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## BOOK REVIEWS

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Rena M. Palloff and Keith Pratt, *Building Learning Communities in Cyberspace*. San Francisco: Jossey-Bass, 1999, 206 pp. \$29.95 paperback.

*Building Learning Communities in Cyberspace*, subtitled “Effective Strategies for the Online Classroom,” provides many questions and answers for the instructor contemplating teaching on-line. Some of the questions are left to the reader to explore. Many of the answers are illustrative rather than being detailed cookbook solutions. The book is organized into two parts and includes considerable material in three resource sections and a five-page bibliography. The major on-line teaching techniques described are the more interactive modes such as bulletin boards or forums and on-line chat rooms. There is little discussion of web page use and development, although there are a few course syllabi provided in Resource A which may be used as course home web pages. The major emphasis is the development of an on-line learning environment. The authors provide many examples of student interactions from on-line forums or chat rooms to illustrate points and ideas presented throughout the book.

Part One: The Learning Community in Cyberspace includes five chapters dealing with the philosophy of on-line teaching, a framework for on-line teaching, and student or instructor characteristics. The framework includes ensuring student access to the required technology, guidelines, participation requirements, collaboration in learning, and encouraging feedback. Establishment of an on-line community of students and instructors for each course is critical to the approach presented. This ensures active learning opportunities for each student and

also provides a suitable means of continuously evaluating student progress. Time issues and class size are discussed in Chapter Four. Awareness and comfort level with on-line technology by both the student and the instructor are discussed in the last chapter of the first part of the book.

Part Two: Building an Electronic Learning Community includes six chapters. These chapters deal with how the instructor can build an on-line community of students, provide numerous examples of syllabi suitable for on-line courses, explain how to encourage collaborative learning, and discuss the evaluation process based on on-line participation throughout the course. The final chapter provides a summary of topics presented throughout the book and future directions.

The three resource sections include numerous examples of course syllabi, a glossary of terms, and Internet resources.

This book could be very useful for instructors developing on-line interactive, collaborative course material. There is considerable information describing the authors' template for success with this type of teaching environment. However, if the instructor is looking to provide course material on-line in a less instructor-interactive mode, this book will be less useful.

*David Bourne, Ph.D.*  
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Janet Eyler and Dwight E. Giles, Jr., *Where's the Learning in Service-Learning?* San Francisco: Jossey-Bass, 1999, 352 pp. \$28.95 hardcover.

The concept of service-learning is relatively new, but it has a number of features in common with what we have long called on-the-job-training. It also overlaps somewhat with traditional co-op school/work programs that are a mainstay in engineering schools; however, service-learning has a much broader perspective. Service-learning as an applied practice has been evolving quickly over the last ten years or so and across a broad array of disciplines, including pharmacy education. Consequently, there is no single definition to describe the diversity of programs that have been labeled as service-learning. It can range from a

single afternoon of community service to well-integrated programs where students spend a year or more in a connected series of courses linked to service projects in the community. This is the point at which the authors begin their comprehensive examination of just what constitutes service-learning and what we hope to achieve by applying it to traditional academic learning.

There is an intuitive notion that combining “affective” service with “cognitive” learning can greatly enhance the learning process. However, as the authors note up front, service-learning has become a very popular concept that is quickly being applied to higher education practice without the benefit of a solid knowledge base about the process and learning outcomes. The purpose of the book, then, is to describe the empirical research the authors have conducted on these issues. They present extensive qualitative and quantitative research data to support the connection between service and learning and demonstrate how these components can be mutually reinforcing. Although the book is written from a very general perspective, the lessons it contains are easily adaptable to pharmacy education. It is very well referenced and indexed.

The book is a rich resource that is divided into several major parts. The first part, which consists of nine chapters, provides in-depth discussions of the philosophical and practical underpinnings of what learning is all about and why a service component can be so desirable. For example, the authors see it as a powerful tool for preparing students to become more caring and responsible citizens, which in turn helps colleges and universities make good on their pledge to serve society. This perspective is particularly appropriate to the pharmacy profession and our educational mission. As mentioned above, service-learning suggests a broad focus and can include pharmacy-related activities that have a direct impact on the community.

