in improving new and ongoing instructional activities I have had to conduct. I would like to offer some highlights of this text that likewise could assist others who conduct any instructional activity.

First, as the subtitle of the text implies, *From Classroom to Clinic*, teaching and learning occur throughout the continuum of education and practice in the profession of physical therapy. Although this may seem exclusive to the academic arena, this applies to nearly every instance when a patient or client is seen by a physical therapists or physical therapist assistant. These factors serve as fundamental tenets of this text: a) characteristics and outcomes of the learners are just as important as the skills of the teachers, and b) practitioners constantly teach knowledge and skills to their learners, the patients/clients they treat.

Similarly, the benefits of the text apply to the student as well as the teacher. Students in physical therapy education must learn how to effectively instruct patients and clients to learn about their conditions and accurately perform activities just as the physical therapists and physical therapist assistant, which they will become, must do. In addition, a new chapter in this edition specifically addresses the transition from the classroom to full-time clinical experience and how the student can excel in this very different environment (see Chapter 12).

The format of the chapters emulates the principles and practices of active learning, a fundamental factor of effective teaching and learning. Content is replete with questions and applications that enhance learning, including Stop and Reflect, Critical Thinking Clinical Scenarios, and Key Points to Remember. The material becomes vivid and more meaningful rather than appear as a series of PowerPoint slides filled with information.

The chapters on systematic effective instruction, which include a new one on facilitating higher-order and critical thinking in the classroom and clinic, serve as the core for excellence in instructional design and delivery. Designing any instructional activity should "begin with the end in mind" (see Chapter 5). What are the expected outcomes for the learner throughout the instructional session. These are absolutely essential to provide an effective teaching/learning experience.

Indeed, the authors include these in the list of "non-negotiable" attributes of systematic effective instruction: needs assessment, motivational hook, learning objectives, content booster and active learning strategies, and summary (see Chapter 7). I can attest to these as providing the basis for excellence in instruction having used these principles and practices to enhance a variety of educational arenas from a single classroom session to an entire course. I have also had the pleasure of seeing this in action as a learner in instructional sessions provided by the authors on the topic. The room was filled with individuals who were engaged and enthusiastic in the learning process, and eager to incorporate these practices in their work.

Active learning strategies, such as those above, require time, therefore, the authors contend that content for any instructional activity should be limited to the "needs to know" category. Data from sources noted by the authors indicate that lectures provide the lowest retention rate of material presented as compared to other strategies, such as demonstrations, discussions, practice, and teaching others (see Table 5-4). The delivery of instruction for any audience should limit time spent using the classical lecture approach and maximize use of strategies to engage the learner and enhance retention. Although the lecture method of instructional delivery still predominates in physical therapy education, increased use of technology is fostering other more engaging strategies, such as blended learning and the "flipped classroom." The final chapter of the text addresses this expanding area to move instruction beyond the classroom and clinic.

Teaching and learning are pervasive in physical therapy education and practice. This text is an excellent resource to understand learners and design and deliver effective instruction. It should be in the personal library for any novice or experienced physical therapy educator or clinician. The same applies to students in physical therapy education as they learn how to instruct their patients, clients, and others. I commend the authors for their excellent work in this area and look forward to their continued contributions to our profession.

Michael A. Pagliarulo, PT, MA, EdD, BA, BS
Professor Emeritus
Department of Physical Therapy
Ithaca College
Ithaca, NY

Introduction

"Learning and teaching are not inherently linked. Much learning takes place without teaching, and indeed much teaching takes place without learning."

—Etienne Wenger, Communities of Practices: Learning, Meaning, and Identity.

"Teaching, in my estimation, is a vastly over-rated function."

—Carl Rogers, Freedom to Learn.

STOP AND REFLECT

What comes to mind when you think about "Teaching and Learning in Physical Therapy Practice"?

- · Who do we teach?
- What do we teach?
- · Where do we teach?
- When do we teach?
- · How do we teach?
- Why do we teach?

Teaching is a significant component of any clinical practice. In physical therapy, we teach patients, families, colleagues, students, community members, and other professionals, and as we teach we learn. Teaching and learning are both formal and informal, and happen on a daily basis (Figure I-1). Teaching and learning are dynamic skills that require both knowledge and practice to perfect.

