Barbara Gross Davis

# Tools *for* Teaching

SECOND EDITION

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The Jossey-Bass Higher and Adult Education Series

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# PREFACE

*Tools for Teaching* provides new and experienced faculty in all disciplines with practical, tested strategies for addressing all major aspects of college and university teaching, from planning a course through assigning final grades. Graduate student instructors and teaching assistants will also benefit from the foundational knowledge and research findings described in this book.

This second edition includes twelve new chapters devoted to innovations in classroom technology and current trends on American campuses. In addition, all of the chapters from the first edition have been thoroughly revised to incorporate recent research on college-level teaching and learning.

Certain assumptions about you, the reader, have guided the design and organization of this second edition:

- You teach a course that is primarily face-to-face and use technology for administrative and educational purposes.
- You want to know about specific instructional strategies that faculty members have used successfully and that researchers have found to be effective in developing students' intellectual and cognitive skills.
- You can figure things out for yourself. Once you are presented with the gist of a strategy, you can adapt it to your particular circumstances and needs—or reject it as inappropriate for you and your students.
- You are busy and have little time to read through the burgeoning literature on teaching and learning. You want to be able to quickly locate information and appropriate strategies for improving your teaching and students' learning.

Each chapter contains a brief introduction, a set of general strategies, and concise descriptions of teaching ideas, supported by research, that instructors can adapt and try out. The format lends itself to easy and efficient identification

of major points and to quick reading or browsing. Each chapter can be read independently of the others, and the chapters can be read in any order.

Many of the suggestions can be readily implemented; others require planning or modifications in course design. No one instructor could possibly use even half of the ideas—nor would any instructor want to. *Tools for Teaching* is truly a toolbox from which to select and adapt those ideas that match your teaching style and the needs of your students. Indeed, one of the premises of the book is that there are no pat answers, quick fixes, or sure-fire recipes for excellent teaching and optimal learning, only endless ways to improve.

## Sources of *Tools for Teaching*

The information in *Tools* comes from many sources: the research literature in higher education on teaching and learning; books published by scholars, researchers, and faculty development experts on effective educational practices; articles on pedagogy by college and university faculty; conversations with and classroom observations of faculty at the University of California, Berkeley; the Web sites of colleges and universities, especially the resources at teaching.berkeley.edu; and local and national listservs devoted to teaching.

I have made every effort to attribute each entry to a published source or to cite a reference that provides greater detail, although the source cited is not necessarily the originator of the strategy. Some tools, though, are part of general lore or reached me without attribution. If I have misinterpreted any findings or conclusions or if I failed to give appropriate credit, I hope readers will contact me so that I can make corrections in a future edition.

Though *Tools* derives from a substantial body of research and theory, the text focuses on practice. For readers who want to know more about the origin and testing of the strategies, the end-of-chapter reference lists provide starting points. Those seeking discussions of theory and philosophy, essays on good teaching, personal reflections about classroom experiences, examination of the teaching persona, case studies on college teaching, or discipline-specific perspectives on teaching will want to look elsewhere to the many excellent books on these topics. For example, see, among others, Bain's analysis (2004) of the teaching practices of nearly one hundred college and university instructors; Lang's personal week-by-week guide (2008) aimed at those embarking upon their first teaching experience; Palmer's exploration (2007) of a teacher's inner landscape and the importance of emotion and spirit in the educational process; and Kalman (2008) for teaching science and engineering, Showalter (2003) for teaching literature, or Buskist and Davis (2005) for teaching psychology.

## Organization of *Tools for Teaching*

*Tools* is designed to be used as a reference book; it is not meant to be read cover to cover. The twelve parts represent, in a roughly chronological sequence, the principal teaching responsibilities and activities of college instructors. The table of contents, index, and internal cross-references should help you locate the material you need. The following overview may also help you decide where to begin.

Part One, "Getting Under Way," addresses planning: designing a new course or revising an existing one, creating a syllabus, preparing for the first days of class, and managing classroom conduct and decorum.

Part Two, "Responding to a Changing Student Body," offers suggestions for working with students who have disabilities, students from ethnic or cultural backgrounds different from your own, and older students returning to school. The last chapter in this part focuses on classes in which students have widely varying academic skills and abilities.

Part Three, "Discussion Strategies," provides ideas for leading a productive discussion, framing challenging questions, and encouraging student participation, both in class and online.

Part Four, "The Large-Enrollment Course," explores aspects of the lecture method: preparing and delivering effective lectures, engaging students and providing for student participation, and maintaining instructional quality with limited resources.

Part Five, "Alternatives and Supplements to Lectures and Discussion," continues the theme of student participation, looking at the advantages of group work and ways to involve students in role playing, case studies, games, virtual worlds, fieldwork, and undergraduate research. Web-based activities are highlighted in this part.

Part Six, "Enhancing Students' Learning and Motivation," provides research-based approaches to helping students become more confident, independent, and self-motivated learners. Informal ways to assess learning and the use of mobile technologies are also described.