Another very valuable discussion in this first section concerns the relative balance between service and learning in any particular curriculum. At issue is the importance of where the emphasis is placed in a service-learning program and the implications of that emphasis. According to the authors, it is critical for any service-learning program to identify clearly where its priorities lie since this will direct the nature and content of the program. For example, the authors discuss four unique service-learning orientations: 1. learning goals are primary and service outcomes are secondary; 2. service outcomes are primary with learning goals secondary; 3. service and learning goals are completely separate; and 4. service and learning goals are of equal weight, and each enhances

the other for all participants. The authors provide some very useful illustrative examples of each of these orientations. From a pharmacy education perspective, we might assume that learning goals would take precedence over service outcomes, at least initially, but upon reflection, the other orientations might be appropriate in some situations.

The remainder of the first part of the book demonstrates how service-learning can have an impact on learning outcomes in areas such as social problem solving, citizenship, interpersonal relationships, critical thinking, perspective transformation, understanding and applying knowledge, and reflective practice. All of these issues are highly relevant to pharmacy education in this era of the expanding role of the pharmacist in pharmaceutical care.

The second part of the book provides extensive detail on the research conducted by the authors over two decades on what constitutes an effective service-learning program. Included in this section are descriptions of their study populations and methodology and the survey instruments used. At the back of the book are data tables that support their conclusions about the impact of the several characteristics on the effectiveness of service-learning programs.

While every chapter contains valuable insights, the chapter with the greatest utility for educators engaged in or planning to implement service-learning programs is Chapter 8, which clearly summarizes those program characteristics that make a difference in effectiveness. The most consistently stressed aspects included what the students did in the community, their relationships with others—community members, peers, and faculty, and the challenge of integrating their service and academic study through reflection. The authors expand on these observations by discussing the components that contribute to these characteristics, such as the importance of placement quality. The components include providing activities that are productive for the student as well as the community, the degree to which students can link what they are doing in the classroom to what they are experiencing in the community and vice versa, the opportunity to work with diverse ethnic groups during the course of their service-learning, whether their activities meet needs identified by members of the community, and the value of reflection. According to the authors, reflection is the critical element and has long been considered central to effective service-learning. Reflection is the link that ties student experience in the community to academic learning. It involves stepping back and being thoughtful about the experience and monitoring one's own reactions and thinking processes.

Currently, this appears to be the definitive work on service-learning, and it is absolutely required reading for pharmacy educators involved in or contemplating service-learning programs. The authors provide a clear blueprint that is adaptable to pharmacy education and essential in designing and implementing an effective service-learning program.

*John P. Juergens, Ph.D., R.Ph.*  
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Theresa Kline, *Remaking Teams: The Revolutionary Research-Based Guide That Puts Theory into Practice*. San Francisco: Jossey-Bass/Pfeiffer, 1999, 152 pp. \$39.95 hardcover.

This book describes theoretical and practical research on the use of teams within organizations, much of which was conducted by the author. Kline shares her hypotheses, ideas, and experiences for making teams successful in the workplace and provides a theoretical model of performance improvement based on multiple variables. While the book offers little new information on team effectiveness for those with experience using groups in the classroom, her ideas are backed up solidly with research references as the title of the text suggests.

The book begins with a brief history of the use of teams in corporate organizations, including some interesting distinctions between various types of teams (crews, task force, standing teams, dispersed teams). Her definition of a task force is probably the most closely related to student groups used in problem-based learning (PBL) courses: each group member has a loose or variable role within the team and the group's purpose is to develop a specific plan of action that will allow them to solve an unstructured, ill-defined problem. Kline offers suggestions for increasing the effectiveness of each type of team, which may be useful to instructors with minimal experience using student groups in the classroom. For example, a task force type of team will often need to meet more frequently than other types of teams to set goals, evaluate progress toward goals, and address conflicts. Finally, Kline's discussion of the effectiveness of dispersed teams (virtual teams) may also be useful to some distance learning programs.

Kline emphasizes that teams in general have a steep learning curve regarding how to organize themselves to meet a goal and how much time it will take to complete assigned tasks. To improve group effectiveness, she suggests that all group members should be educated in practical skills such as how to set up and run a meeting, make group decisions, resolve conflicts among members, organize the work flow processes, and clarify member goals and expectations. The book contains various forms and exercises designed to help group members develop these practical skills, and a floppy disk containing templates of team exercises accompanies the text. One form that could be especially helpful for pharmacy students summarizes the criteria for an effective group meeting (Exercise 8.1). Examples of other exercise templates included with the book are measuring team leadership (this could be modified for use in evaluating faculty facilitators of PBL groups), measuring team member satisfaction, measuring team outcomes (this could be adapted for use in evaluating the entire team in PBL courses), and a checklist for improving team effectiveness.

