Pharmacy Education
What Matters in Learning and Teaching

Edited by
Lynne M. Sylvia, PharmD
Senior Clinical Pharmacy Specialist
Department of Pharmacy
Tufts Medical Center
Boston, Massachusetts
Adjunct Clinical Professor
School of Pharmacy
Northeastern University
Boston, Massachusetts

Judith T. Barr, ScD, MEd
Associate Professor
Director, National Education and Research Center for Outcomes Assessment
School of Pharmacy
Northeastern University
Boston, Massachusetts
When consideration is being given to use of any drug in the clinical setting, the health care provider or reader is responsible for determining FDA status of the drug, reading the package insert, and reviewing prescribing information for the most up-to-date recommendations on dose, precautions, and contraindications, and determining the appropriate usage for the product. This is especially important in the case of drugs that are new or seldom used.
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Where did it all start... this teaching and learning thing? When Socrates taught from his porch? When the discoverer of fire taught the technique to another caveman? When God instructed Adam and Eve not to eat the apple?

Well, whenever it started, in writing this book we recognize that we are standing on the shoulders of giants. Our premise is that the ultimate goal of a teacher is not teaching, but rather the facilitation of student learning. Socrates encouraged students to find their own truth and knowledge through questioning and debate (a form of active learning). John Dewey said that “Learning is doing,”1 and Chickering and Gamson included student engagement in their 1987 “Seven Principles of Good Practice in Undergraduate Education.”2 These pioneers have encouraged us to center our teaching on the learner and on our subject, rather than on ourselves as teachers. However, most contemporary faculty agree that the seismic shift from an emphasis on teaching to a focus on student learning can be traced to the essay “From Teaching to Learning—a New Paradigm for Undergraduate Education” by Robert Barr (no relation to one of the present authors) and John Tagg. We quote from this classic 1995 article in Change magazine: “In its briefest form, the paradigm that has governed our colleges is this: A college is an institution that exists to provide instruction. Subtly but profoundly we are shifting to a new paradigm: A college is an institution that exists to produce learning.”3

Now, 15 years later, within our institutions we have teaching and learning centers, divisions of education technology, and other resources to help faculty adopt the learning-centered philosophy. Neuroscientists are showing with functional magnetic resonance imaging studies that active learning is deeper learning. Accreditation bodies in education call for active learning in classrooms, and commercial electronic companies provide clickers to engage students in course-embedded electronic responses to assess learning in real time. The movement toward learner-centered teaching and student engagement is supported by evidence of higher rates of retention and application of knowledge. The answer is clear, but the question is whether we are prepared to meet this call for a shift from transmission of knowledge to the facilitation of learning. This book was written with this intent in mind: to help you, both new and experienced faculty, plan and execute educational activities within a learner-centered environment, particularly in schools of pharmacy.
In this book we will guide you in a journey to learner-centered teaching with the understanding that each of you have different experiences and backgrounds in pharmacy education. The workbook style of this text, with integration of reflective exercises and self-diagnostic questions, will allow you to customize the presented material to your current situation as a prospective, new, or experienced faculty member. Our muse in this journey is Parker Palmer, and our compass is his inspirational text *The Courage to Teach,* which recently celebrated its 10th year in print.

Palmer reminds us that the road to effective teaching and student learning starts with an exploration of our inner landscape. As such, your journey will begin with a discussion of the teacher within. In Chapter 1, you will be challenged to examine your current teaching philosophy and role as a teacher. What do you currently believe constitutes good teaching and the promotion of learning, and how does your person, or the way you identify with the world, influence the way you teach? In subsequent chapters in the first section of this text (Chapters 1 through 4), a foundation will be laid for the application of learner-centered teaching. Chapter 2 will offer an understanding of the learner, the most important member of our teaching and learning community. This chapter addresses how a student’s preferred learning style and generational characteristics influence learning and how knowledge, skills, behaviors, and reflective thinking are developed and nurtured using a learner-centered approach to education. Chapter 3 delves into the systems approach and all of the inputs and processes that need to be considered when planning a lecture, coordinating a course, or participating in the revision of a pharmacy curriculum. Using systems thinking, you will be able to identify how the content that you teach interrelates and connects with the course in which you are teaching, the curriculum in total, and the longitudinal development of your students. In the last chapter of this section, the focus is on assessment. With a clear understanding of the learner, your role as teacher, and the systems approach, how will you measure whether you have met the goal of student learning? Chapter 4 will provide an assessment toolbox that can be used in the various settings of pharmacy teaching and learning.