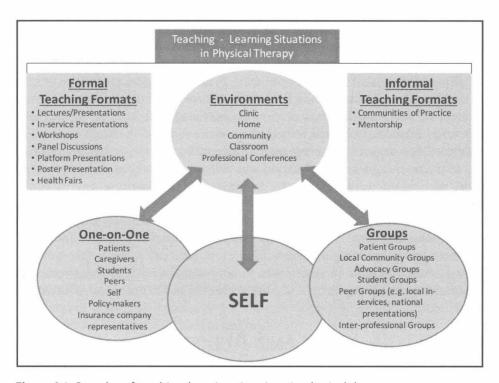


Figure I-1. Samples of teaching-learning situations in physical therapy.

STOP AND REFLECT

Consider the opening quotes:

- Why would we title this book *Teaching and Learning in Physical Therapy:* From Classroom to Clinic?
- Why, too, would we begin a book on teaching and learning with these quotes, which suggest that teaching is relatively unimportant and vastly overvalued?

When we prepared the first edition of this text, a colleague asked us why we decided on the title *Teaching and Learning in Physical Therapy*. She asked, "Isn't it a book for educators; isn't it really about teaching? So why 'learning'"? We believed, and continue to believe, that teaching and learning are inseparable. Our goal in this second edition is to continue to help the reader make that link between teaching and learning. In any teaching-learning situation, the goal is to ensure that learners learn. Whether we are in the formal setting of the classroom or the more informal community of practice of the clinic, learning is critical to professional development and to quality patient care. In physical therapy, learning is a lifelong process, as is teaching. In practice, what was learned becomes more important than what or how something was taught. We would agree that teaching without learning is relatively unimportant and vastly overvalued!

To be effective educators and clinicians, it is important to understand who we are as learners; to explore how we learn, how we think, and how we approach our problem solving. We must identify our strengths and the areas where we struggle. We need to recognize the assumptions that we bring to the teaching-learning situation and what influences our decision making. Most of all, we want to be certain our teaching is linked to learning. For a long time, literature suggested that good teachers were born and not made. Not true! Teaching and learning are skills that, like other physical therapy skills, must be learned and perfected.

In physical therapy, knowledge is being generated at such an enormous rate that much of what we learn today may very well be obsolete within a few years. Unless we are helping our learners to understand *how* to learn, to critically think, and to problem solve, we are only truly preparing them for today and not for the future. Even when working with patients, it is not enough to teach them a skill, we need to help them learn to problem solve challenges that they may face once they leave the clinical setting. Our learners need to be prepared to leverage their resources and to use their communities of practice for purposes of lifelong learning. As clinicians and educators, we have moved from being teachers with all of the answers to being facilitators of learning, from being the "Sage on the Stage" to being the "Guide on the Side." We no longer view our learners as blank slates or passive recipients of knowledge; rather, they bring their own knowledge and experiences and are active participants in the learning process, in negotiating meaning, in developing identities, and in creating new knowledge. Learning is not simply an accumulation of facts; it is a process of adapting information and transforming it into something useful.

Learning is about making connections and linking them to prior experiences so that we can modify what we know. Learning is a dynamic and complex process, and each new connection influences how we approach all future situations. As clinicians and educators, our role is to identify and acknowledge the experiences that our learners bring to the learning situation, which includes the clinical setting, and to help them make those connections and transform their knowledge and problem-solving abilities. It is important to recognize as educators that we, too, bring our own knowledge, experiences, and assumptions to the teaching-learning situation and that we, too, learn and change with each experience. Even as authors of this text, we brought our personal histories and research to our writing, and we continue to learn from the process. For us, teaching and learning are inseparable, which is why we use the term *teaching-learning experience* throughout this text. Not only are they inseparable, but they are integral to physical therapy practice. Teaching and learning do not just happen in the classroom, they continue to happen every day in both the classroom and the clinic while interacting with patients, families, peers, and community members.

In this text, we explore what it takes to be an effective teacher and learner in physical therapy, and we provide you with multiple opportunities to apply, adapt, and practice the skills required to ensure excellence in teaching and learning.