Although Kline does not offer any new suggestions for solving intragroup conflicts, she does make some interesting observations on conflict that are relevant to the classroom setting. Her research found that self-directed work teams believe that it is the responsibility of the external leader (a supervisor or the instructor in the classroom setting) to handle interpersonal conflicts among group members such as disruptive behaviors, negative attitudes, and those who do not carry their weight in the task. Kline supports this expectation and recommends that the supervisor step in to solve these types of problems when they occur. These findings may help to explain why a faculty member's refusal to intervene in intragroup conflicts in a PBL class, where learning to handle these types of problems is often as important as learning the content material, is so very frustrating to group members. Furthermore, this research emphasizes how crucial it is for faculty to explain to students *why* they do not make certain types of interventions within a group.

One disappointment is that while Kline stresses the importance of group assessment and team feedback, there is little discussion of an effective way to accomplish either task. Such information would be especially useful to instructors using group work or teaching in a PBL format. In addition, the lack of instructions for use of the floppy disk of forms and group exercises may prove frustrating to those without significant computer experience (and those without Microsoft® products may not be able to open the program). Still, the author's experience in the field of team effectiveness and examples of the implementation of

her theoretical model of team work should be helpful to those interested in a thorough review of the use of groups in the workplace or to those new to the use of student groups in the classroom.

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William H. Maehl, *Lifelong Learning at Its Best: Innovative Practices in Adult Credit Programs*. San Francisco: Jossey-Bass, 2000, 357 pp. \$34.95 hardcover.

William H. Maehl was the principal investigator of a research project conducted by the Commission for a Nation of Lifelong Learners and funded by the Kellogg Foundation. This commission was convened by a consortium of leading institutions and organizations in adult education, including the American Council on Education (ACE) and the Council for Adult and Experiential Learning (CAEL) and was charged with two tasks: 1. to take stock of the provision of adult education and recommend actions that business, labor, higher education, public agencies, and philanthropies could take to advance it and 2. to collect information on adult learning innovations and make it available to others seeking to initiate or adapt programs for adult learners. The commission's report, "A Nation Learning: Vision for the 21st Century," prompted a national summit by Vice President Gore on "21st Century Skills for 21st Century Jobs." This book represents an outgrowth of the commission's second charge as described above.

Although the book is "directed to anyone working with adult learners at the postsecondary level," it seems most useful for institutions with nontraditional, nonprofessional adult education programs. This book interprets the concept of lifelong learning as nontraditional college and graduate education beyond a high school or bachelor's degree, rather than self-initiated learning that continues throughout someone's career. It may provide some value, however, to those faculty members, administrators, and staff involved with nontraditional postbaccalaureate Pharm.D. programs.

The book is organized into three sections with two or three chapters in each section. The first section provides historical background and de-

scribes “meeting the Nation’s need for lifelong learning,” the second focuses on “innovative responses to learner needs,” and the third discusses “strategies and approaches to program implementation.” The second and third sets of chapters describe numerous programmatic examples that illustrate the theme of each chapter. There are three helpful appendices: the first lists names of the commission members, the second provides contact information for those programs whose examples are illustrated, and the third describes and provides an example of the survey used to collect national data on adult learning programs. Finally, a very thorough index contains keywords and names that aid readers in finding specific information.

Specific chapters can be very helpful to those involved in nontraditional adult education programs, depending on their focus. For example, the second chapter, “Towards Models of Good Practice,” reviews philosophies, theories, models, and guidelines for creating adult education programs as well as a template for examining them. This information could be very useful for those schools and colleges of pharmacy currently in the process of designing nontraditional degree programs, whether at the entry-level or postbaccalaureate degree level. Chapter Six, “Opportunities for Advanced Professional Development,” provides a brief background of the development of and need for nontraditional master’s and doctoral degree programs and describes the “nuts and bolts” of four different degree programs.

Chapters Seven and Eight describe examples of collaborative adult education programs among different higher education institutions as well as educational partnerships with industry and individual corporations. These models illustrate the benefits and pitfalls of such relationships, thus providing a “lessons learned” approach for others who may be contemplating such relationships or are in the process of improving those in which they are currently involved. Chapter Nine, “Sustaining and Renewing Successful Programs,” highlights those programs having a history of delivering their particular offerings and the factors that have helped them succeed and prepare for future educational needs.

