

PREPPING: PLANNING TO TEACH A COLLEGE CLASS

Consider how an ordinary day is put together. . . . whether it is crowded or empty, novel or routine, uniform or varied, your day has a structure of its own—it fits into the texture of your life. And as you think what your day will hold, you construct a plan to meet it. What you expect to happen foreshadows what you expect to do.

—George A. Miller, Eugene Galanter, and Karl H. Pribram
Plans and the Structure of Behavior (1960, p. 5)

Preparation to teach psychology begins many months before that first day of class. This planning must take into account not only the nature of the class to be taught and the kinds of students who take it but also the purposes of the class itself. All who teach must, before they walk to the classroom's dais on the first day of the term, identify and prioritize the goals they will attempt to reach, including their broad objectives and their more narrow specific aims. They must also decide how they will teach by selecting the techniques they will use to help their students reach their learning goals. They must plan discussions, write lectures, select readings and texts, design assessments, and sequence the topics they hope to cover. This planning comes to an end on the first day of class when these plans, and the syllabus that details them, are shared with students.

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The nightmare always begins the same way. I stand at the lectern in a teaching auditorium I have never seen before. Countless students pack the vast room, sitting in hundred-seat rows that stretch back into the room's dark, distant recesses. I lean forward, clear my voice in the microphone, and the students fall silent as I begin to welcome them to this, the first day of class. But before I am halfway through my first sentence, I realize that I have inexplicably forgotten to prepare any remarks. With no notes on the podium that provide an eloquent overview of the course's purposes and procedures, I decide to skip the oration and just review the syllabus.

My confusion becomes panic when the empty desk by my side tells me that, despite an unbroken record of 25 years of dutifully meeting each first class with a carefully prepared syllabus, I forgot to make one up for this class. So I take a deep breath and steel myself to the task of bluffing my way through 30 minutes reviewing course goals and procedures until the awful truth becomes apparent to me: I have no idea what course I am supposed to be teaching.

The nightmare's lesson: Prepare. Indeed, psychologists' teaching-related thoughts often revolve around "prepping": I haven't finished prepping that class yet. Is that course a new prep for you? I cannot go to that colloquium—I have to prep for a class. How many preps do you have this semester? I need to have a few minutes of quiet so I can prep. Apparently professors are so busy preparing that they do not even have time to say the whole word.

Teaching psychologists' near obsession with preparation reflects the thoughtful nature of teaching. As Woodworth (1958) explained some time ago, most complex actions are organized in two stages: the preparatory stage and the consummatory, or behavioral, stage. During the preparation stage, people create the organization for their actions: They identify their objectives, set their goals, develop strategies, make plans, and select their tactics. All this planning, as Miller, Galanter, and Pribram (1960) explained, provides the blueprint for specifying "the order in which a sequence of operations is to be performed" (p. 16) and in doing so, structures actions effectively. Armed with a plan, individuals no longer react to situations; rather, they proactively control situations so that their expectations are affirmed.

Miller and his colleagues (1960) pointed out that "any Plan complicated enough to be interesting will include steps that are executed for no other reason than to pave the way for what we really want to do" (p. 159). For teaching, these steps include setting the goals for a class—the broad, general outcomes as well as the more specific outcomes that are more easily documented when the term comes to an end. Planning also involves identifying the paths to follow in reaching those goals. Will you lecture or lead discussions? Will you give tests and of what type? Will you use a textbook or a collection of readings? What topics will you cover and in what order? Will you assign papers and projects? These sorts of questions must be considered before class even meets, making preparation the first step on any journey into teaching.

GOALS TO SEEK

A professor's course planning includes the formulation of general goals for the class—for example, to instill knowledge, create critical thinkers, hone research skills, transform students into scholars—as well as the spec-

ification of specific, content-based goals such as to “teach students that correlations do not imply causality,” “help students learn to respond in positive ways to people who are different from them,” “encourage an attitude of healthy skepticism,” and “write all research papers in APA style with ragged right-hand margins.” This planning helps professors cultivate and maintain a thoughtful, coherent approach to their teaching. Like a corporation’s mission statement, a set of strategies gives purpose to the small day-to-day actions that, although insignificant in isolation, sum to create an overall approach to teaching. Such an inclusive perspective provides an antidote for the relentless drift toward meaninglessness that can overtake action. The original purpose of an act can change over time until its original purpose is replaced by some new, and less coherent, understanding (Vallacher & Wegner, 1987). The professor, reading over material that must be covered in tomorrow’s lecture, may forget she is “prepping a class” and instead think she is “just reading.” The professor who stops on the street to answer a student’s question may think he is wasting time when, in fact, he is teaching. If people enter a situation without a conceptualization of action in mind, their actions are easy targets for reinterpretation. Before they know it, they become test givers, attendance takers, experts, disciplinarians, or speakers, but not what they intended to be: teaching psychologists.

Goals also sit atop a pile of factors that psychologists have identified in their studies of motivation and performance. People working at jobs ranging from hauling logs to generating creative ideas to proofreading were found to be unproductive if their goals were vague or absent but productive if they were laboring to attain clearly established goals (Austin & Vancouver, 1996). Students tend to be more interested in course materials and their performance improves when they can identify the goals they are seeking (Elliot, 1999; Husman & Lens, 1999). Individuals experiencing interpersonal and psychological difficulties cope more effectively when they can identify the goals they hope to achieve and the paths they can take to reach these goals (Snyder, Cheavens, & Simpson, 1997). These findings suggest that students and their professors will perform better if they know what goals they are seeking and whether those goals are important to them (Kleinbeck, Quast, & Schwarz, 1989). This chapter therefore reviews several models of goals in higher education and includes ones that vary in terms of specificity; some focus on the specific content to be examined in the course, whereas others include a wider range of outcomes when specifying the purposes of college teaching.

Bloom’s Taxonomy: Global Cognitive Outcomes

In the late 1940s Bloom and other educational psychologists began formulating a classification of “the goals of the educational process”

(Bloom, Englehart, Furst, Hill, & Krathwohl, 1956). Bloom and his colleagues developed taxonomies in three domains: affective (emotions, attitudes, appreciations, values, feelings); psychomotor (physical skills such as coordination, athleticism, dance, body awareness); and cognitive (thinking, reasoning, evaluating). However, his hierarchical model of the cognitive domain is what so frequently guides educators' attempts to identify the critical goals they seek in the classroom. The cognitive taxonomy's six levels range from low to high in terms of cognitive complexity, from simple recall or recognition of facts to evaluation (see Table 1.1). Bloom's model, despite advances in our understanding of the actual relationships among cognitive skills and domains (e.g., Anderson & Sosniak, 1994), offers a useful way of categorizing learning goals.

Knowledge

Many college classes focus on transmitting basic information about the discipline's facts, concepts, theories, researchers, and theorists to the student. Knowledge, as the lowest level of learning, involves only the ability to recall the information and not the use of the information to solve problems or the integration of information with other knowledge. When

TABLE 1.1
 Bloom's Taxonomy of Educational Objectives (Bloom et al., 1956)

Level of learning goal	Sample learning objective
Knowledge: remembering factual information, such as names, dates, studies, concepts, theories, and researchers	List the six levels described by Bloom's taxonomy, in order from least to most complex
Comprehension: understanding the meaning of an idea, concept, theory, or procedure	Generate five verbs that describe the learning outcomes associated with each of the six stages of Bloom's taxonomy
Application: describing the specific, concrete implications of a concept or idea in a new context or situation	Give an example of a test question that measures learning at the application level of Bloom's taxonomy
Analysis: identifying the elements of a complex concept and identifying the interrelationships among these elements	Compare and contrast Bloom's taxonomy and Anderson's revised model of learning goals (Anderson & Sosniak, 1994)
Synthesis: integrating concepts and information to yield new insights or structures	Use recent findings in the field of cognitive science to update and refine Bloom's original taxonomy of educational objectives
Evaluation: gauging the value, quality, usefulness, and worth a concept, theory, set of works, and so on	Critique Bloom's taxonomy in terms of the key characteristics of a good theory (parsimony, disconfirmability, coherence, consistency with empirical findings)

professors explain that the first laboratory in psychology was founded in 1879, that many theorists believe five dimensions form the bedrock for individual differences in personality, and that R^2 indexes the percentage of variance accounted for in a multiple regression, they are stressing knowledge. When professors hand out study sheets before the first exam that list key terms, dates, studies, theories, and theorists, they are stressing the goal of increased knowledge.

Comprehension

Whereas knowledge goals can be attained through memorization, comprehension requires more than just recall of data from memory. When students comprehend a concept or idea, they grasp its basic meaning and interpretation. Instead of just naming the three parts of personality described by Freud, students who understand the tripartite theory of personality can describe the basic nature of each component, the dynamic interconnections among the components, and the implications of strengths and weaknesses of each component for overall psychological adjustment. When students can interpret charts and graphs, translate text material into symbolic forms such as equations or predictions, defend the methods used in a particular study, or poke holes in the logic of a theory, then they demonstrate comprehension rather than knowledge.

Application

When professors require their students to use the course's theories and concepts—to solve practical problems, to identify avenues for future research, to explain unexpected findings, and so on—they are stressing applications over simple knowledge or comprehension. Application questions are particularly important in psychology, for psychology's applied fields are often grounded in the theoretical substrates of more basic areas of knowledge. Application questions also require more creativity from students, for they must move from the conceptual and general to the concrete and specific. Knowing the names of the eight stages of Erikson's theory of psychosocial development may be sufficient for them to demonstrate knowledge, but to demonstrate application they need to use this information in some way—say, by specifying how therapeutic interventions should be structured for individuals at each of the eight stages.