Section II of this text is devoted to the environment of teaching and learning. In this section, you will explore the large classroom, the clinical site, the laboratory, and the small classroom as environments of teaching and learning. What are the inherent challenges to both teaching and student learning in these environments? Which teaching strategies have been shown to be most effective in facilitating learning, and which assessment techniques are best suited to measure learning in these settings? How can technological advances, ranging in complexity from PowerPoint slides to virtual reality, enhance your teaching and promote student learning? Each of these questions will be posed to deepen your self-discovery of what matters in teaching, learning, and assessment.
Section III focuses on your role as a faculty member, advisor, and mentor in the professional maturation of the pharmacy student. In his essay “On Professionalism,” Michael Lacombe, MD, advises us to “Teach professionalism. Gently. Make the student proud of themselves, have them respect each other, and teach them to respect the patient.” Chapter 10 provides recommendations on how to enact these words and nurture student professionalism in and out of the classroom. Beyond your role as a faculty member and model of professional behavior, you also influence the professional growth of your students through your roles as an academic advisor and mentor. How can you optimize these roles? Using a case-based approach, Chapter 11 outlines the responsibilities and potential pitfalls of each position and addresses the legal issues that are specific to advising and mentoring.

The last section of this text focuses on you, the faculty member, and your professional development. This section begins with a global view of the faculty development process. Chapter 12 outlines the opportunities for your development in teaching, service, and scholarship and how to maximize them, from the initial stages of your academic career through the tenure and promotion process and beyond. Of the three primary components of faculty contribution, service has been referred to as being victim to the middle-child syndrome, suffering in attention and appreciation. Chapter 13 focuses on your role in service, how to develop a service plan, and how to balance service contributions to the university, the college or school of pharmacy, your profession, and your clinical practice, if applicable. Finally, in Chapter 14, the topic of discussion is the scholarship of teaching and learning. In this chapter you are asked to challenge your understanding of scholarship as it relates to your teaching and your students’ learning. You will be guided in the development of an individualized plan for the study of your teaching and learning strategies with the ultimate goal of sharing your findings with the greater community of scholars.

As you follow our lead through this journey in Pharmacy Education: What Matters in Learning and Teaching, we encourage you to embrace the workbook style of the text. Opportunities have been provided in each chapter for goal setting, self-diagnosis and rediagnosis of learning needs, and reflection. The value of reflection cannot be overstated. It allows for “future behaviors to be guided by a systematic and critical analysis of past actions and their consequences.” So before you adopt any of the practices or strategies recommended in this text, it is important for you to reflect on your past and current practices in teaching, learning, and assessment. Where are you in this journey to effective teaching and facilitation of learning? What strategies and practices will fit your person, and what can you learn from your past experiences in teaching and learning? After you have implemented some changes in teaching and learning strategies,
reflect on the following questions: What worked? What didn’t work? And if you could do it again, what would you change?

Our goal in *Pharmacy Education: What Matters in Learning and Teaching* is to empower you along this journey to examine your teaching with the goal of facilitating and promoting student learning. As such, we are guided by Parker Palmer’s words from *The Courage to Teach*: “I have no question that students who learn, not professors who perform, is what teaching is all about. Students who learn are the finest fruit of teachers who teach.”

Bon voyage!