Part Seven, "Strengthening Students' Writing and Problem-Solving Skills," describes how instructors in all departments can help students develop their writing skills—and how to do so without spending enormous amounts of time grading and marking students' papers. This part also offers strategies on designing and grading problem sets.

For many faculty members, testing and grading are among the most difficult aspects of teaching. Part Eight, "Testing and Grading," offers pointers on developing good exams, alleviating students' test anxieties, implementing various grading methods, and promoting academic honesty.

Part Nine, "Presentation Technologies," explores low-tech media (flipcharts, chalkboards), audio and video multimedia, and PowerPoint presentations.

Part Ten, "Evaluation to Improve Teaching," explains how instructors can gather and interpret information that will help them become better teachers. This part includes quick methods for getting immediate feedback from students as well as the use of video recordings, colleague observation, and self-assessment.

Part Eleven, "Teaching Outside the Classroom," offers ideas on office hours, electronic communication with students, advising undergraduates, and working with graduate students as teaching assistants.

Part Twelve, "Finishing Up," covers end-of-term activities: review sessions, student ratings, and letters of recommendation.

## Suggestions for Using *Tools for Teaching*

Because each chapter is designed to be read independently, some themes are mentioned in several chapters, an overlap that I hope will not bother the careful reader. Readers will also notice that not all the suggestions are compatible: they represent a variety of strategies from which to choose. As with any new undertaking, it is best to pick one or two activities to start with and add new items to your repertoire over time.

*If you are a new instructor,* you may want to begin by looking at Parts One, Three, and Four ("Getting Under Way," "Discussion Strategies," and "The Large-Enrollment Course"). You could then read the chapters that seem particularly relevant to your teaching responsibilities and refer to *Tools* during the term as different challenges arise (for example, encouraging students to talk during discussion periods).

*If you feel generally comfortable about your teaching but are looking for ways to inject some excitement into your courses,* browse through the book and select topics that appeal to you. Or start with Part Three ("Discussion Strategies") and Part Five ("Alternatives and Supplements to Lectures and Discussion"), both of which offer ways to actively engage students.

*If you already have a sense of the areas you want to improve,* read the chapters that directly relate to those areas.

*If you are unsure about your teaching strengths and weaknesses,* read Part Ten ("Evaluation to Improve Teaching") for suggestions on how to assess your teaching. Once you have identified areas for improvement, scan the table of contents and the index for the relevant topics.

*All instructors* can benefit from "Informally Assessing Students' Learning" (in Part Six) and "Early Feedback to Improve Teaching and Learning" (in Part Ten),

which offer suggestions for gauging students' comprehension of course material and for eliciting their opinions of the strengths and weaknesses of your teaching.

## A Request

I would be most grateful for your comments on the ideas and perspectives presented in *Tools.* Let me know what you think, and please pass along the good ideas you use in your own courses (email: barbara@BarbaraGrossDavis.com).

## Acknowledgments

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# CREDITS

We gratefully acknowledge permission to use the following material:

**Barbara Gross Davis,** Assistant Vice Provost for Undergraduate Education at the University of California, Berkeley, received a B.A. degree in psychology, an M.A. degree in educational psychology, and a Ph.D. degree, also in educational psychology, all from the University of California, Berkeley. Davis's main areas of interest have been program and curriculum evaluation, instructional improvement, and faculty development—all in higher education. She has conducted workshops and seminars on topics related to teaching, learning, and evaluation, and she has written about faculty evaluation, assessment, and teaching improvement.

*To my mother, Rita Berro, my first and best teacher*

# Getting Under Way

# Designing or Revising a Course

In designing or revising a course, faculty must consider what material to teach, how best to teach it, and how to ensure that students are learning what is being taught. Many instructors, hoping to impart to students everything they know about a subject, attempt to include far too much material. Indeed, one of the most difficult steps in planning a course is deciding which topics must be excluded if the whole is to be manageable. The following suggestions are designed to help you make decisions about the content of your course, the structure and sequence of activities and assignments, the identification of learning outcomes, and the selection of instructional resources.

## General Strategies

***Let your decisions be guided by what you want your students to accomplish.***
Instead of thinking about the topics you want to teach, focus on learning outcomes: What do you want your students to be able to do after they have studied the material and completed their assignments? What knowledge, skills, attitudes, and "habits of mind" do you want your students to acquire during the semester? (Sources: Diamond, 1998; Fry et al., 2003; Ramsden, 2003; Suskie, 2004)

***Apply principles that will enhance students' learning and intellectual development.*** The most important of these principles are discussed in Chapter 29, "Helping Students Learn." For example, you will want to think about how to provide your students with opportunities for active learning and for peer interaction, how to organize and communicate the material, what constitutes a reasonable workload, and how you and your students will monitor and assess their progress. (Source: Donnelly and Fitzmaurice, 2005)