Analysis

When students analyze concepts, ideas, issues, or phenomena, they must break them down into their component parts while recognizing the interconnections among those parts. Such analysis, according to Bloom, requires an understanding of the structure of knowledge, in addition to an understanding of the content of the knowledge. The classic essay question

that begins “compare and contrast” is an analysis question, for it asks the learner to take at least two concepts, break the concepts down into their basic elements, and then compare these elements with one another to determine areas of similarity and difference.

Synthesis

Professors who hope that students grasp the larger significance of the material presented—the field’s outlook—are pushing for synthesis: the ability to put parts together to form a new whole. One of the most traditional ways to facilitate the attainment of this goal is to require students develop a paper or project that integrates material from various segments of the course. Theses and dissertations in psychology represent the epitome of synthesis, for students must integrate vast amounts of theory and prior evidence in a coherent, organized framework.

Evaluation

Bloom, anticipating work dealing with personal commitment to interpretations of complex ideas (e.g., Perry, 1970), argued that one of the most advanced forms of learning involves the capacity to judge the value of course material. Bloom was careful to note, however, that he was concerned with evaluations that are based on established criteria, rather than personal likes and dislikes. The student who answers the question, “What is your evaluation of Skinner’s theory of behaviorism?” with “I don’t like it much,” is not demonstrating a sophisticated level of educational attainment. Rather, the theory must be evaluated by arguments that support the position taken, as well as by arguments that refute alternative interpretations. Bloom placed such learning outcomes at the top of the cognitive hierarchy because they require elements from each of the other categories and they demonstrate personal commitment to a viewpoint.

Angelo and Cross’s Model of Teaching Goals

Angelo and Cross (1993) surveyed a range of diverse resources as they developed their model of basic teaching goals in higher education, including Bayer’s (1975) national survey of instructional goals, Bowen’s (1977) classification of the basic individual and social values associated with higher education, Bloom et al.’s (1956) taxonomy of educational outcomes, and a number of earlier studies of college outcomes (e.g., Astin, 1977, 1993; Chickering, 1969; Feldman & Newcomb, 1969). They noted that these sources, despite their varying emphases, repeatedly stressed a common core of outcomes that included higher order thinking skills, basic academic success skills, discipline-specific knowledge and skills, liberal arts and academic values, work and career preparation, and personal development.

Angelo and Cross (1993) developed a series of items to assess a professor's emphasis on these types of educational outcomes, and they administered their inventory to faculty at 2-year and 4-year colleges. They then used cluster and item analysis to fine-tune the inventory and to confirm the clusters of outcomes that they had identified in their review of the literature. They then developed the Teaching Goals Inventory (TGI) to measure the six clusters of outcomes summarized in Table 1.2. Respondents complete the TGI by rating the importance of each goal on a scale from "essential" to "unimportant."

Angelo and Cross (1993) surveyed more than 2,000 professors at community colleges and 4-year colleges to determine which goals were considered "essential." The professors in their study emphasized higher order thinking skills, with discipline-specific knowledge coming in a close second. These professors also rated personal development and work-career preparation as collateral goals, with liberal arts and basic academic skills receiving relatively fewer endorsements as essential. A few more of the professors in 4-year schools rated goals pertaining to increased appreciation of the liberal arts as more essential than did professors at community colleges, who tended to stress personal development, work and career preparation, and the development of basic skills. They also found that the majority of these professors generally agreed in their ratings of the specific goals that

TABLE 1.2
Angelo and Cross's (1993) Six-Factor Model of Teaching Goals

Goal	Description
Higher order thinking skills	Analyzing and synthesizing information; rationality; identifying solutions to new problems; creativity; critical thinking
Basic academic success skills	Improving concentration, memory; listening, speaking, reading, writing, and math skills; development of study skills
Discipline-specific knowledge and skills	Knowledge of terms, facts, concepts, perspective, values, methods, and theories specific to the subject; preparation for advanced study; ability to use tools and technologies
Liberal arts and academic values	Appreciation of the arts, humanities, and sciences; development of a historical perspective; recognition of role of science and arts in society; multiculturalism; ethics
Work and career preparation	Ability to work with others; development of management and leadership skills; commitment to personal achievement and skilled performance
Personal development	Development of a sense of self-worth and personal responsibility; respect for others; commitment to honesty; capacity to make wise decisions

are the least and most essential to teach. The three top goals, all rated by more than 50% of both community college professors and 4-year college professors as “essential,” were “develop ability to apply principles and generalizations already learned to new problems and situations,” “learn terms and facts of this subject,” and “develop capacity to think for oneself.” The least important goals, rated as essential by fewer than 10% of the faculty, were “develop a commitment to exercise the rights and responsibilities of citizenship” and “cultivate physical health and well-being” (Angelo & Cross, 1993, pp. 399–406).

What were psychologists’ top three goals? Angelo and Cross did not single out psychologists in their analyses, but they did differentiate between social scientists and professors in other disciplines such as the natural sciences, business, arts, and so on. This analysis indicated that social scientists’ ratings matched the overall ratings reported by the professorate. Angelo and Cross (1993, pp. 20–21) discovered that 57% of professors in the social sciences they surveyed rated “develop ability to apply principles and generalizations already learned to new problems and situations” as an essential goal. The second and third highest rated goals were “learn to understand perspectives and values of this subject” (52%) and “develop capacity to think for oneself” (50%). Social scientists, as a group, tended to be more varied in their rankings of the various outcomes in comparison to professors in the arts, humanities, and sciences. More than 75% of the professors in the arts, for example, felt that the development of an appreciation of art was an essential goal. More than 80% of the math professors felt that the development of problem-solving skills was an essential goal. But only 50–57% of the social science professors agreed in their ratings of the goals just mentioned, suggesting that social science professors’ courses do not converge on a single set of shared outcomes.

Angelo and Cross’s (1993) survey also indicated that professors remain more concerned with their own discipline’s specific forms of knowledge than general academic and scholarly skills such as writing and mathematics. For example, even though the “Writing Across the Curriculum” movement stresses the importance of teaching students to express their knowledge of their major field through writing, most professors “still regard the improvement of writing as the responsibility of English departments” (p. 368).

Psychology’s Goals

Angelo and Cross’s conclusions about professors’ goals are generally consistent with analyses that have focused on psychologists’ goals in their classes. Although psychology’s lack of any widely shared paradigm and its practitioners’ penchant for specialization ensures a high level of disagreement about the field’s ultimate purposes, the three sets of educational out-

comes noted in Table 1.3 are those most widely accepted across the field (Kimble, 1984; Levy, Burton, Mickler, & Vigorito, 1999; McGovern, Furumoto, Halpern, Kimble, & McKeachie, 1991). Many psychologists would take exception to this list—suggesting critical goals that should be added or targeting some that should be deleted—but it is generally consistent with the spirit of prior reviews of the psychology undergraduate curriculum, such as the APA Committee on Undergraduate Education’s 1991 report (McGovern et al., 1991), the Quality Principles generated by conferees at the 1991 National Conference on Enhancing the Quality of Undergraduate Education in Psychology (McGovern, 1993; McGovern & Reich, 1996),

TABLE 1.3
Three Sets of Goals in Psychology Classes

Goal	Subgoals
Knowledge base	<p>Content: a conceptual framework for learning significant facts, findings, theories, and issues in psychology</p> <p>History: knowledge of evolution of psychology's theories and systems</p> <p>Methods: understanding of research procedures, measurement, and statistics</p> <p>Interdisciplinary context: recognition of connections between psychology and other disciplines</p>
Intellectual skills	<p>Thinking skills: proficiency in critical thinking, evaluating research methods, thinking scientifically about behavior and mental processes, basing judgments on psychological theory and research</p> <p>Language skills: comprehension of psychological texts and scientific reports, skill in speaking and writing</p> <p>Research and technological skills: ability to conduct (and critically evaluate) research and statistical analyses</p> <p>Information-gathering skills: ability to locate and synthesize information needed</p>
Practical skills and personal development	<p>Applied skills: proficiencies that are useful in psychology-related jobs and careers (e.g., testing, management, counseling)</p> <p>Self-improvement: improved well-being, happiness, motivation, self-control, stress management, creativity, and so on</p> <p>Interpersonal skills: enhanced capacity to relate well with, appreciate, and respect other people</p> <p>Interpersonal sensitivity: increased sensitivity to diversity and individual differences</p> <p>Ethics: understanding of the role of ethical values in scientific and personal context</p>

and Halpern and colleagues' (1993) analyses of outcomes for psychology majors.

Knowledge Base

Most psychologists would agree with McGovern et al. (1991) that "there are significant facts, theories, and issues in psychology that a student needs to know" (p. 601). Although the core content changes over time as the discipline changes, the emphasis on teaching that core to students does not. This agreement, however, does not extend to other questions of content such as: What topics constitute the core of psychology: biopsychology, learning, cognition, social psychology, developmental psychology, personality, abnormal psychology, measurement? Should professors devote significant portions of the course to the history of the field? Should the connections between psychology and (a) other sciences and (b) the humanities be covered? The changing nature of the discipline's knowledge base and the lack of consensus on these issues support a focus on creating a foundation for lifelong learning rather than a focus on the accumulation of isolated facts and findings.

