

WHAT IS GOOD TEACHING?

Educators, psychologists, philosophers, novelists, journalists, filmmakers, mathematicians, scientists, historians, policy makers, and parents, to name only a few groups, have examined this question; there are hundreds of answers. And good teaching is not confined to classrooms. It occurs in homes and hospitals, museums and sales meetings, therapists' offices, and summer camps. In this book, we are primarily concerned with teaching in classrooms, but much of what you will learn applies to other settings as well.

Inside Three Classrooms

To begin our examination of good teaching, let's step inside the classrooms of three outstanding teachers. The three situations are real. The first two teachers worked with my student teachers in local elementary and middle schools and were studied by one of my colleagues, Carol Weinstein (Weinstein & Romano, 2015). The third teacher became an expert at helping students with severe learning difficulties, with the guidance of a consultant.

A BILINGUAL FIRST GRADE. Most of the 25 students in Viviana's class have recently emigrated from the Dominican Republic; the rest come from Nicaragua, Mexico, Puerto Rico, and Honduras. Even though the children speak little or no English when they begin school, by the time they leave in June, Viviana has helped them master the normal first-grade curriculum for their district. She accomplishes this by teaching in Spanish early in the year to aid understanding and then gradually introducing English as the students are ready. Viviana does not want her students segregated or labeled as disadvantaged. She encourages them to take pride in their Spanish-speaking heritage and uses every available opportunity to support their developing English proficiency. Both Viviana's expectations for her students and her commitment to them are high. She has an optimism that reveals her dedication: "I always hope that there's somebody out there that I will reach and that I'll make a difference" (Weinstein & Romano, 2015, p. 15). For Viviana, teaching is not just a job; it is a way of life.

A SUBURBAN FIFTH GRADE. Ken teaches fifth grade in a suburban school in central New Jersey. Students in the class represent a range of racial, ethnic, family income, and language backgrounds. Ken emphasizes "process writing." His students complete first drafts, discuss them with others in the class, revise, edit, and "publish" their work. The students also keep daily journals and often use them to share personal concerns with Ken. They tell him of problems at home, fights, and fears; he always takes the time to respond in writing. Ken also uses technology to connect lessons to real life.

Students learn about ocean ecosystems by using a special interactive software program. For social studies, the class plays two simulation games that focus on

history. One is about coming of age in Native American cultures, and the other focuses on the colonization of America. Throughout the year, Ken is very interested in the social and emotional development of his students; he wants them to learn about responsibility and fairness as well as science and social studies. This concern is evident in the way he develops his class rules at the beginning of the year. Rather than specifying dos and don'ts, Ken and his students devise a "Bill of Rights" for the class, describing the rights of the students. These rights cover most of the situations that might need a "rule."

AN INCLUSIVE CLASS.

Eliot was bright and articulate. He easily memorized stories as a child, but he could not read by himself. His problems stemmed from severe learning difficulties with auditory and visual integration and long-term visual memory. When he tried to write, everything got jumbled. Dr. Nancy White worked with Eliot's teacher, Mia Russell, to tailor intensive tutoring that specifically focused on Eliot's individual learning patterns and his errors. With his teachers' help, over the next years, Eliot became an expert on his own learning and was transformed into an independent learner; he knew which strategies he had to use and when to use them. According to Eliot, "Learning that stuff is not fun, but it works!" (Hallahan & Kauffman, 2006, pp. 184–185). What do you see in these three classrooms? The teachers are confident and committed to their students. They must deal with a wide range of students: different languages, different home situations, and different abilities and learning challenges. They must adapt instruction and assessment to students' needs. They must make the most abstract concepts, such as ecosystems, real and understandable for their particular students. The whole time that these experts are navigating through the academic material, they also are taking care of the emotional needs of their students, propping up sagging self-esteem, and encouraging responsibility. If we followed these teachers from the first day of class, we would see that they carefully plan and teach the basic procedures for living and learning in their classes. They can efficiently collect and correct homework, regroup students, give directions, distribute materials, and deal with disruptions—and do all of this while also making a mental note to find out why one of their students is so tired. Finally, they are *reflective*—they constantly think back over situations to analyze what they did and why, and to consider how they might improve learning for their students.