References

About the Authors

Lynne M. Sylvia, PharmD, is a senior clinical pharmacy specialist in the Department of Pharmacy at Tufts Medical Center, Boston, Massachusetts. She also holds the position of adjunct clinical professor at Northeastern University, School of Pharmacy, also in Boston. Lynne coordinates a 12-week advanced pharmacy practice experience at the medical center for pharmacy students in their fourth professional year, she serves as a pharmacy residency preceptor, and she contributes to direct patient care in the areas of drug allergy, cardiology, and drug-induced diseases. She has been a pharmacy practitioner–educator for the past 30 years; for more than 20 years, she was a full-time pharmacy faculty member in both tenure- and nontenure-track positions. For the past eight years, she has facilitated the Residents Teaching Seminar, an annual seminar series offered to all pharmacy residents in Massachusetts. She is a member of the editorial boards of *Pharmacotherapy* and the *Annals of Pharmacotherapy*. Lynne earned her bachelor of science in pharmacy from the Massachusetts College of Pharmacy and Health Sciences in 1980 and her doctor of pharmacy from Duquesne University School of Pharmacy in 1983. She completed a residency in clinical pharmacy at the Rhode Island Hospital and a residency in hospital pharmacy at Mercy Hospital of Pittsburgh.

Judith T. Barr, ScD, MEd, is an associate professor and director of the National Education and Research Center for Outcomes Assessment in Healthcare at the School of Pharmacy, Northeastern University, Boston. She received her bachelor of science degree from Simmons College, her masters in education from University of Massachusetts–Boston, and her doctorate in health policy and evaluation from the Harvard School of Public Health. Judy has extensive experience in healthcare professional education. Within the School of Pharmacy she has taught large classes such as pharmacoeconomics, healthcare systems, and research methodology as well as designed and taught healthcare professional education courses for graduate and undergraduate students in the health professions. She has also precepted advanced practice pharmacy students in
campus-based education experiences and chaired the curriculum and assessment committees. All of her courses extensively involve in-class active learning activities and group project assignments. In addition to educational research and scholarship, she conducts patient-centered outcomes research. She has written more than 75 journal articles, monographs, chapters, and other publications.
Contributors

Zubin Austin, PhD, MBA, MIS, BSPharm
Associate Dean, Academic Associate Professor
OCP Professor in Pharmacy Practice Research
Leslie Dan Faculty of Pharmacy
University of Toronto, Canada

Eric G. Boyce, PharmD
Associate Dean for Academic Affairs
Professor of Pharmacy Practice
Thomas J. Long School of Pharmacy and Health Sciences
University of the Pacific
Stockton, California

Jill Clutter, PhD, CHES
Assistant Professor
School of Allied Medical Professions
The Ohio State University
Columbus, Ohio

Dana P. Hammer, RPh, MS, PhD
Director
Bracken Pharmaceutical Care Learning Center
Teaching Certificate in Pharmacy Education
University of Washington School of Pharmacy
Seattle, Washington
Laura L. Harris, PhD, ATC, LAT
Director of Athletic Training Clinical Education
School of Allied Medical Professions
The Ohio State University
Columbus, Ohio

Katherine A. Kelley, PhD
Assistant Dean for Assessment
Clinical Assistant Professor
College of Pharmacy
The Ohio State University
Columbus, Ohio

Jennifer Kirwin, PharmD, BCPS
Associate Clinical Professor
School of Pharmacy
Bouvé College of Health Sciences
Northeastern University
Boston, Massachusetts

Lisa A. Lawson, PharmD
Philadelphia College of Pharmacy
Dean, Barbara H. Korberly Professor in Women's Leadership and Health
University of the Sciences in Philadelphia
Philadelphia, Pennsylvania

Donna M. Qualters, PhD
Director and Associate Professor
Center for Teaching Excellence
Suffolk University
Boston, Massachusetts
John R. Reynolds, PharmD
Dean and Professor
School of Pharmacy
Bouvé College of Health Sciences
Northeastern University
Boston, Massachusetts

Evan T. Robinson, RPh, PhD
Professor and Dean
School of Pharmacy
Western New England College
Springfield, Massachusetts

Jenny A. Van Amburgh, BSPharm, PharmD, CDE
Associate Clinical Professor
School of Pharmacy
Bouvé College of Health Sciences
Northeastern University
Boston, Massachusetts