Intellectual Skills

Students need to know things like "Theory Y predicts this will happen" or "Such and such experiment supported this hypothesis," but they also need to be capable of *doing* psychology. Students need the intellectual skills required to generate theories, do research, communicate ideas and information to others, evaluate conclusions statistically, and locate the information they need for all these intellectual pursuits. As Sternberg (1999c) suggested, psychology's basic content "will change greatly over the years, but the tools for thinking critically and creatively about psychology will not" (p. 38). Of the 10 specific outcomes specified in the Quality Principles, half focus on intellectual skills, including the ability to think scientifically, critique research findings, communicate effectively, and use psychological theory and research when making decisions (McGovern & Reich, 1996).

Practical Skills and Personal Development

Psychology is both a basic science and an applied science. Although its courses often stress fundamentals of the field and basic intellectual skills, much of psychology's content can be applied to oneself, one's relationships, and one's career (Grasha, 1998; Quereshi, 1988). At the *personal level*, studying psychology often helps people better understand themselves—and their problems. Courses like personal adjustment and stress management address the goal of self-improvement explicitly, but even the most basic of psychology courses will yield ideas that have personal implications. At the

value level, the field of psychology openly examines important contemporary issues, including racism, sexism, ethics, social policy, and political values. A course in psychology teaches not only psychological facts but also interpersonal sensitivity, respect for diversity, appreciation of individual differences, and ethical decision making. And at the *practical level*, psychology courses often seek to apply the field's theories, methods, and findings to industrial, organizational, educational, judiciary, and therapeutic contexts. Courses that deal with interviewing, testing, counseling, and substance abuse are devoted primarily to practical applications of psychology, as are community-based courses such as fieldwork placements and service learning (Levy et al., 1999; McGovern & Reich, 1996).

Prioritizing Goals

Different professors emphasize different goals in their teaching. Professor A may do all she can to impart content to her students; when the term ends she hopes they will be familiar with the basic assumptions of the field's theories, theorists, and major findings. Professor B may be more interested in teaching his students the analytical and methodological skills of the field. He hopes that successful students can “do” things when they finish the course. Professor C may insist that her students learn to think critically, and she may let students sharpen these skills by debating controversies. Professor D may want students to apply material in their own lives. Rather than just read about the topics and methods, D wants his students to recognize the extent to which their own lives are shaped by factors discussed in class. Professor E may share the goals of A, B, C, and D but also want students to apply an academic field in a practical pursuit, such as a business enterprise. These professors' approaches, although very different in their emphases, are nonetheless consistent with a subset of the goals specified in Table 1.3. Indeed, the guarantee of academic freedom ensures that each scholar can pursue his or her own interests and teach those interests in his or her own way—at least, within the constraints of the department's curriculum policies (Levy et al., 1999).

Overall, however, applied goals tend to get less attention in the curriculum, particularly at the undergraduate level. Whereas applied graduate training programs focus on the development of skills needed in mental health treatment facilities, community agencies, corporate settings, and so on, undergraduate courses focus more on psychology's knowledge base and helping students develop their intellectual skills (Belar & Perry, 1992; Miller & Gentile, 1998). These priorities are not, however, always shared by students. Students, more so than faculty, expect that their course work will give them useful, practical skills that can be applied in a profession—with a particular emphasis on a mental health setting (Brown, 1980; Malin & Timmreck, 1979; McGovern & Hawks, 1986). McGovern and Hawks

(1986) documented this disparity by asking students and faculty to rate the importance of goals like those summarized in Table 1.3 on a scale from 1 (not at all important) to 7 (extremely important). They found that psychology faculty gave high ratings to such outcomes as learning the scientific principles of behavior, developing skills needed to evaluate psychological research, and using statistical methods. Students, on the other hand, stressed more immediately useful goals. They gave the highest ratings to these two goals: "get practical experience" and "help other people." They also gave higher ratings to such personal goals as improved relationship skills and skill at modifying their own behavior. When the faculty and students rated the importance of 40 courses, they agreed that core courses like experimental methods, statistics, history, and testing are needed for learning the scientific side of psychology. The faculty's list also included physiological psychology and learning, whereas the students' list included abnormal psychology. Similarly, when the American Psychological Association (n.d.) asked graduates from undergraduate programs to identify those courses that were the most useful to them in their current careers, these respondents named courses with practical content, such as courses in clinical and abnormal psychology. McGovern and Hawks (1986) suggested that this gap between professors' visions of their goals and students' expectations about their courses can be narrowed through academic advising and curriculum revision.

PLANNING THE CLASS

If the first step in prepping a class is the identification of goals—the knowledge base to build, the intellectual skills to foster, the personal development to actuate—then the second step requires identifying the means to achieve those ends. Indeed, when Stark, Lowther, Ryan, and Genthon (1988) asked faculty how they prepare for their classes, few of them said "I think deep thoughts about my general approach to teaching and learning" or "I ask myself 'What qualities should I build into my classroom to promote learning?'" Rather, they reported that they spent time reviewing the topics they would be covering and the materials that they would need for the teaching activities they planned. They also claimed that they considered the characteristics of the students who would be taking the class, as if to coordinate their planned teaching approaches with the students' abilities, goals, and needs. Pondering arcane questions about goals, long-term outcomes, and strategies is all well and good, but apparently professors cannot do it for too long, for they must get ready to teach the class.

Professors, like people in general, differ in their approach to making their plans (Karoly & Ruehlman, 1995). Some like to sketch out their plans in extraordinary detail, laying out each step along the way to the

final goal. Others, in contrast, prefer the flexibility of a sketchy plan or just a set of heuristic orienting principles. People also vary in how willingly they disclose their plans to others; some are “very cagey about announcing what their Plans are, whereas others feel quite free to describe them to anybody who inquires” (Miller et al., 1960, p. 121). Some, too, prefer to craft their own plans and will refuse to listen to the advice of others. Others seek out information about others’ plans and adopt them as their own if they deem them to be effective. But the complexity of the task facing the college professor, and the need for a syllabus that accurately describes the course’s elements, increases the need for an explicit plan of action for each course taught. This plan need not be extensive, but it must at least take into account the type of course being taught, the characteristics of the students who are likely to enroll in the class, and the teaching activities that will be enacted as well as the grading procedures to be implemented.

Consider the Class

When Perlman and McCann (1999b) reviewed the course catalogs from more than 400 psychology departments in colleges and universities, they generated a long list of common courses. The introductory course was universally offered, but abnormal, social, personality, learning, history and systems, tests and measures, cognitive, statistics, child, physiological, experimental, industrial/organizational, developmental, methods, adolescence, life span, human sexuality, counseling, biological psychology, adjustment, sensation and perception, comparative, special topics, field experience, independent study, and research participation courses appeared in many college catalogs. They also identified a number of laboratory co-requisites and newer courses, such as the psychology of women, the psychology of the African American, prevention of social and psychological problems, the psychology of substance abuse, and so on. These courses may all be part of the field of psychology, but the unique content, assumptions, emphases, and complexities of each make unique demands on the psychologists who teach them.

What Does the Course Cover?

Professors who teach a course regularly may not have to review the topics that they need to cover in their assigned courses for the coming term, but professors who are doing a new prep or who are teaching the course again after several years away from it need to refresh their memories of the course’s content. One obvious source to consult for information is the university catalog. These descriptions, in most cases, have been officially sanctioned by curriculum review committees, but they can also be out-of-date and inaccurate. Colleagues who have taught the course regu-

larly are another good source of information about content, and they can also clarify what the local mores are about veering away from the catalog's description. Textbooks are another key source of information about content, if the course is one of the more traditional psychology courses previously noted. A review of a few good textbooks can tell you far more about what the course usually covers than a colleague's old syllabus or a dusty description in your college's catalog.

Do You Have a Commanding Grasp of the Course's Contents?

Many professors remember their first term teaching with mixed emotions. They were thrilled to have completed their graduate training and to, at last, be professors. But in many cases they did not feel as though they were ready to teach it. First, many felt uncertain about teaching because they were not trained in teaching, *per se* (e.g., Benassi & Fernald, 1993; Meyers & Prieto, 2000). Second, even though they were well trained in their particular field, their expertise was often narrower in scope than the courses they would be teaching. Sure, they knew the topic of their dissertation better than anyone else, but did they know an entire term's worth of material in a course that surveys a larger topic in psychology? Preparation, then, requires a personal review of critical concepts, theory, and research in the area examined in the course; otherwise, one risks falling into the "staying one chapter ahead of them" trap.

Fortunately, professors are scholars, and so they are experts when it comes to building their own understanding of material. Some rules-of-thumb for this process include:

- Begin with very general (and lower level) treatments of each topic before moving to more specific and higher level treatments (Marques, 1999)
- Review several textbooks' analyses of each significant topic that you will cover to sharpen your understanding of theoretical concepts and empirical results
- Supplement this general understanding with more advanced sources, such as *Psychological Bulletin* and the *Annual Review of Psychology*
- Use original sources, scholarly monographs, and resources located on the Web to round out the review and resolve any questions not answered by more general sources.

Chapter 2's analysis of lecture development offers other suggestions to professors who must quickly transform themselves from novitiate into expert.

What Is the Level of This Course?