SO WHAT IS GOOD TEACHING? Is good teaching science or art, the application of research-based theories or the creative invention of specific practices? Is a good teacher an expert explainer—"a sage on the stage" or a great coach—"a guide by the side"? These debates have raged for years. In your other education classes, you probably will encounter criticisms of the scientific, teacher-centered sages. You will be encouraged to be inventive, student-centered

guides. *But beware of either/or choices.* Teachers must be both knowledgeable and inventive. They must be able to use a range of strategies, and they must also be capable of inventing new strategies. They must have some basic research-based routines for managing classes, but they must also be willing and able to break from the routine when the situation calls for change. They must know the research on student development, and they also need to know their own particular students who are unique combinations of culture, gender, and geography. Personally, I hope you all become teachers who are both sages and guides, wherever you stand.

MODELS OF GOOD TEACHING.

In the last few years, educators, policy makers, government agencies, and philanthropists have spent millions of dollars identifying what works in teaching and specifically how to identify good teaching. These efforts have led to a number of models for teaching and teacher evaluation systems. We will briefly examine three to help answer the question, “What is good teaching?” Another reason to consider these models is that when you become a teacher, you are a very hot topic these days! We will look at Charlotte Danielson’s Framework for Teaching, the high-leverage practices identified by TeachingWorks at the University of Michigan, and the Measures of Effective Teaching project sponsored by the Bill and Melinda Gates Foundation.

Danielson’s Frameworks for Teaching. The Framework for Teaching was first published in 1996 and has been revised three times since then, the latest in 2013 (see danielsongroup.org for information about Charlotte Danielson and the Framework for Teaching). According to Charlotte Danielson (2013): The Framework for Teaching identifies those aspects of a teacher’s responsibilities that have been documented through empirical studies and theoretical research as promoting improved student learning. While the Framework is not the only possible description of practice, these responsibilities seek to define what teachers should know and be able to do in the exercise of their profession. (p. 3) Danielson’s Framework has four domains or areas of responsibility: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. Each domain is further divided into components, as you can see in Figure 1.1. When the Framework is used for teacher evaluation, each of these 22 components is further divided into elements (76 in all), and several indicators are specified for each component. For example, component 1b, demonstrating knowledge of students, includes the elements describing knowledge of

- child and adolescent development
- the learning process
- students’ skills, knowledge, and language proficiency
- students’ interests and cultural heritage
- students’ special needs

Indicators of this knowledge of students includes the formal and informal information about students that the teacher gathers in planning instruction, the student interests and needs the teacher identifies, the teacher's participation in community cultural events, opportunities the teacher has designed for families to share their cultural heritages, and any databases the teacher has for students with special needs (Danielson, 2013).

The evaluation system further defines four levels of proficiency for each of the 22 components: unsatisfactory, basic, proficient, and distinguished, with a definition, critical attributes, and possible examples of what each level might look like in action. Two examples of distinguished knowledge of students are teachers who plan lessons with three different follow-up activities designed to match different students' abilities and a teacher who attends a local Mexican heritage event to meet members of her students' extended families. Many other examples are possible, but these two give a sense of distinguished knowledge of students (component 1b). You can see that it would take extensive training to use this framework well for teacher evaluation. When you become a teacher, you may learn more about this conception of good teaching because your school district is using it. For now, be assured that you will gain knowledge and skills in all 22 components in this text. For example, you will gain knowledge of students.

TeachingWorks.

TeachingWorks is a national project based at the University of Michigan and dedicated to improving teaching practice. Project members working with experienced teachers have identified 19 high-leverage teaching practices, defined as actions that are central to teaching and useful across most grades levels, academic subjects, and teaching situations. The Teaching Works researchers call these practices "a set of 'best bets,' warranted by research evidence, wisdom of practice, and logic" (teachingworks.org/work-of-teaching/high-leverage-practices). These practices are specific enough to be taught and observed, so they can be a basis for teacher education and evaluation. See Figure 1.2 for these 19 practices. Again, you will develop skills and knowledge about all of these practices in this text. (For a more complete description of the 19 high-leverage practices, see teachingworks.org/work-of-teaching/high-leverage-practices.) When you compare the 19 high-leverage practices in Figure 1.2 with the 22 Danielson components in Figure 1.1, do you see similarities and overlaps?