AIM AND AUDIENCE

This text is designed for anyone interested in enhancing his or her skills as a learner, clinician, and educator in physical therapy. Whether you are a student, clinician, first-time presenter, or faculty member, or whether you are a teaching student, peer, or patient, you will find this book useful. This text offers a systematic approach to designing, implementing, and evaluating effective teaching-learning experiences. We offer practical strategies throughout that can be adapted to

a variety of teaching and learning situations. The concepts discussed are relevant for any health care provider; although, given our experiences in physical therapy, the examples and activities relate specifically to physical therapy practice.

CONTENT

This text is divided into the following 3 sections: (I) Who Are We as Teachers and Learners?; (II) Designing, Implementing, and Assessing Effective Instruction; and (III) From Classroom to Clinic and Beyond.

In Section I, we explore who we are as individuals, how that impacts the teaching-learning experience, and what that means for us as educators. We describe strategies to help us to explore our own assumptions, to self-assess, and to become effective communicators and good critical thinkers essential to effective instruction. In Chapter 1, "Filters: Individual Factors That Influence Us as Teachers and Learners," we begin by exploring different characteristics of learners and teachers. We use the terms personal filters or lenses to describe some of the factors that may impact how we teach and how we learn. We refine our understanding of the factors that shape our values, beliefs, and worldviews including our past experiences, culture, gender, generational differences, levels of expertise, and current social roles (ie, family, work, community) and further develop our presentation of the characteristics of the adult learner. These filters certainly influence us as individuals and may impact any teaching-learning situation in which we are involved. This chapter highlights the importance of recognizing how designing effective instruction requires us to know our learners and therefore gain an appreciation of the dynamic interaction of all of these filters.

In Chapter 2, "Reflection and Questions: Developing Self-Awareness and Critical Thinking for Continuous Improvement in Practice," we explore the reflective process (what it is, why it is important and how to facilitate it). In this edition, we focus on reflection as the basis for critical thinking, self-assessment, and clinical decision making. We describe reflection as the basis for lifelong learning and the development of therapeutic relationships and expertise in practice. We emphasize the art of questioning, which goes way beyond the types of questions asked to include the environment and the ways in which they are asked. Although asking questions might seem intuitive for some, the challenge lies in whether we are asking the right questions at the right time and in the right way to facilitate reflection and critical thinking in ourselves and in others. This chapter highlights how we can use questions and the reflective process to better understand our learners and ourselves.

Chapter 3, "Communication and Conflict Negotiation: Facilitating Collaboration and Empowering Patients, Family Members, and Peers," is new to this edition. In this chapter, we address the pivotal role that communication plays in all aspects of physical therapy practice and how communication underpins the quality of care we provide. Building on concepts from Chapter 1, we discuss how communication can be misconstrued and provide strategies to minimize communication errors, whether working one-on-one with a patient or working in teams. We describe some of the potential barriers to communication and some strategies for effective communication. We discuss challenging patient scenarios, such as delivering bad news, apologizing for errors, or working with terminally ill patients, and offer various frameworks to help optimize communication in those scenarios. We discuss communication in teams and its unique challenges, as well as evidence-based strategies to optimize team communication such as SBAR (situation, background, assessment, recommendation), call outs, and hand-offs. We offer strategies for providing effective feedback and, finally, we discuss the inevitable: conflict. Many shy away from conflict. Here, we discuss various sources of conflict, conflict styles, and strategies to effectively manage conflict through communication.

In Chapter 4, "The Brain: Translating Current Concepts in Brain Science to Inform the Practice of Teaching and Learning," we continue to refine our understanding of brain function and its implications for teaching and learning. Since our first edition was published, neuroscience and cognitive psychology have greatly enhanced our understanding of the complexity of the human brain. In this edition, we continue to draw from these fields and add to our presentation on learning, memory formation, and memory retrieval. In this edition, we provide numerous strategies to enhance learning and retention, which you may find helpful, particularly for the struggling student. We have also added a section on how various practice strategies and factors such as sleep, exercise, and individual perspectives affect learning. We continue to acknowledge how brain research is truly in its infancy and how we are grateful to the neuroscientists and cognitive psychologists who work to unlock the complex function of our brain.