The examples of different programs described in each chapter are helpful for gaining perspective on the wide variation in which nontraditional adult education programs are designed, delivered, and maintained. Most provide logistic information regarding their programs, such as program structure and organization; learner recruitment, admission, and orientation to the program; design of curriculum and advising systems and processes; identification and role of faculty; assessment of

student learning; financial maintenance of the program; and overall program evaluation.

Additionally, each program description discusses many specific examples that may be of interest to the reader. Some of these include use of student portfolios to assess and award prior credit as well as document learning throughout the program; implementing student-faculty learning contracts and individual plans of study/curricula; using admissions criteria such as level of motivation and quantity of work experience; recruiting community professionals as adjunct faculty; using faculty as facilitators, mentors, and advisors instead of “teachers”; awarding of degrees through assessment of student achievement of programmatic outcomes; and implementing unique academic calendars. While these examples may stimulate thought on the part of the reader, they are only discussed as features of particular programs and are not fully described. Thus, the reader would need to seek further information about the actual implementation of these examples to operationalize them in his or her own program.

Overall, *Lifelong Learning at Its Best* provides an excellent overview and discussion of the features of a variety of quality adult learning programs. The book also outlines models for “best practice” in the design, implementation, and maintenance of these programs. It is an important foundation text for those faculty members, administrators, and staff involved in these aspects of an adult learning program.

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Mansoor A. Khan and Indra K. Reddy. *Pharmaceutical and Clinical Calculations*, 2nd edition. Lancaster, PA: Technomic Publishing Co., Inc., 1999, 384 pp. \$84.95 hardcover.

*Pharmaceutical and Clinical Calculations*, 2nd edition, by Mansoor A. Khan and Indra K. Reddy is comprehensive and well organized, making it an excellent textbook choice for any undergraduate pharmacy calculations course. One additional advantage to this text is that it makes an excellent reference source for practicing pharmacists. This is

due primarily to the format the authors have used in organizing the 15 chapters.

Although not formally divided by the authors, the book really has 4 sections, Chapters 1-4, Chapters 5-11, Chapters 12-15, and 5 review sets. The first four chapters cover the typical background material, such as systems of measurement and prescription interpretation as well as principles of weighing and measuring. Chapters 5-11 are conveniently divided into calculations involving different dosage forms. These are categorized in the following chapters: (5) oral liquids; (6) capsules, tablets, and powders; (7) ointments, creams, and other semisolids; (8) topical ophthalmic, nasal, and otic preparations; (9) suppositories; (10) injectables; and (11) nutrition. Chapters 12-15 are used to discuss topics pertaining to patient-specific dosing and specialty areas such as radiopharmaceuticals. These chapters include (12) doses and dose adjustments, (13) pediatric and geriatric dosing, (14) immunizing agents and vaccines, and (15) radiopharmaceuticals. It could be argued that the chapter regarding nutritional calculations could be included with this section, but one very welcome trend in pharmacy is the blurring of the lines between staff pharmacist and clinical pharmacist, which this book addresses well. The final section of the book contains five sets of review problems that are not only good resources for preparing for course exams but also make an excellent review for the NAPLEX exam.

As an undergraduate text, *Pharmaceutical and Clinical Calculations* is an excellent source for covering everything from the very basic computational principles to more advanced patient-specific dosing techniques. In each chapter, not only are the concepts involved with the calculations described but also several examples of the computational methods are clearly presented. The end of each chapter includes the typical list of practice problems pertaining to the material in that chapter.

The strengths and weaknesses of this text are somewhat surprising and on the other hand also typical for pharmaceutical calculations texts. The surprise strength is Chapter 12, which covers doses and dose adjustments. This is typically a weakness in other texts in that this type of material is extremely difficult to present in a purely didactic manner. Drs. Khan and Reddy have done an excellent job of presenting not only the theory and concepts involved with patient-specific dosing but also many real world examples to help the student apply the calculations. There still is no substitute for the experience gained during clinical rotations and through years of actual practice, but the student will be given an excellent exposure to the topic with this chapter. This leads to the book's weakness, which is the treatment of pediatric and geriatric dos-

ing in Chapter 13. To the authors' credit, this, too, is an extremely difficult topic to present in a textbook, and it is done better here than in some other texts. However, there are still methods discussed that in most cases would not be used in an actual geriatric or pediatric practice. For example, Young's, Cowling's, and Fried's equations for pediatric dosage adjustment are still covered (however, a note of caution is given regarding the appropriateness of using these conversions). Again, the authors' treatment of these will do a good job of exposing the student to these concepts and getting across the point that pediatric patients and geriatric patients do need dosing adjustments.