MEASURES OF EFFECTIVE TEACHING. In 2009, the Bill and Melinda Gates Foundation launched the Measures of Teaching Effectiveness (MET) Project, a research partnership between 3,000 teachers and research teams at dozens of institutions. The goal was clear from the title—to build and test measures of effective teaching. The Gates Foundation tackled this problem because research shows that teachers matter; they matter more than technology or funding or

school facilities. In pursuing the goal, the project members made a key assumption. Teaching is complex; multiple measures will be needed to capture effective teaching and provide useful feedback for personnel decisions and professional development. In addition to using student achievement gains on state tests, the MET researchers examined many established and newer measures of effectiveness including the Tripod Student Perception Survey developed by Ron Ferguson at Harvard University (R. F. Ferguson, 2008), the Content Knowledge for Teaching (CKT) test from the University of Michigan (Ball, Thames, & Phelps, 2008), and several classroom observations systems, the Danielson (2013) Framework for Teaching described earlier, and the Classroom Assessment Scoring System (CLASS, Pianta, LaParo, & Hamre, 2008) described in Chapter 14. The MET researchers also examined several other observation approaches specific to certain subjects such as the Stanford University's Protocol for Language Arts Teaching Observations (PLATO) (Stanford University, 2013) and the University of Texas UTeach Teacher Observation Protocol (UTOP) (Marder & Walkington, 2010) for assessing math and science instruction. The final report of the project (MET Project, 2013) identified the following three measures used together as a valid and reliable way of assessing teaching that leads to student learning:

Student gains on state tests.

Surveys of *student perceptions* of their teachers. The Tripod Student Perception Survey asks students to agree or disagree with statements such as “My teacher takes time to help us remember what we learn” (for K–2 students), “In class we learn to correct our mistakes (upper elementary students), and “In this class, my teacher accepts nothing less than our full effort” (secondary students) (from Cambridge Education, tripodproject.org/student-perception-surveys/sample-questions/; for more information about the Tripod Student Perception Survey, go to tripodproject.org/student-perception-surveys).

Classroom observations from the Danielson (2013) Framework for Teaching. Remember, teaching is complex. To capture effective teaching, these measures have to be used accurately and together. Also, the best combination of reliability and prediction of student gains in both state tests and tests of higher-level thinking comes when gains on standardized tests are weighted between 33% and 50% in assessing effectiveness, with student perception and class observation results providing the rest of the information (MET Project, 2013).

Are you surprised that teacher's content knowledge for the subject taught did not make the cut in measuring teacher effectiveness? So far math seems to be the one area where teacher knowledge is related to student learning, but with better measures of teacher knowledge, we may find more relationships (Gess-Newsome, 2013; Goe, 2013; MET Project, 2013). Is all this talk about expert

teachers and effective teaching making you a little nervous? Viviana, Ken, and Mia are experts at the science and art of teaching, but they have years of experience. What about you?

Beginning Teachers

STOP & THINK Imagine walking into your first day of teaching. List the concerns, fears, and worries you have. What assets do you bring to the job? What would build your confidence to teach? Beginning teachers everywhere share many concerns, including maintaining classroom discipline, motivating students, accommodating differences among students, evaluating students' work, dealing with parents, and getting along with other teachers (Conway & Clark, 2003; Melnick & Meister, 2008; Veenman, 1984). Many teachers also experience what has been called "reality shock" when they take their first job because they really cannot ease into their responsibilities. On the first day of their first job, beginning teachers face the same tasks as teachers with years of experience. Student teaching, while a critical element, does not really prepare prospective teachers for starting off a school year with a new class. If you listed any of these concerns in your response to the *Stop & Think* question, you shouldn't be troubled. They come with the job of being a beginning teacher (Borko & Putnam, 1996; Cooke & Pang, 1991).