***Design or revise your course with principles of universal design in mind.***
Universal design is based on the premise that barrier-free, inclusive design benefits

everyone—those with and without disabilities—and thereby eliminates or reduces the need for assistance and accommodation (see Chapter 6, "Students with Disabilities"). In college classes, instructors can

- use a variety of instructional methods
- offer students multiple ways to demonstrate mastery
- use technology to increase accessibility
- provide options for participation and presentations
- invite students to make their needs known

***Aim for alignment of course elements.*** *Alignment* means that learning outcomes, instructional activities, and assessments of student learning are consistent and reinforce each other. Research shows that learning is improved when there is alignment among what instructors intend to teach, what they actually teach, and what they test. (Sources: Whetten, 2007; Wulff, 2005)

## Preliminary Information Gathering

***When preparing to teach a course for the first time, talk with faculty who have taught it previously.*** Ask your colleagues for their syllabus, course Web pages, instructional resources, list of assignments and papers, and old exams. Find out about the typical problems their students had with the material and any other difficulties the instructors encountered. Student evaluations of earlier offerings will also help you identify strengths and weaknesses of previous classes. If webcasts or podcasts of the course are available, view them as well.

***When preparing a brand new course, review textbooks on the topic and materials or webcasts from similar courses at other universities.*** Current textbooks will give you a sense of the main themes, topics, and issues your course might address. Reviewing syllabi and webcasts or podcasts will let you see how other instructors approach the topics. Syllabi for introductory courses are often available from professional associations; some universities post syllabi online (see, for example, the MIT OpenCourseWare Web site).

***Think about how your course fits into your department's curriculum and sequences.*** Look at the syllabi for prerequisite courses and the courses for which your course serves as a prerequisite. The former will give you a sense of what your students will already know, and the latter will help you identify the knowledge and skills that your course is expected to address.

***When revising a course you have taught, assemble all your old materials.*** You will want to look at your syllabus, textbooks and readings, handouts, exams, notes for each class session, and other instructional resources. Review the students' end-of-semester evaluations to remind yourself of the course's strengths and weaknesses. Examine your materials in light of students' comments, new developments in the field, and your own changing interests.

***Consider the characteristics of your students.*** As you plan your course, think about your prospective students: What range of knowledge, skills, and attitudes might they bring to the course? Will they be new to the field, potential majors, majors, or nonmajors? What courses have they already completed? What preconceptions and misperceptions might they have? Will all or most of your students be just out of high school, or older and more mature? Will some be part-time students who have work or family responsibilities? Will they be living on campus or will they commute?

***Identify constraints on the course.*** As you begin to design the course, ask yourself, How many hours are available for instruction? How many students will be enrolled? Will you have lab assistants, graduate student instructors, or readers? What sorts of technology will be available in the classroom? Will there be opportunities for fieldwork or internships? What barriers or obstacles might detract from your students' learning?

## Deciding What You Want to Accomplish

***Think beyond this semester.*** Imagine yourself overhearing a group of graduating seniors who have taken your course and are discussing why it was among the most valuable courses they had ever taken. What would they be saying about your course? Or imagine that several of your students will become local or national power brokers, or that half of them will drop out of school before graduation. What would you like the legacy of your course to be for these students? What will distinguish students who have taken this course from those who have not? (Sources: Bergquist and Phillips, 1977; Fink, 2003; Wiggins and McTighe, 2005)

***Use taxonomies to help identify a range of learning outcomes.*** Bloom's classic *Taxonomy of Educational Objectives* (1956) outlines six levels of cognitive processing: Knowledge, Comprehension, Application, Analysis, Synthesis, and Evaluation. Although Bloom's taxonomy oversimplifies how learning occurs, and research

has not supported its hierarchical structure, it provides a useful starting point for defining learning outcomes that go beyond the memorization of facts. Applying new research on learning and cognitive development to Bloom's taxonomy, Anderson and Krathwohl (2001) offer a matrix that matches four types of knowledge (Factual, Conceptual, Procedural, and Metacognitive) against each of six cognitive processes (Remember, Understand, Apply, Analyze, Evaluate, and Create). In this revised taxonomy, learning progresses from the remembering of factual knowledge to the creation of new knowledge and the ability to reflect on one's own learning.

Fink (2003) developed a taxonomy that takes into account types of learning not readily apparent in the Bloom taxonomy or revised taxonomy: leadership, interpersonal skills, ethics, tolerance, and the ability to change. He proposes six nonhierarchical categories (Foundational Knowledge, Application, Integration, Human Dimension, Caring, Learning How to Learn). Here's an example of a learning outcome from the Human Dimension: "You will be able to inform and educate others about the role of microbiology in personal and public life; for example, by educating your roommate about proper ways of cooking a hamburger."

Erickson, Peters, and Strommer (2006) have developed a framework that uses everyday language in four categories: Knowing (memory), Understanding (ability to recognize), Thinking (applying what one has learned), and Learning How to Learn. Here's an example of an outcome from Understanding: "You will be able to identify which of a list of chemical equations conform to the Law of Conservation of Mass."