In Section II of this text we examine the design, implementation, and assessment of effective instruction. In Chapter 5, "Systematic Effective Instruction 1: Keys to Designing Effective Presentations," we present a comprehensive, systematic approach to instruction that includes assessing the needs of your learners, gaining their attention, and effectively presenting content to achieve the established objectives. We discuss motivational hooks, content boosters, formative assessments, practice opportunities, summaries, and summative assessments. In this edition, we enhance our presentation on active learning, providing teaching strategies that are multidimensional and interactive, and discuss the importance of alignment from learning objectives to assessment and from a single presentation to a curriculum.

Chapter 6, "Systematic Effective Instruction 2: Going Beyond the Basics to Facilitate Higher-Order and Critical Thinking," is a new chapter in this edition. This chapter focuses on the importance of critical thinking in the practice of physical therapy. Whether as a student preparing to become a physical therapist, a licensed clinician performing clinical decision making in the clinic, or a patient learning new skills to improve his or her movement capacity, critical thinking is a necessary part of the learning process. The ultimate goal in developing critical thinkers is to prepare clinicians for the challenges of clinical practice; however, perhaps of even greater importance is our goal of preparing patients to be able to think through the challenges and problems that they will face at home and in the community. Here, we build on concepts presented in previous chapters (integrating reflection, questions, feedback, dialogue, and active and collaborative learning) to refine our learners' thinking in different environments. We discuss scaffolding techniques and provide strategies for creating learning activities that facilitate higher-order thinking both for individuals and for groups of learners, including mind maps, infographics, priming activities, and authentic environments. Recognizing that critical thinking is important not only for our students but also for our patients, we apply these concepts to clinical practice and to classroom teaching throughout this chapter.

In Chapter 7, "Systematic Effective Instruction 3: Adapting Instruction for Varied Audiences and Formats," we continue to build on the principles presented in the previous chapters. The goal of this chapter is to help you to adapt a presentation for different formats and different audiences. Here, we discuss the non-negotiables of systematic effective instruction and demonstrate how these concepts can be adapted and applied to a variety of formats common to physical therapy, including continuing education programs, platform presentations, panel discussions, health and wellness fairs, and the like. We also problem solve challenging issues often encountered in preparing for and providing presentations.

In Chapter 8, "Motor Learning: Optimizing Conditions for Teaching and Learning Movement," we transition from teaching through presentations, to designing environments and conditions that encourage learning through active engagement and practice. We describe how theories of motor control and motor learning inform practice. We examine various types of movement, task characteristics, and movement taxonomies; conditions of practice, types of practice, and practice schedules; and various forms of feedback. We discuss humans as information processors and link to concepts such as attention, interference, response alternatives, and accuracy demands. We integrate and apply these concepts to optimize learning given the individual, the task, and the environment. In this edition, we also discuss the importance of dual tasks and divided attention in helping our patients learn to move and function in their environment. Finally, the chapter ends with a discussion of teaching and learning differences across the lifespan.

In Chapter 9, "Patient Education: Facilitating Behavior Change," we focus on the importance of our patients as learners and our role in optimizing their learning. Adding to the filters discussed in Chapter 1, we examine concepts of health beliefs, explanatory models, motivation, and readiness to learn as components of understanding our patients as learners. We describe the importance of negotiating shared meaning and maintaining our patients at the center of the decision-making process. We emphasize our role in facilitating behavior change, examine the stages of change, and suggest strategies to help move our patient along the continuum of behavior change. We discuss potential facilitators and barriers to behavior change and identify strategies to facilitate adherence in our patients. We apply the same non-negotiable concepts of systematic effective instruction to educating our patients. Given the prevalence of low literacy in the United States, we also offer you strategies to assess your patient's literacy level and to design effective patient educational materials. Finally, we offer strategies to facilitate the long-term maintenance of behavior change in your patients. In this edition, we also provide evidence-based resources to facilitate learning and optimize adherence and retention, and we discuss concepts such as psychologically informed practice, motivational interviewing, Teach-Back Method, and Ask Me 3. The goal of this chapter is to help us empower our patients to become partners in their own health.