Psychology courses range from the introductory overview course that samples topics from the entire field to graduate seminars for students who

are working on their dissertations, and skilled professors strive to match their instructional and assessment strategies to the level of the course. Course level is often confounded with other influential variables such as course size, general goals, and student maturity, interest, and skill. A 100-level course is often a large-enrollment course, in contrast to a senior capstone course or a graduate seminar in some highly refined topic. Lower level courses are also more content focused than process focused, for in many cases they are prerequisites for advanced classes that assume students are familiar with basic content. When seniors sitting in an advanced psychology class raise their hand and ask, “What’s a correlation?” or “What is the difference between classical and operant conditioning?” or “What’s an independent variable?” their professor will likely wonder about the quality of the instruction these students received in the prerequisite courses. Course level also determines, in large part, the types of students who will enroll in the course. At many universities, introductory psychology is considered to be a first-year (i.e., “freshman”) course, and so it includes a relatively high proportion of students who may not yet have developed the learning skills they need for academic success. Care must therefore be exercised when setting the course’s level of difficulty.

What Is the Size of the Course?

Applying Simmel’s (1902) taxonomy of groups to classes, a small class numbers from 4 to 20 members, a moderate class from 20 to 40 members, and a large class contains more than 40 members. And perhaps we should add another category, huge, to describe those college classes with 100 or more students taught in vast lecture halls.

Size, per se, changes many of the structural, pedagogical, and practical features of a class. Professors who design their courses for small classes of 10 to 20 students will need to make substantial changes when they discover that 200 have enrolled, just as professors who typically teach mega-sections will need to adopt new techniques when they teach small classes. For example:

- *Style*: As groups increase in size, the need for a task-organizing leader increases. In consequence, an informal style that works so well in a small class may fail when applied to a large class, just as a highly structured, organized approach may be overly constraining in small classes.
- *Interdependence*: Very small classes possess many unique characteristics simply because they include so few members. In such classes, each student becomes more important, and each student therefore has a more profound impact on the quality of the class. In a small class, all the members can develop

individualized relationships with one another, and each student has more of an impact on each class session.

- *Instructional choices:* As classes get larger, the reliance on student-centered teaching methods becomes smaller. One can lecture to a group of five students, but such classes can also be taught through discussion, student presentations, small group activities, and other methods that increase student-to-student interaction. Many such activities can be used in large classes, as chapter 2 notes, but such classes generally force professors into the role of lecturer.
- *Testing methods:* Even though professors may wish to use open-ended, essay type tests in their classes, such testing methods become unwieldy in large classes. When courses reach beyond 20 members, most professors find themselves reaching for tests that can be scored by computers.
- *Engagement:* The intimacy of smaller classes and the anonymity of larger classes create unique demands for students. Because smaller classes are more personal social experiences, confident students often enjoy the opportunity to work closely with others. Less confident students, in contrast, may find the evaluative pressures of the small group to be too great. In contrast, students in larger classes often describe these classes as impersonal and uninvolving, yet some find the anonymity of such classes comforting. If they wish to skip class, their absence will go unmissed. If they get behind in their reading, they will not be embarrassed publicly when they cannot understand the class discussion. If they read the text material casually and cursorily, their blunder goes undetected, for even their test scores are rarely linked to them personally.
- *Management:* Very large classes are more dramatic social experiences, and the sheer number of individuals gathered together puts unique demands upon both the professor and the students. Some of the most time-extensive aspects of teaching—office hours, record keeping, make-up examinations, help sessions, advising, responding to specific students' questions—multiply in direct proportion to the number of students in a class. Technical problems, too, arise as classes swell in size and professors become media specialists, photocopy wizards, and crowd control experts. Students, too, must take more responsibility for their own learning in larger classes, and fewer exceptions can be made for them in terms of testing procedures, missed classes, and other exceptions to procedures.

In general, larger classes require more time to plan and organize. When a professor must give a 10-page test to 10 students, she can print the copies she needs in 10 minutes. But when the class numbers 400, she must develop the exam far in advance of the day that it is needed. When a teacher in a small class gives the wrong date for the test on Monday and corrects the error on Wednesday, he can make a mental note to tell Juanita since she was not in class on Wednesday. In a large class, however, such slips cannot be so easily corrected, for what can be done for the 50 of the 400 students who skipped class on Wednesday and did not hear the correction? One can give a few students a make-up test when they are sick on test day, but what about 20 sick students? These problems cannot be entirely avoided, but planning decreases their frequency.

Consider the Students

Each year Beloit College releases a list of facts about the incoming first-year class. The list recognizes that these students, if they are entering college immediately after they complete high school, were born only 18 years before—and so their experiences are confined to the past 2 decades. These incoming students bring not just cell phones, Palm Pilots, credit cards, and laptop computers, but also a different set of life experiences. The Beloit College (2001) Mindset List noted that for these students:

- There have always been ATM machines.
- They have never referred to Russia and China as “the Reds.”
- There has always been a national holiday honoring Martin Luther King, Jr.
- Around-the-clock coverage of Congress, public affairs, weather reports, and rock videos has always been available on cable.
- Women sailors have always been stationed on U.S. Navy ships.
- They have never heard a phone “ring.”
- They never dressed up for a plane flight.
- They have never used a bottle of “White-Out.”
- “Spam” and “cookies” are not necessarily foods.
- They feel more danger from having sex and being in school than from possible nuclear war.

The Beloit list reminds professors to consider their students’ background—their life experiences, their attitudes and interests, the level of preparation, their ethnicities, their cultural backgrounds, and their goals—when ruminating about the best ways to teach them.

Novice Learners or Savvy Seniors?

The matching of students with their classes is an assortive social process that reflects students' stages of their academic careers, their personal interests, and in many cases the requirements of their programs. As noted earlier, students often take introductory psychology in their first year of school, along with English, biology, history, and other general education classes. Not only are these students relatively unskilled learners, but they may also be coping with a number of personal issues related to such things as dormitory living, establishing friendships, and even homesickness, and so their performance can be surprisingly variable as their concentration on the course material ebbs and flows. Such students are also the youngest students on the campus, so the cautions of the Beloit list apply: Students will not know what you are talking about when you mention "old" rock groups (they are not even called "rock groups" anymore), ancient history (e.g., the Bill Clinton–Monica Lewinsky scandal), or long-gone television programs (e.g., *Beavis and Butthead*) in your examples. In many cases, too, local examples do not work with such students because many are new to campus and do not know the local lore of the school or the town or city where it is located.

Psychology Majors or Nonmajors?

The introductory course (and advanced courses that are particularly relevant to other disciplines, such as abnormal psychology, industrial/organizational, and developmental) are often *service courses* for which a substantial proportion of the students who enroll are in another degree program that requires them to take this course. In service courses one is teaching not only the devoted majors in the discipline, but also students whose interests lie elsewhere than psychology: humorless biology majors, pragmatic business students, disdainful future physicists, tattooed and pierced art students, expressive theater majors, and so on. But many advanced courses in psychology, and the methods and statistics offerings in particular, are populated primarily with students who have chosen to major in psychology. Indeed, teaching psychologists have the luxury of teaching to the choir, for the four-fold increase in psychology majors that surprised many departments in the 1970s shows little sign of abating.

Socially Diverse or Homogenous?

In the 1950s most college students were men in their early 20s, they lived on campus, attended classes full time, and their parents were college graduates. But over the past 3 decades, women, African Americans, Hispanics/Latinos, Asians, Pacific Islanders, people with disabilities, international students, openly gay and lesbian students, and those students from families whose members have never gone beyond high school have entered

college in record numbers. As college classrooms become more diverse, professors must sometimes revisit their methods, policies, and course contents to be certain they are appropriate for, and fair to, the students in their classes (Border & Chism, 1992; Chism, 1999). When classes are filled with students who range widely in ethnic, cultural, personal, and social background, then the professor must be ready to respond positively to variations in communication styles and skills, interactional and learning styles, achievement orientation, and experience with Western culture's norms and expectations. Moreover, and as considered in more detail in chapter 6, diverse classes provide professors and students with the resources they need to develop their sensitivity to diversity and individual differences.

Traditional or Nontraditional?

The traditional, full-time, 18–22 year-old college student is being gradually outnumbered by older students who are returning to school after a long hiatus. Allen (2000) explained that teaching nontraditional students creates challenges when planning the course for the complexity of students' lives often means that they miss more classes, have less time for non-classroom activities, and can't take advantage of on-campus resources. She recommended exercising care when selecting readings (providing more background for students who took prerequisite courses long ago) and when making decisions about assignments that require students to invest considerable amounts of time outside of class.

Consider the Teaching

No one assumes that lawyers can only bill their clients for time spent in the courtroom or that an orchestra's conductor should be paid only for performances. Yet when people outside the hallowed halls of academia condemn professors for spending so little time teaching, they usually calculate time spent teaching with a single index: How much time do you spend in the classroom lecturing to students? This narrow view of teaching overlooks the wide range of actions that fall under the category *teaching*.

What Will You Do?

When Stark et al. (1988) interviewed faculty who were planning their courses very few of these professors spoke of making deliberate choices among various teaching strategies. Most assumed that they would rely on the tried-and-true lecture method in their teaching, without giving much thought to alternative methods such as discussion and collaborative learning procedures. These faculty make the same error that outsiders do who complain about the "professors' cushy jobs," for they assume that teaching = lecturing. But, in actuality, teaching requires many actions besides lec-

turing, such as reviewing with students passages from the textbook or previous lectures, guiding classroom discussions, answering students' questions in and out of class, e-mailing course material to them, posting instructional information on the Web, and so on. Even preparing to *not teach*, say by arranging for guest lecturers or by developing a colloquium series that students attend in lieu of class, counts as teaching.

What Will Students Do?