As mentioned above, the practicing pharmacist will find this a useful reference source due mainly to the organization of Chapters 5-11. Many pharmaceutical calculations texts contain chapters devoted to specific concepts and types of calculations. This may seem well organized to a student during the semester, but a pharmacist needing help with an unusual calculation usually only knows the type of dosage form involved and doesn't remember the specific type of calculation to perform. If the pharmacist is confronted with the need to prepare suppositories, he or she can simply refer to Chapter 9 and find the common procedures and calculations along with several examples.

As stated earlier, there simply is no substitute for the experience gained in actually applying pharmaceutical calculations in the practice setting. It is not the intent of any pharmaceutical calculations course or text to substitute for this experience, but these courses are where students are taught the computational techniques and exposed to the concepts of this subject. In the second edition of *Pharmaceutical and Clinical Calculations*, Drs. Khan and Reddy have done an excellent job in providing a textbook to help accomplish these goals.

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Stephen M. Shortell and Arnold D. Kaluzny, eds., *Health Care Management: Organization Design and Behavior*, 4th edition. Albany, NY: Delmar-Thomson Learning, 2000, 471 pp. \$83.95 hardcover; instructor's manual \$12.

With the many technological, political, and economic changes occurring in health care, the fourth edition of *Health Care Management: Organization Design and Behavior* is a valuable asset to the collection of management resources. As part of a series in health services administration, this textbook emphasizes organizational design and behavior and human resource management. It provides an overview of organizational design and behavior theories, concepts, and principles with information on how to apply them in everyday situations. Overall, the authors emphasize the importance of human resource management as they contend that managers in the future will have to be human resource experts.

The primary audience for the book is graduate students in health care administration, policy, or other similar fields. It is an advanced management textbook; therefore, it is not recommended as the main textbook for an introductory level management course. Educators most likely would find the book useful in teaching graduate students and as a supplement in teaching undergraduate or professional students. In a pharmacy management course, the book would be most useful as a supplement to the human resource component of the course. Examples are usually organization-related and not pharmacy-specific. Additionally, managers in health care organizations or students in professional programs who are interested in management may find this book to be a useful resource.

One of the greatest strengths of the textbook is its arrangement. The authors provide a framework for the text that allows the material to be presented in a logical order. The first section of the book presents information about organizations and the role of managers in organizational design and behavior. In the remaining four sections, the authors discuss the responsibilities of managers. Four areas of responsibility are identified: the need to motivate and lead people; the need to determine appropriate work groups; the need to renew the organization by determining appropriate organization design, acquiring resources, managing change, and attaining goals; and the need to chart the future by managing strategically and anticipating the future. The book appears to be a comprehensive book on organizational behavior and human resource management in health care organizations.

The authors have incorporated educational tools within the textbook, making the book an excellent educational resource. Each chapter in-

cludes a chapter outline, learning objectives, key terms, managerial guidelines, and discussion questions. The section headings and key terms are in bold, and a glossary is included at the end of the book. Graphs, tables, and figures are used often to help clarify points and re-emphasize concepts. Chapters also have sections titled “In the Real World” and “Debate Time.” “In the Real World” provides a real-world situation that highlights at least one concept presented in the chapter. This section allows students to see the application of the concepts and the relevance to the real world. “Debate Time” presents controversial issues, thereby stimulating discussion and illustrating that often there is not one right or wrong solution. These chapter features create a favorable learning environment for students. Students are likely to find that these features facilitate their studying efforts and evaluation of their progress.

An instructor’s manual accompanies the textbook, again making the book a useful educational resource. The manual provides chapter outlines, teaching tips, and discussion questions for each chapter. The teaching tips provide excellent active learning activities for the classroom. These types of activities and discussion questions are likely to help an instructor create an interactive classroom environment.