In Section III, we move from the classroom to the clinic and beyond. We focus on how learning takes place in the clinical setting, we provide strategies to optimize the clinical learning experience, and we discuss the use of technology in enhancing learning for students, clinicians, and patients. In Chapter 10, "Communities of Practice: Learning and Professional Identity Development in the Clinical Setting," we explore the concepts of apprenticeship learning and emphasize the development of professional behaviors. While focused on the affective domain, the concepts we present here can be generalized to all aspects of learning in the clinical environment. We use quotes from interviews with students and clinicians to illustrate and reinforce the concepts discussed. Through the quotes, students and clinical instructors provide their perspectives on how they developed their own professional identity.

In Chapter 11, "Optimizing Supports and Minimizing Barriers to Learning in the Clinical Setting," we present the concept of a learning triad involving the learner, the instructor, and the clinical community. We examine the role of mentorship within the physical therapy community of practice and how mentorship in physical therapy moves beyond the one-to-one relationship of the student and clinical instructor to include the entire learning triad. We examine the role

of the learning triad in both supporting and potentially hindering learning. We conclude with a framework for learning that optimizes the supports and minimizes the barriers to learning in the clinical setting. As in the previous chapter, we use direct quotes from students and clinicians to illustrate, reinforce, and provide opportunities to apply the concepts that are discussed.

Chapter 12, "Teaching and Learning in the Clinical Setting: Striving for Excellence in Clinical Practice," is new to this edition of the text. Given that clinical education is a significant component of entry-level physical therapist education programs, with students in many programs spending at least one-third of their curriculum time in full-time clinical education, this is an important addition. Here, we examine strategies to optimize the clinical learning experience for students. In this chapter, we build on and apply the concepts of systematic effective instruction to clinical education. The concepts of completing a needs assessment, planning learning objectives, capitalizing on the characteristics of adult learners, designing learning experiences, engaging, and assessing learners are applied to clinical education. The authors share successful tools and strategies from multiple students and clinical instructors with whom they have interacted over the years. This chapter also includes several appendices with worksheets and tools that students and clinical instructors can use to optimize the learning opportunities available in the clinical setting.

Section III and the text conclude with Chapter 13, "Harnessing Technology: Enhancing Learning in the Clinic and the Classroom." This chapter has been substantially revised from the original text, with a greater focus on the "why" and "what for" of e-Learning. Emphasis is placed on how technology can be used to support all of those involved in teaching and learning in physical therapy—students, clinicians, patient educators, teachers, and lifelong learners. Framed around the principles of systematic effective instruction, we discuss strategies to motivate and engage a diverse group of learners using multiple modalities and the Universal Design for Learning. We provide strategies and tools to address a wide range of challenges and needs in physical therapy education. We also discuss factors to consider in using technology such as copyright issues, challenges of various device interfaces, and the importance of maintaining separate professional and personal identities on social media. Although technologies evolve, the foundational principles and concepts we present will remain relevant and will help you to navigate the ever-changing landscape.

FORMAT

The format of this edition remains unchanged. Each chapter begins with a set of Chapter Objectives that clearly delineate what you, the reader, will be prepared to do after completing the chapter, and concludes with a Summary of the major concepts presented in the chapter. Embedded throughout each chapter are opportunities for you to "Stop and Reflect" and actively engage with the content as you process the information presented. Concepts are supported by research and clinical examples. You will have multiple opportunities to apply and adapt these concepts to real world situations through "Critical Thinking Clinical Scenarios." Finally, concepts are reinforced through frequent "Key Points to Remember."

INSTRUCTOR'S MANUAL

The Instructor's Manual includes numerous examples of in-class activities and assignments designed to apply and extend concepts presented in each chapter. Examples of active learning strategies, such as gallery review, small group brainstorming, group problem-solving tasks, and reflective writing assignments are provided throughout.

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Instructors: Teaching and Learning in Physical Therapy: From Classroom to Clinic, Second Edition Instructor's Manual is also available from SLACK Incorporated. Don't miss this important companion to Teaching and Learning in Physical Therapy: From Classroom to Clinic, Second Edition. To obtain the Instructor's Manual, please visit http://www.efacultylounge.com