When developing the course, professors plan not only their own actions but also their students' actions. Will they do specific readings? Carry out writing assignments such as term papers? Discuss material in class and make oral presentations? Will they undertake collaborative learning assignments, group and individual projects, take part in service learning experiences, or go out into the field to conduct research? Given the limited amount of time available during the term and students' commitments of time and energy to any one class, the number of learning activities must be assigned carefully. Classes with too few assignments and activities, like work environments where workers have too little to do and too much time to do it in (Wicker & August, 1995), are often boring, unchallenging, and inefficient because learning outcomes that would be accomplished through the activities are neglected. Too many assignments, though, will leave the students, and the professor who must grade the activities, feeling harried. A course where activities follow one after another gives the impression that students' are completing busy work rather than meaningful educational experiences.

What Activities Will the Students Undertake?

One of the advantages of teaching a course in psychology, rather than, say, astrophysics, is that the subject matter can be created and studied within the confines of the classroom. Many classroom activities work by asking students to consider their own behavior from a psychological perspective and may require the development of personal insight. Some activities also make use of simulation and role-playing methods. These learning methods, when they work effectively, help students apply psychological concepts to their own lives, get them involved in the learning process, and challenge them to think about themselves (Mathie et al., 1993). Publishers often provide useful activities in the materials that they have prepared to support their book, and the journal *Teaching of Psychology* publishes and evaluates learning activities in each issue. Indeed, Benjamin, Nodine, Ernst, and Broeker (1999) and Ware and Johnson's (2000a, 2000b, 2000c) compendia of hundreds of activities cut across all areas of psychology, including statistics, research methods, history, physiological-comparative,

perception, learning, cognitive, developmental, personality, abnormal, and social. I consider the use of such activities in more detail in chapter 3.

What Technology and Media Will Be Used?

Years ago, high-tech teaching psychologists prepped by ordering films from distribution centers, sorting their slides, and changing the bulb in the overhead projector. Today's high-tech professors source out audiovisual materials from films, videos, DVDs, and laser disks; update their PowerPoint presentations; and check to see if the digital projection system in their lecture hall has been upgraded. The well-prepared teachers of yesteryear visited the classroom before the term started to check the microphone, the lectern, the blackboards, and lighting, but now they need to troubleshoot the network connection and verify that all the gizmos they want to use were not stolen over the break. They must also consider what types of technology their students will be using, and if they decide to use a virtual classroom they must check their Web links and their e-mail system, and field test any new technologies that they are considering implementing.

What Will You Do to Support Students' Learning?

Some professors, anticipating that their students may have problems with the material, plan in advance the sorts of educational support they will provide. Some may, for example, decide to provide students with their lecture notes, partial outlines, or skeletal notes prior to the lecture. Students generally appreciate this indulgence, although they may skip class more frequently if they know they can refer to the printed notes when they study. This practice also means that the lecture cannot be revised extensively the night before class, for students must have enough lead time to purchase the notes from the bookstore or download them from the Web. Some professors schedule review and help sessions before each examination, either as part of class-time or as optional outside sessions for those who need more structure. Other forms of educational support include delivering lectures on study skills, encouraging students to form study groups, holding tutorials during office hours, arranging for students to meet online before exams to review material, giving practice quizzes, and so on. Like social support, educational support has its greatest impact when students need it the most.

Consider the Texts

Scholars acquire much of their knowledge through reading rather than listening. Indeed, humans' capacity to read others' words gives literate people access to the knowledge of past generations while reducing their dependence on oral forms of communication and information exchange

(Stanovich, 1993; Stanovich & Cunningham, 1993). McKeachie (1999) went so far as to suggest that students learn more from their textbook than they do from their teacher, making the choice of texts and readings one of the most important components of adequate preparation (Parsons, 1957).

What Text Should You Use?

When identifying a textbook for your class, you can turn to colleagues for input, both informally and more formally by reading reviews of texts published in such journals as *Contemporary Psychology* and *Teaching of Psychology* (Dewey, 1999). You can also ask students to evaluate which texts they prefer. When Britton, Guelgoez, Van Dusen, Glynn, and Sharp (1991) asked college students to read text passages that had been previously tested for clarity and "learnability," they found that the students were 95% accurate in their judgments, suggesting that students can tell the difference between books that they can learn from and books that will baffle them.

But McKeachie (1999) was correct when he stated, "there is no substitute for detailed review of the competing texts for the course you are teaching" (p. 13). That review requires that you obtain copies of all the texts that you are considering by contacting the field representatives of the publishers, writing directly to the publishers, or by using the Web to request review copies. Acquiring these copies takes time, and most college bookstores like to have professors' book orders far in advance of the start of the term, so the selection of a text usually occurs well before all other preparatory activities. Some characteristics to consider include:

- *Scope, accuracy, and currency:* A good text should present a unified but comprehensive review of all major topics and concepts in the field you are teaching. The material itself should be clearly presented, painstakingly accurate, and representative of current thinking in the field, although a mix of classic and contemporary references is usually desirable. A check of the references should reveal that critical monographs and journal articles are cited.
- *Level:* Different textbook authors write for different audiences. Some write lower level books, deliberately focusing on critical points but presenting the material so that students with minimal reading skills will be able to comprehend it. Others write more challenging books, stressing depth of coverage and detail. Others write books that fall between these extremes: not too hard, not too easy, but, like Goldilock's porridge, just right in terms of students' backgrounds and their course goals. A text's level is determined in large part by the scope of the contents. As an author introduces more

concepts, provides more details about research procedures, and includes more statistical information and more chapters, the book grows in complexity. The book's difficulty is also determined by how easy or hard it is to read and understand the author's writing. Reading level can be estimated by considering the length of the average sentence, the complexity of sentence structure, and the use of longer words (three or more syllables), but you can also precisely index reading level with such word-processing programs as Word or WordPerfect. A few clicks in the Tools areas of these programs indicated, for example, that the preceding paragraph was written at the college level, uses the passive voice 33% of the time, and is average in terms of sentence and vocabulary complexity.

- *Students' background*: The level of text should match the backgrounds and capabilities of the students in your classes. As Wolfe et al. (1998) verified, learning is enhanced when the text matches the conceptual background of the student. They found that students who knew very little about the material they were studying learned the most from a basic text, whereas more advanced students learned the most from a higher level book.
- *Conceptual orientation*: Texts can differ profoundly in terms of theoretical orientation, and one should generally try to avoid selecting a text that is just too different from one's own view of the field (e.g., Rheingold, 1994). Although disagreements with the text are inevitable, the fewer the better, both in terms of learning and classroom relations. Adopting a textbook and then not using it makes the top-10 list of students' pet peeves (Ludewig, 1994).
- *Emphasis on research, application, and diversity*: Textbooks differ in how much they integrate research, applications, and diversity issues. A traditional text will focus on the field's concepts' and conclusions, whereas a more research-focused text will stress how this content was generated through research. Texts also differ in the number of pages they spend on applications and multicultural issues related to racial, ethnic, and gender diversity. They also differ in the way they achieve this integration. Some texts integrate this material throughout the book, others present such information in special boxes within chapters, and others collect this material in a single chapter near the end of the book.
- *Writing quality*: A good textbook should not just present information, but also teach it through a clear presentation that engages the reader (Sadoski, Goetz, & Avila, 1995; Sadoski,

Goetz, & Rodriguez, 2000). Dewey (1999) recommended checking the quality of the writing in 5 or 10 sections scattered throughout the book. He noted that a book with an excellent table of contents, a good sequencing of chapters, compelling summaries, a great test bank, and up-to-date references may nonetheless fail “at the level of individual sentences and paragraphs” (p. 26). Students will learn more from a textbook in which the authors replace wordiness with crisp sentences that use the active voice; pepper the text with vivid examples that touch on topics with which readers are already familiar; help the reader grasp the overall organization of the chapter by clearly signaling its structure with headings, summaries, and transitions from section to section; vary their sentence and paragraph structures appropriately; and create coherent paragraphs that make one or two points clearly.

- **Organization:** A good textbook should be well-organized, both in its ordering of chapters and in the ordering of material within chapters. True, if the book’s materials are not ordered the way you want them to be, you can always ask students to read them in the order you prefer (e.g., Rheingold, 1994). But assigning entire chapters at a time, and also following the order of the chapters exactly, is less confusing for students. Telling students to “read the next chapter” is far simpler than having them check the syllabus or Web to find out where to go next.
- **Pedagogy:** Textbooks contain elements designed to help the reader remember the material. These pedagogical elements may include the use of boldface for key terms, a glossary, learning objectives, chapter preview, chapter summaries, review questions, embedded self-assessments, boxed material, graphs and charts, summary tables, annotated readings list, and suggested activities.
- **Ancillaries:** Most publishers provide the professor who adopts their books with an array of supporting material, including suggestions for additional classroom activities, lecture ideas, information about resources available on the Internet, and extensive test banks.

Should You Use Readings?

When students read the textbook only, they study only one psychologist’s description of the field, or what Rheingold (1994) called “restless thought distilled into static outlines” (p. 36). But when they read articles, they are exposed to many styles, approaches, and orientations. Readings,

too, require students to organize the material themselves and make decisions about importance, meaning, and implications. One must, however, select papers carefully, for students cannot grasp the meaning of the article if they lack statistical training and a substantial vocabulary. Not all undergraduate students can, for example, read a *Psychological Review* article and glean the essential points. Articles published in the field's research journals can also be narrow in focus, so the yield for the student who labors through the work may be rather meager. Banyard and Grayson (1999) suggested testing each candidate for the reading list with these questions:

- Does it have star quality?
- Does it stimulate students' questions?
- Does it stimulate ideas for practical work?
- Does it raise contemporary issues?
- Do the studies illustrate a range of psychological methods?
- Do the studies illustrate a range of psychological ideas?
- Do the studies illuminate the lives of a wide range of people?