Another framework (Fry et al., 2003) takes into account research on deep and surface approaches to learning (See Chapter 29, "Helping Students Learn"). The first three levels are surface approaches: Increase in Knowledge, Memorizing, and Acquisition of Procedures. The last two are deep approaches: Abstraction of Meaning and Understanding Reality. Here's an example of an outcome from Abstraction of Meaning: "You will be able to provide a causal analysis of the seminal historical events that have shaped modern British society." Still another taxonomy (called SOLO and developed by Biggs, 2003) also has five levels: Prestructural, Unistructural, Multistructural, Relational, and Extended Abstract. An example of a learning outcome from Relational is "When shown a graph of severity of asthma attacks by time of a day, you will be able to advise a patient how to cope with diurnal variation in symptoms."

Marzano's taxonomy (2001) articulates six levels of mental processing: Retrieval, Comprehension, Analysis, Knowledge Utilization, Metacognition, and Self-System Thinking. Here's an example of a learning outcome from

Metacognition: "You will be able to monitor the extent to which you are effectively carrying out the proper experiments needed to isolate a gene."

Some two dozen frameworks or taxonomies have been developed to define domains of learning, development, and cognition. For descriptions of some of these taxonomies, see Anderson and Krathwohl (2001).

***Draft a list of learning outcomes.*** What do you expect your students to know, do, demonstrate, or produce as a result of taking the course? Writing down these learning outcomes will help you (1) clarify what you want your students to accomplish; (2) determine what will count as evidence of student achievement; and (3) select appropriate teaching methods, materials, and assignments. At the start of the semester, you can refer to these learning outcomes when introducing the course to your students, and your students can use your list to monitor their progress. (Source: Wiggins and McTighe, 2005)

***Identify both content outcomes and content-neutral outcomes.*** Content outcomes relate to students' grasp of the subject matter: "At the end of this course, you will be able to summarize the key forces affecting the rise of China as an economic power." Content-neutral outcomes relate to cognitive skills, interpersonal skills, and other outcomes independent of a student's mastery of course content: "At the end of this course, you will have learned to work collaboratively with peers." For each outcome, think about what constitutes acceptable performance and how your students will demonstrate that they have achieved the outcome. (Source: Fuhrmann and Grasha, 1983)

***When writing learning outcomes, use clear language and everyday words.*** Express your learning outcomes in the second person ("you"), rather than the third person ("each student" or "the students"), and in the future tense: "When shown an electrocardiogram, you will be able to identify the duration, amplitude, and morphology of the QRS complex."

Fry, Ketteridge, and Marshall (2003) and Race (2007) offer other useful tips:

- Describe the learning that will result from an activity. Instead of "You will read one journal article on trade flows," write "You will be able to apply the analysis presented in a journal article on trade flows, and predict the effects that higher commodity prices will have on the U.S. trade deficit."
- Favor precise terms (*critique, define, distinguish among, argue, identify, solve, predict*) over vague ones (*understand, know, appreciate, become familiar with*).
- Drop trivial items from your list; help students focus on the most important learning outcomes.

- Think ahead to assessment. As you draft each learning outcome, ask yourself how you will measure how well a student has achieved the outcome.
- Recognize that some educational aspirations cannot be evaluated with certainty: aesthetic appreciation or creativity, for example (Toohey, 1999).

***Reduce your preliminary list of learning outcomes to a realistic set.*** Take into consideration the different abilities, interests, and expectations of your students and the amount of time available for class instruction. How many outcomes can your students reasonably achieve during your course? (Source: Lowman, 1995)

***Anticipate students' questions about learning outcomes.*** Students may want to know why a particular learning outcome is being addressed or the importance of an outcome. When your students understand the short-term and long-term benefits of acquiring a particular skill or competency, they are more likely to try to achieve it. To reinforce the importance of learning outcomes, mention them throughout the course. (Source: Race, 2007)

## Defining and Limiting Course Content

***Review your preliminary list of topics and toss the excess baggage.*** Designing a course is somewhat like packing for a long trip. First, list everything that you feel might be important for students to know, just as you might pull out armloads of clothes and personal items for a trip. Then severely pare down the topics you have listed, just as you would limit yourself to whatever will fit in one or two suitcases. Research shows that including too much detail or too many topics interferes with students' efforts to learn the material. (Source: Bransford et al., 2000)

***Distinguish between essential and optional material.*** Divide the course concepts or topics into three groups: basic material that should be mastered by every student, recommended material that should be mastered by every student who is seeking a good knowledge of the subject, and optional material that should be mastered by students with special interests and aptitudes. Course sessions and exams should focus on the basic topics. Recommended and optional topics, labeled as such for students, can be included in class sessions, supplementary materials and resources, and readings.