Another strength of the book is the expert authors that Shortell and Kaluzny recruited to write each chapter. Experts in each subject area were recruited to write a chapter on that topic for the book. The authors’ diverse backgrounds, experiences, and expertise contribute to the richness of the book. Hence, it is a great reference book for educators and researchers. The authors often cite studies in the book and refer to current research findings. Because the book is well referenced, researchers can use the book to obtain an initial list of original research articles to review and information on current research trends in organizational design and behavior.

Although the book is an excellent educational and research resource, a couple of suggestions are warranted. Case studies in the textbook would be advantageous. Other health services management textbooks include case studies and allow the reader to apply the principles learned in the chapter. Perhaps even a CD would enhance student learning. The accompanying CD could include sample test questions, a case study whereby the user has options that lead him down different paths, and other educational tools. Additionally, the managerial guidelines in each chapter summarize the key points; however, the book could include a more how-to perspective and provide more detailed guidelines.

As previously stated, the book is written for graduate students interested in organizational design and human resource management. Many abstract concepts are presented for the advanced student. It is important to note, however, that financial management, operations management, and other areas of management found in general management books are not emphasized in this textbook. Instead, this textbook is an advanced, comprehensive organizational design and human resource management textbook. Thus, it is an excellent option for a graduate management course.

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Marcia Mentkowski and Associates, *Learning That Lasts: Integrating Learning, Development, and Performance in College and Beyond*. San Francisco: Jossey-Bass, 2000, 544 pp. \$38.95 hardcover.

The hackneyed laments about the evanescence of college learning struck home when a few years ago I reviewed my college transcript and saw that I got A's and B's in courses I don't even remember taking. Not facts and concepts but whole courses I have no memory of. I am not prepared to say I learned nothing from these courses, since I also do not remember learning to walk or talk, but I am skeptical that from these courses I have achieved much learning that lasts.

Marcia Mentkowski and associates reflect more deeply on what makes learning meaningful and permanent in *Learning That Lasts: Integrating Learning, Development, and Performance in College and Beyond*. The book describes how a college experience can help students integrate learning; development as a person; and effective performance in the workplace, family, and community. Such an education is holistic, focusing on the student's continuing growth in abilities, perspectives, commitments, and moral judgments.

Mentkowski and associates are from Alverno College, which has achieved an international reputation for its pioneering work in ability-based education and assessment-as-learning. To graduate from this all-women's college in Milwaukee, students must demonstrate not passing grades but proficiency in eight college ability outcomes, which

are the organizing principles for the college's curricular plan. Courses are opportunities for students to practice designated abilities at a level appropriate for the student at that point in the curriculum. For each ability and for each assignment or practice of the abilities, students are given clear criteria for what constitutes successful performance. With the aid of such criteria, students assess themselves and their work and are provided feedback from peers and expert assessors such as the instructors or professionals from the community. Assessment-as-learning means that assessment is a tool to enhance learning, not merely an after-the-fact evaluation of what learning has been achieved.

The Alverno experiences have been widely disseminated through publications, conferences, and workshops, including the college's annual one-week workshops conducted each summer which attract hundreds of educators from around the world. *Learning That Lasts* is probably the most complete and complex description of the educational practices, assumptions, principles, theories, and data results relating to the Alverno program.

The book is divided into four parts. Part One provides background regarding themes, concepts, methods, and purposes. Rooting their inquiry in praxis, Alverno faculty explore key issues such as understanding what learning is, understanding the learner, and organizing colleges to optimize learning. Along with traditional modes of inquiry such as formal research and literature review, the faculty also explore teaching and learning through pervasive collaborative inquiry and through the practice of teaching itself. They begin by uncovering their basic educational assumptions, such as, "Education goes beyond knowing to do what one knows"; "Abilities and disciplines are an integrated framework for learning"; "Assessment is integral to learning"; and "Education should develop the whole person: mind, heart, spirit." Through further educational inquiry, they refine such assumptions into principles and then generalize the principles into conceptual frameworks to guide activity, as is explained more fully in Part Three.

Part Two uses 20 years of data compiled at Alverno College to identify the type of learning that lasts, focusing on the student as learner, learner as developing person, and graduate as performer and contributor. Measuring institutional effectiveness is still tricky business, and the cynical number crunchers may not be convinced, but Alverno employs a variety of techniques, some innovative, to demonstrate how a college experience can help students to be lifelong learners, effective professionals, and committed members of various communities.