Problems can arise, however, in simply getting the outside readings to students. Copyright laws have made it more difficult for faculty to create packets of readings, and in some cases university libraries will not even place photocopies of articles on reserve for fear of running afoul of U.S. copyright laws. Some academic publishers will create a customized package of readings, provided your classes are sufficiently large to justify the cost of production. Alternatively, if you are willing to use someone else's collection of readings, then you can adopt an edited volume, such as *Forty Studies that Changed Psychology* (Hock, 1999). Last, some journals, such as *Psychological Science*, permit the use of their contents in educational settings provided your university's library subscribes to the journal.

Consider the Assessments

Well-prepared professors usually know what kinds of tests and scored assignments students will be completing during the 12 to 16 weeks of the term. The possibilities are nearly limitless; *tests* may include examinations, quizzes, take-home tests, and pop quizzes, and *scored assignments* may include reaction papers, book reviews, article summaries, term papers, research reports, journals, and group projects. Assessment planning requires a series of difficult choices about number, timing, and type of tests and assignments that generate opportunities but exact costs as well (Walvoord & Anderson, 1998).

Number of Tests and Assignments

The term's procession of educational events—its lectures, discussions, activities, and assignments—is punctuated by tests. As chapter 4 notes,

tests serve as explicit milestones that break up the months of continuous study and so provide a clear deadline that forces students who would otherwise procrastinate to review what they have learned. Tests also yield feedback for students about their progress toward their learning goals, with grades functioning as powerful motivators for all kinds of useful behaviors, such as studying, attending class, taking notes, and reading the text. Because of these motivational benefits, frequent tests on smaller amounts of material are generally more desirable than infrequent tests on massive amounts of material (Dempster & Perkins, 1993). Although a mid-term and final may be sufficient for high-level courses where students are self-motivated and sufficiently skilled learners, the structure of tests may be needed to keep students who are less adept on task. Indeed, some systems of instruction, such as Keller's (1968) programmed learning with integrated feedback, require constant self-testing.

The general warning against "too much of a good thing" applies to tests, however. Frequent testing keeps students on task, but too frequent testing distracts them from the ultimate goal of learning. Instructors who stress tests, evaluations, and grades over all else produce students who are striving to earn a particular grade rather than to learn the course material (cf. Harackiewicz, Barron, & Elliot, 1998). Professors should also describe the nature and purposes of assessments carefully, because even evaluations described as achievement tests serve as extrinsic motivators, whereas tests described as feedback mechanisms stress intrinsic motivation (Ryan, Mims, & Koestner, 1983). Students who are told that a grade of A means they are doing well in a subject respond to the testing better than students who are told that the A is a reward for working hard (Miller, Brickman, & Bolen, 1975). Frequent tests may also create high levels of competition among students. Although introducing competition among students is a popular way to prompt them to expend greater effort, competition may focus students' attention on winning, to the extent that they eventually conclude that "learning something new" is not nearly as important as "performing better than others" (Ames, 1987, p. 134). Tests also take class time away from other activities, with the result that the more one tests, the less one lectures, leads discussions, presents demonstrations, and so on.

Timing of Tests

Most professors schedule their tests to maximize motivational impact, but they do so within the constraints imposed by the term's calendar of class meetings and holidays. Every term has unique events—religious holidays, big football games, basketball tournaments, rush week, homecoming revelries, vacation breaks, and so on—and the ideal testing schedule works around these events. When tests are scheduled on the day after such events, the results are often disappointing, for if students must choose be-

tween taking part in campus events and studying, their extracurricular interests generally trump their curricular requirements. Few students will, for example, use their spring break to study for their psychology exam that is scheduled for the day they return to campus, so scores will be better if the assessment is taken before rather than after the break. As Duffy and Jones (1995) noted, professors find that their classes go more smoothly—and students learn more easily—when their tests and teaching activities are consonant with the naturally occurring rhythms of the semester.

Type of Tests

Students' achievement can be measured in many ways, but in most cases the choice boils down to two basic options: *choice-type (CT) tests* and *supply-type (ST) tests*. Tests that use multiple-choice items, true–false questions, and matching are choice-type tests, for students must select the correct answer from a list of alternatives. Short- and long-answer essay questions and fill-in-the-blank items ask students to supply the answer to the question posed. Chapter 4 considers some the strengths and weaknesses of these two basic approaches to measurement, but this choice is often driven by practical considerations rather than pedagogical ones. Because supply-type tests must be hand-graded by either the professor or a well-trained assistant, the time demands they impose become too great in large-enrollment classes.

Cumulative Tests

Dempster and Perkins (1993) suggested that learning is more durable when cumulative testing methods are used. A cumulative mid-term examination and cumulative final examination, for example, could be offered in addition to smaller, unit-specific individual tests. The more cumulative the testing program, however, the greater the retention rates students show. Rohm, Sparzo, and Bennett (1986), for example, found that students who were tested weekly outscored students who were tested biweekly, but that students achieved the very best scores when all the tests were cumulative—when each test contained items dealing with the current material but also items testing the understanding of material from previous units.

Cumulative testing methods require, however, that more time be spent reviewing the results of tests with students. When students will be confronting the material again in the near future, they expect and deserve clear feedback about the items that they answered incorrectly. Because this review can be both time-consuming and contentious when conducted in an open-class discussion, many instructors prepare standardized feedback information that can be distributed to all students. This feedback identifies common problems as identified by the test results and alerts students to which learning objectives will likely be tested on future examinations. Such

feedback procedures also reduce the need to return the actual examination items to students. Control of items is less of an issue for professors who use short-answer and essay tests, but instructors who reuse choice-type items each year may find that their items begin to lose validity if they return the tests to students to use in preparation for cumulative finals. These old tests often become part of the test files maintained by campus groups (e.g., fraternities), giving members of such groups an unfair advantage over students who do not have access to the old tests.

Some type of heavily weighted examination at the end of the course is usually needed, even if it is not cumulative. This final examination, in addition to being required at many universities, also prevents the motivational crash that can occur when students' work during the final weeks of class has little influence on their grades. If, for example, students' grades are based on a series of five equally weighted examinations, and the test given during finals week is just the fifth test, students whose prior four tests have virtually locked them into a particular grade will disappear during one-fifth of the class.

Dropping and Making Up Tests

Because of circumstances both within and beyond their control, students sometimes miss tests. Although some professors tell students that no make-up tests will be given, these same professors must then bend their policies for students who have excuses from their physicians, who are required to take part in institution-sponsored activities (i.e., sports), or who are experiencing life events that psychologists recognize as extremely distressing (e.g., death of a loved one). Rather than simply installing a rigid policy that punishes students who miss examinations, many professors establish student-centered make-up test policies that include (a) advance notification of the absence, (b) a time-limit for taking a make-up test, (c) the location and time of the testing, and (d) the type of test to be given (e.g., multiple-choice, essay, true-false). They also share their rationale for their policy with their students so that the system is viewed as a fair, nonarbitrary one (Whitley, Perkins, Balogh, Keith-Spiegel, & Wittig, 2000).

Some professors avoid the problems associated with make-up tests by letting students drop their lowest test grade when computing their final score in the class or by counting another test (or the final) twice. Such procedures, however, likely reduce the overall level of student learning. Grabe (1994), for example, compared the performance of students who could drop tests to students who could not. He found that scores on individual tests were lower, overall, when students' grades were based on a subset of their tests, although the impact on final examination scores was not significant. These findings nonetheless suggest that students may not

prepare as diligently when they know that they can drop a test score. The findings also underscore the importance of having a cumulative final examination when using such methods. A “nondroppable” cumulative final prevents students who are satisfied with their grade based on the earlier tests from skipping class entirely during the final segment of the term because they will drop that test anyway.

Pop Quizzes

Few instructors would be shocked to learn that students sometimes come to class unprepared: They have not reviewed their previous session’s notes, read the text material assigned for the day, or spent much time ruminating about the issues and concepts under consideration. One way to increase preparation is to put students on a variable-interval reinforcement schedule by giving them unannounced quizzes (Burchfield & Sappington, 2000). Thorne (2000) administered quizzes regularly, and found that they were useful for (a) giving students feedback about their studying (or lack of); (b) desensitizing them to the testing process; (c) sharing samples of the types of questions on the major course exams; (d) gathering feedback about areas where students are having problems; and (e) increasing their level of preparation for class. Ruscio (2001) reported increased preparation in classes when he quizzed students with questions that would be easily answered if they had read the assigned materials.

Nitko (2001), however, argued that random quizzing may increase the level of anxiety of the class and is in some respects inconsistent with one of the most revered principles of education: Diligent, deliberate studying is essential to learning. Nitko (2001) wrote:

Some teachers advocate “surprise” or “pop” quizzes. Their reasoning is often some vague notion that a good student should always be prepared to perform on command. This seems to be an unrealistic expectation of students. Teachers, for example, make lesson plans and prepare to teach these lessons in advance. They are often resentful (and rightfully so) if asked to teach a class for which they have not had sufficient time to prepare. (p. 311)

Nitko (2001) also noted that such quizzes could harm the grades of students with special learning needs and concludes they should never be used to punish a class that is not obedient or falls behind in its reading.