***Draw a concept map.*** To help you determine which topics are most important, you can create a concept map, a chart that captures the central, major, and minor

concepts and the relationships among them. To draw a concept map, follow these steps:

- Write down all the ideas that seem important in the course.
- Reduce your list by circling the ideas that are most important.
- Write each of the circled concepts on a sticky note.
- Sort the sticky notes into meaningful clusters or groups.
- Name each cluster, and write each name on a sticky note.
- Arrange the cluster names (key concepts) in a way that is meaningful to you.

    (Sources: Amundsen et al., 2004; Donald, 2002)

***Emphasize the core concepts.*** For example, in engineering, as one professor points out, there are thousands of formulas, but all of them are variations on a small set of basic ideas or theories. In a single course, students might encounter a thousand equations. Rote memorization is futile because no one can remember that many equations. Instead, the instructor repeatedly emphasizes the fundamentals by showing students how the thousand equations are embedded in a dozen basic ones.

***Focus on the "big idea."*** A big idea is a concept, theme, theory, issue, underlying assumption, or critical principle that gives meaning to an array of discrete facts, topics, inquiries, or issues. In different fields, examples of big ideas are the challenge of defining justice, the distinction between the letter and the spirit of the law, adaptation, and the need for communicators to focus on audience and purpose. (Source: Wiggins and McTighe, 2005)

***Stress the classic issues, or the most enduring values or truths.*** Often the most interesting issues and themes for undergraduates are those that first attracted you to the discipline. You might also focus on the most critical skills or ideas, and drop the rest. Or give special attention to important ideas that are usually hard for students to understand. (Source: McManus, 2005)

***Limit course content to five types of information.*** When reducing your preliminary list of topics, limit yourself to

1. key points and general themes
2. especially hard-to-understand material
3. important material that is not addressed in the readings or elsewhere

4. examples and illustrations
5. material of high interest to students

(Source: Wankat and Oreovicz, 1998)

***Include multiple perspectives and scholarship.*** A unit on the impact of World War II on the American economy, for example, could address the views and experiences of different ethnic and income groups. See Chapter 5, "Diversity and Inclusion in the Classroom."

***Select a manageable number of course topics.*** Experienced instructional designers recommend four to seven topics or issues for a semester-long introductory class. For example, in an introductory biology class, the principal topics might be (1) molecules, cells, and tissues, (2) cellular communication and hormone action, (3) human reproduction, (4) stem cells and human development, (5) the physiology of organ systems, and (6) organ dysfunction and disease.

## Structuring the Course

***Devise a logical arrangement for the course content.*** Material can be arranged chronologically, by topic or category, from concrete to abstract or vice versa, from theory to application or vice versa, or by increasing level of skill or complexity. Here are some other organizing principles (Bergquist and Phillips, 1977, pp. 146–149):

*Micro/macro*: Begin by describing a large complex phenomenon (macro perspective) or by offering a detailed analysis of one aspect of the phenomenon (micro perspective). Establish a broad general base of knowledge and information (macro), or focus on a specific event or concern (micro).

*Distal/proximal*: Begin by presenting an immediate, urgent problem (proximal perspective) or by describing a phenomenon's origins, heritage, or context (distal perspective). Begin by discussing the relevance of a topic (proximal) or by presenting a historical or theoretical perspective (distal).

*Phenomenon/structure*: Emphasize description and analysis of unique and significant events, people, or ideas (phenomenon) or emphasize description and analysis of theories, themes, and universal applications (structure).

Stark (2000) and Toohey (1999) offer additional patterns for ordering topics:

- how ideas have evolved chronologically
- how relationships occur in the real world
- how students will use the information in social, personal, or career settings
- how major concepts and relationships are organized in the discipline
- how students develop competencies (from prerequisite to novice to expert skill sets)
- how knowledge has been created in the field

Keep in mind that a structure that seems logical and clear to you (an expert) may not be the best way for a student (a novice) to learn the material (Ramsden, 2003). From a student's point of view, it may be preferable to begin the course with a topic that will generate confidence and interest in the material. Students tend to be more motivated to work hard when they succeed at the beginning of the term and when they can relate the new material to something they already know.

*Create a schedule.*  List all class meetings, accounting for university holidays, major religious holidays, breaks, and any college events that may preempt classes. Write in tentative topics and dates for exams. Keep in mind the rhythm of the term, and leave open at least part of the class before each exam to allow for catch-up or review. Allow extra time for complex or difficult topics. Schedule time during the middle of the semester for quick student evaluations of the course (see Chapter 52, "Early Feedback to Improve Teaching and Learning"). Also give special consideration to the first days of class (see Chapter 3, "The First Days of Class"), the meetings right before exams, and the last week of class (see Chapter 59, "The Last Days of Class"). You will want to include this schedule in your course syllabus (see Chapter 2, "The Comprehensive Course Syllabus").