Part Three, "Interpreting and Envisioning Learning That Lasts," constructs a theory of durable learning, based upon Alverno's synthesis of theory, research, and practice. Chapter 6 describes how learners integrate four domains of learning (i.e., reasoning, performance, self-reflection, and development) through transformative "cycles of learning" (i.e., metacognitive strategies; self-assessing role performance; and engaging diverse approaches, views, and activities).

Then the authors supplement the domains of learning with six principles for learning that lasts (e.g., learning that lasts is integrative, experiential, self-aware, and reflective), and for each learning principle they supply corresponding action principles. For instance, if learning is integrative (a learning principle), then the following action principles pertain: "curriculum abilities need to inform and connect teaching, learning, and assessment . . ."; "curriculum needs to include opportunities for self-reflection . . ."; "learning strategies need to emphasize doing what one knows . . ."; faculty need to collaborate within and across disciplines . . ."; and so on. Together, the domains of growth, the transformative learning cycles, learning principles, and action principles comprise the theory of learning that lasts.

Part Four, "Fostering Learning That Lasts," relies on Alverno's own experience and on the experience of various consortia to suggest what individuals, faculty, and institutions can do to create learning communities that promote durable learning. If a curriculum based upon learning-that-lasts theory is the goal, achieving it necessitates transformations. The authors discuss how to establish and support collaborative inquiry centered on learning. Important here are the redefinition of inquiry as practice-based and the implications such a redefinition has for organizational structures, schedules, and rewards systems. Engaging faculty from diverse disciplines to participate in concerted action to integrate educational theory, research, and practice is a major but crucial challenge. Particularly helpful are the book's discussions of the "transformative acts" that enabled Alverno to develop a curriculum and an institutional environment conducive to durable learning, guidelines for institutional transformation, and learning and action principles for organizing an institution around learning that lasts.

*Learning That Lasts* has important implications for pharmacy education. The book is written to promote a restructuring of undergraduate education in such ways that liberal arts, professional education, and development of moral character are integrated, with a goal being to connect learning, work, personal life, and citizenship.

Since at least the mid-1980's a number of academic associations, including several pharmacy committees and commissions, have urged the interpenetration of liberal and professional learning. Significantly, Georgine Loacker, Director of Student Assessment at Alverno College, was the consultant for the AACP Focus Group on Liberalization of the Professional Curriculum (1990-93), which was charged with providing models of professional education consistent with the goals and values established by the Commission to Implement Change in Pharmaceutical Education. Most recently, the past AACP Academic Affairs Committee was charged with making recommendations to integrate general and professional ability outcomes in pharmacy education.

Findings at Alverno are encouraging:

We found that professional performance is connected to the liberal arts and its values traditions; each of the ability factors reflected a particular integration of liberal learning and professional abilities. (p. 185)

We found that students first came to appreciate liberal learning as they connected it to expanded understanding of professional role identities, laying a foundation for their development of a sense of purpose. The liberal arts exerted a long-lasting influence on the integration of the persons, and the way the individual enacts values of compassion, collaboration, continued learning, open-mindedness, and integrity. (p. 203)

With its emphasis on the whole person, on doing what one knows, and on development of the student as a learner, person, citizen, and professional, *Learning That Lasts* provides pharmacy educators with a number of opportunities and challenges. It is yet to be shown that the Alverno principles and practices are transferable to pharmacy education, in which scientific research, clinical commitments, and current institutional structures often leave little time and reward for collaborative inquiry into learning. The profession needs innovators who are willing to explore the possibilities.

Not everyone who begins this book will finish it. It is a sophisticated analysis of student learning, but it is not a motivational piece as Parker Palmer might write nor does it offer quick strategies and techniques to enhance learning as can be found in books by Thomas Angelo or John Bean. Prior familiarity with the Alverno program is useful for the person who undertakes this book. If you have none, you might begin by

first reading Appendix A, “Alverno College Ability-Based Learning Program.” Also, it is not always easy to keep straight the terminology, theories, and paradigms. The Alverno program is eclectic and continually evolving, as faculty are relentless in testing preconceptions and reformulating their practices in response to classroom inquiry. The reader will be disappointed if he or she expects to find a fixed and stable blueprint for curricular reform that can be mechanically applied to any institution. However, for the reader seriously committed to transforming educational structures and practices, this description of educational theory and practices derived from more than 20 years’ experience of integrative education at Alverno College comprises one of the most informed studies of how to structure undergraduate education that promotes learning that lasts.

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