Consider the Policies

A classroom, like any group, develops norms: consensual standards that describe what behaviors members should and should not perform. A classroom’s norms, however, are often deliberately manipulated by professors who hope that they can create normative structures that are consistent

with, or even supportive of, scholarship and learning. They do so by developing policies and letting students know the consequences of violating their policies.

Is Attendance Required?

College students are adult learners, so many instructors feel that students should be given the right to miss classes without being penalized. But students learn more when they attend class. Lindgren (1969), for example, reported that students who performed poorly were frequently absent from class, whereas most of the successful students rarely missed classes. These findings offer compelling support for an attendance policy that will prompt students to attend even when they would prefer not to. Students should also be urged to arrive on time and remain in class until its end unless the class is a very informally structured one (e.g., a recitation section, independent study).

A strict no-skip policy can, however, create both organizational (roll must be taken, excuses for missed classes processed) and instructional (classes filled with unprepared, uninterested students) complexities. Sleight and Ritzer (2001) therefore recommended reducing absenteeism by increasing student motivation rather than penalizing students for non-attendance. Their recommendations, which included reducing the overlap between in-class lectures and the text, are considered in more detail in chapter 2.

What Is Your Academic Integrity Policy

Virtually all colleges and universities have an academic integrity policy that describes the kinds of activities that are considered inappropriate, immoral, or punishable (e.g., plagiarism, cheating, destruction of materials). In preparing for class, you should familiarize yourself with your university's code and let students know that you will enforce the code. Students must also, in some cases, be reminded about common courtesy and classroom civility. Although discourteous actions may not qualify as actionable under the code, some behaviors are considered to be so rude, distracting, or disturbing to others that they create tension in the classroom—and you may wish to ban them.

What Special Considerations Apply to This Class?

Students should be warned about any unique, unexpected, and potentially irritating aspects of the class. If, for example, you expect students to use e-mail to do some of their coursework, then they should be told of this requirement. Some psychology courses deal with very sensitive topics, including personal adjustment, sexuality, and abnormality, and students should be warned about subject matter that they might find personally upsetting.

Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 require colleges and universities to provide academic adjustments or accommodations for students with documented disabilities. Students seeking academic adjustments or accommodations should be invited to identify themselves as soon as possible so that adjustments or accommodations can be arranged.

SHARING THE PLAN

Professors' plans for their classes are what Miller, Gallanter, and Pribram (1960) called *shared public plans*. Unlike private plans executed by single individuals, public plans usually call for the integration of multiple, interlocking plans. This integration requires communication among all those individuals who play roles in the execution of the shared plan. Most public plans are also more elaborate than private ones. A private plan can remain vague and protean, but public plans must be "prescribed in great detail because an attempt has been made to obtain optimal, not just satisfactory, performance" from each person who is part of the plan (Miller et al., 1960, p. 100). Professors can achieve this communication and specification of their shared plan in two ways: by writing a syllabus and by carefully presenting that syllabus, and the overall plan, to the class at its first meeting.

The Syllabus

A syllabus was originally a very concise list of the topics that would be covered by a lecturer during a protracted course of studies. In time, though, the syllabus has evolved to include all sorts of basic information about the course. Different schools and departments have varying standards about the course syllabus and its contents, but a syllabus is usually considered a contract that defines professors' and students' responsibilities. A syllabus forces professors to share their private plan: It "compels you to publicly reveal your previously well-concealed assumptions. In other words, it makes explicit that which was implicit" (Appleby, 1999, p. 20). Table 1.4 describes some of the categories of information included on a syllabus and summarizes the preceding analysis of course planning.

Professors may not include all of these categories on their syllabus, and students may not pay much attention to all of them, either. As Becker and Calhoun (1999) discovered when they surveyed students about syllabi, students pay the most attention to information about assessment, especially the dates of the exams and when assignments are due. They take less notice

TABLE 1.4

Types of Information Supplied to Students in a Typical Course Syllabus

Subject	Questions answered
Instructor	What is your name and what should students call you? Where is your office, and do you hold office hours?
Course description and goals	What is your educational, research, and teaching background? What are the overall goals for this course? How does this course contribute to general educational goals? What are the specific goals? What should students know when the course is over? How will this course change them?
Course topics	What topics will be covered in this course? Why these topics? Why this order? What are the prerequisites?
Teaching and learning methods	What methods (lecture, discussion, seminar, tutorial) will be used to teach this material? Will the course make any unusual demands on students (e.g., heavy writing requirements, use of technology, special projects)? Why are these methods being used?
Textbook and readings	What textbook will be used? Will other reading assignments be made? Why were these texts chosen? Are these primary or secondary sources?
Activities and assignments	What types of learning activities and assignments will be made? Will papers be required?
Grades	What is their purpose and how will they influence grades? How will student progress be measured? Is the grading criterion-reference or norm based? How much is each activity and test worth? Can tests be dropped?
Policies	Is the final examination cumulative? What is the attendance and test make-up policy? Do you have any other special policies or expectations about the class? Any extra credit?
Sources of support	Will you hold review sessions prior to examinations? Are the lecture notes or the outline available? Will students be given the opportunity to form study groups? Does this institution have academic support programs that students can use if they encounter academic problems?
Calendar	When are the assignments due and when should readings be completed? When are the tests? When will vacations occur?
Academic integrity policy	What is the timetable for covering the various topics? What type of academic integrity policy is in force at the university? How is this policy applied in this class?
Special issues	What special considerations apply to this class? Should students be warned about material and activities that they might find objectionable? Should students with special needs contact the professor?

of general course information, withdrawal dates, and the titles and authors of readings. First-year students were more interested in prerequisites than were continuing students, and they were also more concerned about sources of academic support and location of course materials. Nontraditional students attended to the syllabus' description of course goals and the readings, but they were not as concerned about holidays and penalties for late work and honors infractions. All students do expect, however, that professors will honor the syllabus as they would a contract. Hence it is important to include, somewhere on the syllabus, a statement that explains that aspects of the course may be changed if unforeseen circumstances arise, and that these changes will be announced before they are initiated.

The First Day of Class

Asch's (1946) classic studies revealed a primacy effect when perceivers form impressions of others: Initial judgments influence subsequent judgments even when subsequent information contradicts these initial inferences. Asch's findings remind the teaching psychologist to take full advantage of the ambiguity, excitement, and potential of the first meeting with a class (Babad, Kaplowitz, & Darley, 1999; Widmeyer & Loy, 1988). That day comes but once, and it is an opportunity to be seized, a chance to do far more than simply take roll and disseminate information about the text and test. Hilton (1999, p. 118), who has taught classes with as many as 1,200 students, wrote: "I firmly believe that I win my class or lose them in the first 15 minutes, and 50 years of person perception research supports that belief." The first day of a class is the ideal time to (a) give a clear introduction to your course that includes information about yourself, your goals, and the nature of evaluation; (b) set the norms and tone for the classroom; (c) motivate students by arousing their interest, involving them in the learning process, and displaying your enthusiasm for the course material; and (d) correct any misperceptions or inaccurate social norms that pertain to the class.

Identifying Course Goals

Students do not always know why they are taking your course. Perhaps it is required, the only one open, or a course they have always dreamed of taking. The first day of class is the time to let them know what is in store for them, so their expectations are in line with reality. Reviewing the goals as listed on the syllabus provides clear information about *your* goals, but it may not help them identify *their* goals. One way to stimulate this goal analysis is to carry out a simple ice-breaking exercise like the one described by Angelo and Cross (1993). Working alone or in groups, ask students to identify five critical goals they hope to accomplish in the class.

Pool their goals in through a class-wide discussion, and contrast their goals with the ones on the syllabus. Students, by the way, generally do not like to perform such icebreakers on the very first day of class. Instead, they prefer to get out of class early after the professors have reviewed the goals of the course and details about the exams, assignments, and grading methods (Perlman & McCann, 1999a). The first day of class, though, is a unique teaching opportunity that should not be squandered by concentrating exclusively on logistics and requirements.

Setting the Tone

Instructors vary in their approaches and methods, and courses vary in difficulty and demandingness. On the first day, students are busy searching for information that helps them understand where you stand with respect to their in-class behavior (taking notes, arriving on time, showing deference, participating in discussions) and out-of-class behavior (homework, amount of time to spend studying). They also want to know what you are like as a person. You can help them get a clearer understanding of you and the class by adopting the behavioral style that you will take for the entire term. If you hope to start class on time, start the first day on time. If you will keep the class to the very end of the hour, do the same on the first day. You should also begin to build a relationship with your students by disclosing personal information about yourself, gathering some information about them, and responding to their questions.

Motivating the Students

Students are not always excited about plunging into a new area of study, so a little motivational packaging on the first day never hurts. Although many professors simply review the syllabus, explain how grades will be determined, or install their policies about absences and make-up tests, others take the opportunity to highlight the stimulating intellectual tasks to be accomplished, pique students' curiosity, challenge traditional views, and hint at inconsistencies to be resolved. Instead of spending the entire session dealing with procedures and logistics, they instead consider such basic questions as "Why take this course?" "What will people learn by the end of the course?" and "How does this course relate to fundamentally important personal and scientific goals?"