*Select instructional methods for each class meeting.*  Instead of asking, "What will I do at each session?" focus on what you want your students to be doing, thinking, or feeling. Look at your learning outcomes and identify suitable classroom activities. (Activities discussed in different sections of this book include lectures, small-group discussions, independent work, simulations, debates, case studies, role-playing, and demonstrations.) For each topic, decide how you will introduce the material, present new concepts, have students apply what they have learned, and assess whether students can put into practice what they have learned. (Source: Bligh, 2000)

*Design in-class and homework assignments.* See Chapter 35, "Designing Effective Writing Assignments"; Chapter 37, "Homework: Problem Sets"; Chapter 21, "Learning in Groups"; and other chapters.

## Selecting Textbooks, Readings, and Course Materials

*Choose textbooks and reading assignments that reflect your learning outcomes.* McKeachie and Svinicki (2006) recommend that instructors select textbooks that generally match their own approach to the material. Students can be annoyed or confused if you repeatedly disagree with the text, and some will wonder why they were required to buy and read such an unsatisfactory book. To expose students to a range of perspectives, you can assign articles and shorter texts that espouse different points of view. And to help students understand that the textbook is not a final authority on a topic, you can pose occasional counterarguments and other interpretations. (Source: National Research Council, 1997)

*Avoid requiring students to purchase a textbook you have authored.* Although it may arguably be the best resource available, the fact that an instructor stands to benefit financially can be alienating to students, especially if the textbook is expensive, and can be seen as a real or perceived conflict of interest. If you decide to require students to purchase your textbook, consider making a contribution of the royalties to your financial aid office or other campus program or service.

*Consider a range of criteria in selecting textbooks.* If several textbooks are appropriate to your course, use the following criteria to select among them (adapted from Dake, 2007; Forsyth, 2003; Lowman, 1995; National Research Council, 1997; Robinson, 1994):

- content: accuracy, currency, coherence, and clarity
- scope and sequence of topics (organization of material)
- level of difficulty and interest for students (challenging but not too difficult)
- conceptual orientation and approach to the subject matter
- availability of alternative media formats for students with disabilities
- quality of writing
- pedagogical design (clear headings and subheadings, chapter previews and summaries, review questions, glossaries, and so on)
- cost (paperback instead of hardback; a less expensive book if it is of comparable quality)

- environmental impacts (use of processed chlorine-free paper; publisher's participation in green press initiatives)
- reviews by faculty who have used the textbook (published book reviews and posts on Web sites or listservs of professional associations; ratings on book-seller Web sites and the Faculty Center (www.facultycenter.net), which has information about textbooks; comments from colleagues)
- opinions of a sample of students after they take a look at the books you are considering

More detailed lists of criteria are offered by Altman, Ericksen, and Pena-Shaff (2006); Landrum and Hormel (2002): and Payne (2003).

***Assign a mix of texts and articles, including some current items.*** Advanced courses typically include journal articles, essays, and research reports. But students in introductory courses should have an opportunity to read at least a few recent pieces.

***Be mindful of the high cost of textbooks.*** Textbook prices increased by 6 percent a year between 1987 and 2005 (Government Accountability Office, 2005). Some campuses have started book-swapping programs and textbook rentals; others have asked faculty to think twice before switching textbooks or assigning a new edition.

You can help your students in several ways (adapted from Boyd, n.d.; listserv discussions from PsychTeacher and POD):

- Place your textbook orders early. Early orders allow your local bookstores to buy back used books from students at higher prices and keep those books for the next semester (rather than shipping the used copies to a consolidator).
- Be cost-conscious when you prepare your required reading list.
- Retain textbooks for longer periods (not immediately switching to a new edition), and use the same text for multiple courses, if possible.
- Make reading lists available, with the ISBN for books, well before the term begins so that students can do some comparison shopping.
- Adopt lower-priced alternatives: no-frill textbooks, free online textbooks (such as Wikibooks or through Creative Commons), and resources such as the Million Books Project (led by Carnegie Mellon) and the Global Text Project (electronic texts for students in the developing world).
- Avoid "bundled" books (with extras like CDs or workbooks) and custom textbooks.
- Give students advice about online shopping for textbooks. Let them know about comparison book sites to find the cheapest version of a textbook

(searching by "used textbooks"). Remind them of the cautions in purchasing books online (such as wrong editions, delays in receiving books, difficulties in making returns).

- Let students purchase an earlier and less expensive edition of the textbook or a similar cheaper textbook of their choice (but make students aware that they will be responsible for matching their chosen text with the required reading assignments).
- Indicate in your syllabus whether you will be using the text again the next time you teach the course so that students will know they can get a higher price on reselling their book.
- Donate textbooks to your campus library.

***Compare the costs and benefits of electronic and paper textbooks.*** Electronic textbooks (e-books), sold on compact disc, are cheaper, lighter, and more environmentally friendly than paper textbooks. Because the text is online, students can conduct keyword searches, adjust the display format, and use text-to-speech software. E-books can be read on special e-book readers, computer screens, mobile phones, or PDAs.

Many e-books also include simulations, audio and video clips, links, and chat tools. One disadvantage is that students cannot sell back their e-books at the end of the term. Another is that some publishers restrict use through expiration dates, limits on the number of page views, and security features that limit use to only one computer. Research shows no difference in course grades between students who use textbooks and those who use e-books, but students complain that e-books can be inconvenient and hard to read for long stretches. (Sources: Nelson, 2008; Shepperd et al., 2008)

***Consider coursepacks.*** Coursepacks are photocopies of copyrighted journal articles, book chapters, and other materials. Coursepacks can be the sole reading material for a class or can supplement the textbook. For advanced classes, some faculty create coursepacks in order to include new research, partial outlines of course lectures, or diagrams that students complete during class. Because coursepacks have little resale value, some instructors do what they can to contain the cost of their coursepack.

If you are preparing a coursepack, here are some tips:

- Carefully select and limit the number of items.
- Include a table of contents or an overview that provides a context for the readings; without guidance students may see only a jumble of articles.
- If appropriate, include a glossary of technical terms and concepts.
- Secure all copyright permissions before duplicating the coursepack.

A note on using copyrighted material: Under "fair use" provisions, educators can use copyrighted materials for instructional purposes, but the conventions for acceptable fair use are complicated. For help in making judgments about fair use, consult your campus librarians and your library's Web site. The Web site of the University of Minnesota Library offers a Fair Use Analysis Tool as well as scenarios of what is and is not fair use for reproducing digital photographs of works of art, audiovisual works for class presentations, electronic reserves, course packs, copies of your own articles, copies of student papers, downloads from the Web, and several other kinds of reuse. The American Library Association Web site (www.ala.org) also has helpful information about copyright issues including a slide rule for copyright advice.

***Plan how to handle errors in the textbook.*** Despite the author's and publisher's best intentions, errors will creep into textbooks, study guides, and workbooks. Researchers report that errors can have a large negative impact on student learning. Keep a list of the errors that you identify, and encourage students to spot them as well. Send the list to the publisher's representative or author. In some cases, the publisher may make corrections and send an online version of, say, the study guide. If immediate corrections from the publisher are not possible, make the correction yourself and place it on the course Web site. If students find errors and the publisher responds, be sure to share the letter with students. (Source: National Research Council, 1997)

***Prepare a set of tips for students on how to use the textbook and readings.*** First-year students and students in introductory courses may benefit from the following advice:

- Study the assigned reading before class.
- Take notes on key points and jot down any questions that come to mind.
- When reading an assignment, stop every half hour or so to summarize what you have read.
- Bring your questions about the readings to class.
- When you are not sure you have understood the assigned text, look at the supplemental texts to see how they present similar topics.
- For homework problems: study and review the worked-out examples before you tackle the assignment.
- Review the readings regularly throughout the term rather than cramming before the test.

  (Source: Boyd, n.d.; National Research Council, 1997)

*Be aware of your students' workload.*  Most colleges expect students to spend two to three hours on outside work for each hour in class. For full-time students taking fifteen hours a week of classes, that would mean devoting thirty to forty-five hours a week to studying, reading assignments, problem sets, projects, and papers. But in one survey (National Survey of Student Engagement, 2007), full-time students reported spending only about thirteen to fourteen hours a week preparing for their classes; many hold part-time jobs and have family or other responsibilities. You might want to discuss this topic with your students and share with them research (Stinebrickner and Stinebrickner, 2007) that shows studying an extra hour a day is estimated to have the same effect on grades as a five-point increase in ACT score. As Laurillard (2002) notes, students need realistic estimates of how much time is appropriate for them to spend on assignments, readings, and study groups.

## Learning Management Systems and Collaborative and Learning Environments

*Find out which system your campus is using.*  Most colleges and universities use either a commercial software, a homegrown application, or an open source solution for their learning and course management system. Examples of commercial software include Blackboard Learning System (which purchased WebCT in 2006), eCollege Course Management System (purchased by Pearson in 2007), Desire2Learn Learning Environment, and Angel. Examples of open source solutions (which allow users to share tools and are called "collaborative and learning environments") include Sakai (a collaboration begun by University of Michigan, MIT, Stanford, and Indiana University), and Moodle (distributed under one of the Open Source Initiative approved licenses).

*Become familiar with features of your campus's system.*  The following kinds of tools may be available as part of your system (adapted from www.edutools.com):

- communication (discussion forums, file exchanges where students can submit papers and assignments online, e-mail, class lists, real time chat)
- productivity (calendars, announcements)
- student involvement (sites for collaboration and group work, community networking, student home pages)
- administration (authentication, authorization, integration with campus registration and enrollment systems)

- course delivery (tests and quizzes; online marking tools, online grade books, student tracking)
- content development (accessibility, document uploads such as class notes, PowerPoint presentations, course readings)

***Let students know how you will be using the system.*** Will the system be the primary vehicle for course announcements? Should students sign up for RSS feeds? Are students required or encouraged to participate in online discussion forums? When will PowerPoint notes be posted?