Correcting Misunderstandings

Students often enter psychology courses with a set of expectations about the course and its content, and in many cases these expectations are inconsistent with reality (Friedrich, 1996, 1998). They may assume that the introductory course will concentrate, almost entirely, on psychological dysfunction. They may think that psychology courses will demand little of

their time, for psychology is not as difficult as such “real” sciences as physics or chemistry. They may assume that their instructor, as a psychologist, is a compassionate individual who is willing to listen to their personal problems and give them therapeutic advice. The first day of class is an excellent time to prepare them for the realities of the class: the topics to be covered, the procedures to be used, and the amount of time they can expect to spend each week in and outside of class.

One myth that is common on many campuses—psychology courses are easy—should be debunked but not so sharply that students’ rosy expectations are transformed into dire prophecies. Positive expectations, even if somewhat unrealistic, facilitate performance. Students who “think they can,” in comparison to students who “think they can’t,” work harder on class assignments, take a more active role in their learning by asking questions, learn more material, and come to think of themselves as high achievers (Harris & Rosenthal, 1986). However, students also need information about the types of behaviors they will need to engage in to achieve desired outcomes and the amount of time they must spend on the class. The old standard, “Look to your left, look to your right: By the end of the term these people will have dropped out of this class with failing grades,” is likely too strong—it will create negative expectations that might interfere with performance. But some type of base-rate information such as a chart of the distribution of grades from prior sections of the course should be sufficient to help students calibrate the class’s demands (Forsyth & McMillan, 1991).

A FINAL SUGGESTION: USE BEST STRATEGIES

Where do plans come from? Miller et al. (1960) pondered this question before concluding, “probably the major source of new Plans is old Plans. We change them around a little bit each time we use them, but they are basically the same old Plans with minor variations. Sometimes we may borrow a new Plan from someone else. But we do not often create a completely new plan” (p. 177). So this year’s syllabus looks very similar to last year’s syllabus. New professors base their teaching on the way they were taught. Professors use familiar assessment methods, give lectures from ancient yellowed notes, and forget to try anything new. The old plan becomes the template for all future plans.

Miller et al.’s (1960) warning about the power of old plans to shape new plans suggests that professors, before they rush to write the syllabus, sequence the topics, and craft compelling lectures, should take a little time to consider the general strategies that will guide their teaching. Rather than rely on the values provided by the default program, they should review

those strategies and consider replacing them with alternative, innovative, and possibly more effective ones.

What alternative strategies should they consider? Although no one has succeeded in forging the definitive guide to teaching, Chickering and Gamson's (1987) *Seven Principles for Good Practice in Undergraduate Education* is a reasonable place to begin the search for alternatives. Chickering and Gamson, working with a select group of experts in higher education, developed a set of principles that they believe defines "effective practice" in college teaching. They considered developing an exhaustive, comprehensive listing of factors identified in prior research, but in the end they heeded the wisdom of Miller's (1956) magical number 7 ± 2 and opted for a shorter, more memorable list. Their final product, the *Seven Principles*, does not focus on content, for it assumes that good professors know which theories to teach, which skills to nurture, and which findings to push into students' memories. Instead, the *Seven Principles* focuses on the way in which the content, skills, and knowledge of the course are taught to students. As shown in Table 1.5, students will be able to reach their learning goals more efficiently and completely if professors create learning environments that are "active, cooperative, and demanding" (Gamson, 1991, p. 5).

Student–Faculty Contact

The *Seven Principles* argues that "frequent student–faculty contact in and out of classes is the most important factor in student motivation and involvement" (p. 4). When in the classroom, professors who use good practices build rapport with their students by learning their names, answering their questions, coming to class early to chat with them, and remaining after class to listen to their ideas and comments. When outside of the classroom, effective professors are willing to talk to students whenever they encounter them, on the sidewalk, by the faculty mailboxes, walking to the commuter parking lot, or even in the checkout line at the local grocery. This student–faculty contact may center on psychology, but it should also include discussion of students' career interests, values, aspirations, and personal interests. Indeed, Pascarella (1980) found that discussion of art, music, politics, literature, and film has a more profound impact on students than discussion of topics within the professors' realm of psychological expertise.

Cooperation Among Students

The *Seven Principles* suggests that professors, when planning their courses' learning activities and grading procedures, should include elements that require students to work in collaborative, positive ways. Professors

TABLE 1.5

A Summary of the Seven Principles of Good Practice Developed by Chickering and Gamson, 1987

Principle	Behavioral indices
Good practice encourages student-faculty contact: Frequent contact in and out of classes	Remembering students' names Involving students in lab and field research projects Taking students to conventions, regional conferences Disclosing personal values, when appropriate Attending student-sponsored events Mentoring and informal advising
Good practice encourages cooperation among students: Collaborative, noncompetitive learning in small groups and student-to-student networks	Encouraging self-disclosure to one another Facilitating the formation of study groups Assigning group projects Using peer evaluation techniques when grading Teaching through group discussion Promoting student-to-student tutoring/teaching Grading by criteria and not by interstudent comparison
Good practice encourages active learning: Teaching methods that require more than passive listening and note taking from students	Requiring class presentations Assigning papers and projects that promote critical thinking Asking students to integrate contemporary events with course material, discussing real-life cases, etc. Assigning term projects and independent studies
Good practice gives prompt feedback: Assessment of baseline knowledge, frequent testing of progress in learning, and global assessment of educational outcomes	Involving students in research Giving quizzes and homework assignments Returning examinations and papers within a week Providing feedback to students early in the term Writing comments on exams and papers Pretesting students Calling or e-mailing students who miss classes
Good practice emphasizes time on task: Setting appropriate time demands and helping students learn to manage their time	Establishing deadlines for completing assignments Discussing course demands with students Helping students set challenging goals Encouraging practice runs before oral reports Stressing self-regulation, studying, and attendance Meeting with students who fall behind
Good practice communicates high expectations: Setting reasonable but high standards for achievement	Warning students about time commitment to the course Stressing high standards of achievement Establishing performance expectations orally and in writing Helping students set challenging goals Explaining penalties for missed or late work Assigning writing Calling attention in class to excellence by class members

Table continues

TABLE 1.5 (*Continued*)

Principle	Behavioral indices
Good practice respects diverse talents and ways of learning: Providing a variety of learning experiences and assessment options	Encouraging questions Discouraging off-task, divisive comments Using a variety of teaching methods Discussing the contributions of women and minority psychologists Developing and using alternative teaching methods Exploring students' backgrounds, learning styles, and outlooks

should not abdicate all instruction to the students, but the more they share the work of teaching with their students the better. Psychology students, in particular, are often thirsting for opportunities to expand their interpersonal skills and so welcome cooperative elements such as peer teaching, small-group activities, student mentoring and counseling, and joint projects. The drawbacks associated with collaborative learning methods, which are discussed in more detail in chapter 3, can be avoided by allowing students flexibility in their choice of work partners and establishing standards that regulate each student's contributions.

Active Learning

The *Seven Principles* questions the heavy reliance on lectures as the default method of instruction in many college courses, favoring instead the use of methods that require an observable response from the learner. Even professors who do not agree with Chickering and Gamson's (1987, p. 5) sweeping salvo at lectures ("students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers") still build nonlecture learning activities into their courses: activities and assignments that require students to respond cognitively, behaviorally, and even emotionally to the material. Such activities include independent study projects, writing assignments, speeches, involvement in research, preparation of papers and posters for conferences, analysis of data, simulations, demonstrations, case discussions, debates, and so on.

Prompt Feedback

Even though college students have years of experience in learning settings, many of them are still unable to calibrate their own learning; they do not always know when they have learned material and when they have not. Students also are not sufficiently skilled in regulating their time and motivation, so they need external goals to punctuate and validate their

work: tests, exams, and other forms of feedback. As Sorcinelli (1991, p. 19) concluded, “immediate, corrective, and supportive feedback is central to learning.” The *Seven Principles* pushes this point even further by recommending pretests prior to beginning of a course of study and occasional global reviews of goals and progress toward those goals.

Time on Task

Studies of the relationship between time spent in teaching, learning, and studying generally support the *Seven Principle's* position on the mindful management of time in and out of the classroom (e.g., Cotton & Wike-lund, 1989; McKeachie, Pintrich, Lin, & Smith, 1986). As professors' set about planning their course, they must carefully sequence the topics and activities, allocating time to each goal depending on its complexity, the depth of coverage, and the topic's importance. The *Seven Principles* also suggests that professors let students know how much time the typical student will need to allocate to the class and its activities, and even provide help to students who are woefully inadequate when managing their time.

High Expectations

Research on students' perceptions of their instructors, which chapter 8 reviews in some detail, has suggested that professors who set challenging goals in their courses do not necessarily create headaches for themselves and indignation among their students (e.g., Cashin, 1988). Instructors who set high standards for students are rated more positively than easy graders, so long as they grade fairly and provide students with the resources they need to reach their preferred outcomes. High expectations, even if unrealistically positive, can also set in motion social and psychological processes that will increase the quality of professors' teaching and students' learning (Rosenthal & Jacobson, 1968; Wright, 2000).

Respect Diversity

Teaching psychologists, as psychologists, are enjoined by the APA code of ethics to recognize and respect differences in their students. They should be aware of, and adapt their teaching practices as needed to take into account “cultural, individual, and role differences, including those due to age, gender, race, ethnicity, national origin, religion, sexual orientation, disability, language, and socioeconomic status” (APA, 1992, p. 1599). They should, then, consider their audience when they plan their teaching, and when possible include topics, materials, and activities that mesh with their students' backgrounds, interests, and goals (Puente et al., 1993). The *Seven Principles* suggests that skilled professors, when faced with great diversity in the students they teach, cope by using a wide array of teaching methods.