## Setting Course Policies

***Extra-credit assignments.*** If you are offering extra-credit assignments, announce them in class so that all students will be aware of the option. Some faculty allow only students who are doing satisfactory work (C or higher) on the regular assignments to undertake extra-credit tasks. Here are some examples of extra-credit options:

- Offer a set number of extra-credit points for a specified activity (such as attendance at a professional conference or submission of a book review in the topic area).
- Offer extra credit for completing problems in the textbook that were not assigned as homework.
- Offer extra credit for keeping a reading journal that documents each course-related article, book, or monograph read in addition to the assigned readings. Each journal entry should include the title, author, date, and source as well as the student's comments on the piece. (Faculty typically spot-check the journals weekly and read them at the end of the term.)

***Attendance.*** Let students know in the syllabus and on the first day of class that you expect them to come to class regularly. Do your best to make class time worthwhile—a time when real work takes place. Students are also more likely to attend if they know that exams will include items that have been discussed in class (and not mentioned in the readings). Some faculty use attendance as a factor in grading, but many do not. If you want to reward good attendance, let students know how you will determine whether they come to class. Rather than penalize absences (by subtracting points), reward perfect or near-perfect attendance (by giving bonus points); the numerical result will be the same, but students feel better

about the latter. Set a good example by arriving early to class, starting and ending on time, and staying late to answer questions.

***Makeup exams.*** For advice on offering makeup tests see Chapter 40, "Allaying Students' Anxieties about Tests."

***Late work.*** Some faculty refuse to accept late work and give students an F on the assignment. Other faculty impose various kinds of markdown penalties. See Chapter 43, "Grading Practices."

***Grading.*** See Chapter 43, "Grading Practices."

***Classroom Behavior.*** See Chapter 4, "Classroom Conduct and Decorum."

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# The Comprehensive Course Syllabus

A course syllabus, placed on the Web or handed out on the first day of class, gives students an immediate sense of what the course will be about, what they will learn, and how their academic progress will be evaluated.

All courses can benefit from a syllabus. The act of preparing a syllabus helps you organize your course and set the schedule. You can also describe to students what they will need to know and do to succeed in your class.

## General Strategies

***Understand the multiple roles a comprehensive syllabus plays.*** Experts have identified various purposes a syllabus can serve: an implicit teaching-learning contract, outlining the reciprocal roles and responsibilities of students and the instructor; a diagnostic tool, helping students assess their readiness for a course by identifying prerequisites and required levels of academic preparation and describing workload and course challenges; an unambiguous source of policies and procedures for course operations; a learning tool, piquing students' interest and providing them with the information, resources, and links they will need to succeed in the course; and a set of promises—what the instructor promises students will learn and the activities students will undertake to fulfill those promises. (Sources: Bain, 2004; Collins, 1997; Eberly et al., 2001; Grunert O'Brien et al., 2008; Lang, 2008; Parkes and Harris, 2002)

***Look over the syllabi of other faculty members.*** If your department does not have a standard format, ask to see your colleagues' syllabi. Other sources of samples include George Mason University's Syllabus Finder, and the University of Texas's World Lecture Hall. Brown University and the University of Minnesota offer online syllabus construction workshops and Honolulu Community College has made syllabus templates available online. In addition, professional associations in your field may have compiled syllabi for introductory and advanced courses.

***Anticipate the general questions that will be in the minds of students.*** What will your students want to know about your course? The three most common concerns of students on the first day of class are likely to be, Will I be able to do the work? Will I like the professor? Will I get along with my classmates? Students may also be asking themselves, Why should I take *this* course? How does this course fit into the larger curriculum or the general education program? Where does it lead intellectually and practically? (Source: Rubin, 1985)

***Keep the syllabus flexible.*** Some classes move more slowly than others. You might anticipate such variations by indicating the topics week by week rather than session by session. Or you might plan to issue a revised schedule midway through the term to account for students' heightened interest in certain topics. Let students know that the course schedule may change, but that the dates for exams and deadlines for assignments are fixed.

***Post the syllabus online as early as possible.*** Students with disabilities may require extra time to convert the readings into alternative media formats.

## Creating a Syllabus

***Include more rather than less material.*** Your syllabus need not include all the components mentioned here, but experienced faculty agree that a comprehensive syllabus can be a valuable learning tool for students and can lessen their initial anxieties about the course. Be careful, however, not to include so many details about rules, contingencies, and dos and don'ts that the syllabus loses its intellectual focus. (Sources: Collins, 1997; Garavalia et al., 1999; Grunert O'Brien et al., 2008)

***Use a simple layout for the hard-copy syllabus handout.*** Use headings, text boxes, bulleted lists, and graphics to highlight important information. Some faculty have found that distributing a one-page graphic syllabus to accompany a comprehensive syllabus helps students understand the flow of the course and the logical and chronological relationships among the topics. Other faculty have replaced their text syllabus with an entirely graphic representation of the course. (Source: Nilson, 2007)

***Provide basic information.*** Include the name of the university, current year and term, the course title and number, the number of units, and the meeting time and location. Indicate any course meetings that are not scheduled for the