With experience, hard work, and good support, seasoned teachers can focus on the students' needs and judge their success by the accomplishments of their students (Fuller, 1969; Pigge & Marso, 1997). One experienced teacher described the shift from concerns about yourself to concerns about your students: "The difference between a beginning teacher and an experienced one is that the beginning teacher asks, 'How am I doing?' and the experienced teacher asks, 'How are the children doing?'" (Codell, 2001, p. 191).

THE ROLE OF EDUCATIONAL PSYCHOLOGY

For as long as the formal study of educational psychology has existed—over 100 years—there have been debates about what it really is. Some people believe educational psychology is simply knowledge gained from psychology and applied to the activities of the classroom. Others believe it involves applying the methods of psychology to study classroom and school life (Brophy, 2003).

A quick look at history shows that educational psychology and teaching have been closely linked since the beginning.

In the Beginning: Linking Educational Psychology and Teaching

In one sense, educational psychology is very old. Issues Plato and Aristotle discussed—the role of the teacher, the relationship between teacher and student, methods of teaching, the nature and order of learning, the role of emotion in learning—are still topics in educational psychology today.

But let's fast forward to recent history. From the beginning, psychology in the United States was linked to teaching. At Harvard in 1890, William James founded the field of psychology and developed a lecture series for teachers entitled *Talks to Teachers about Psychology*. These lectures were given in summer schools for teachers around the country and then published in 1899. James's student, G. Stanley Hall, founded the American Psychological Association. His dissertation was about children's understandings of the world; teachers helped him collect data. Hall encouraged teachers to make detailed observations to study their students' development—as his mother had done when she was a teacher. Hall's student John Dewey founded the Laboratory School at the University of Chicago and is considered the father of the progressive education movement (Berliner, 2006; Hilgard, 1996; Pajares, 2003). Another of William James's students, E. L. Thorndike, wrote the first educational psychology text in 1903 and founded the *Journal of Educational Psychology* in 1910.

In the 1940s and 1950s, the study of educational psychology concentrated on individual differences, assessment, and learning behaviors. In the 1960s and 1970s, the focus of research shifted to the study of cognitive development and learning, with attention to how students learn concepts and remember. More recently, educational psychologists have investigated how culture and social factors affect learning and development and the role of educational psychology in shaping public policy (Anderman, 2011; Pressley & Roehrig, 2003).

Educational Psychology Today

What is educational psychology today? The view generally accepted is that educational psychology is a distinct discipline with its own theories, research methods, problems, and techniques. Educational psychologists do research on learning and teaching and, at the same time, work to improve educational policy and practice (Anderman, 2011; Pintrich, 2000). To understand as much as possible about learning and teaching, educational psychologists examine what happens when someone (a teacher or parent or software designer) teaches something (math or weaving or dancing) to someone else (student or co-worker or team) in some setting (classroom or theater or gym) (Berliner, 2006; Schwab, 1973). So educational psychologists study child and adolescent development; learning and motivation—including how people learn different academic subjects such as reading or mathematics; social and cultural influences on learning; teaching and teachers; and assessment, including testing (Alexander & Winne, 2006). But even with all this research on so many topics, are the findings of educational psychologists really that helpful for teachers? After all, most teaching is just common sense, isn't it? Let's take a few minutes to examine these questions.

Is It Just Common Sense?

In many cases, the principles set forth by educational psychologists—after spending much thought, time, and money—sound pathetically obvious. People are tempted to say, and usually do say, “Everyone knows that!” Consider these examples.

HELPING STUDENTS.

When should teachers provide help for lower-achieving students as they do class work?

Commonsense Answer.

Teachers should offer help often. After all, these lower-achieving students may not know when they need help or they may be too embarrassed to ask for help.

ANSWER BASED ON RESEARCH.

Sandra Graham (1996) found that when teachers provide help before students ask, the students and others watching are more likely to conclude that the helped student does not have the ability to succeed. The student is more likely to attribute failures to lack of ability instead of lack of effort, so motivation suffers.

SKIPPING GRADES. Should a school encourage exceptionally bright students to skip grades or to enter college early?

Commonsense Answer. No! Very intelligent students who are several years younger than their classmates are likely to be social misfits. They are neither physically nor emotionally ready for dealing with older students and would be miserable in the social situations that are so important in school, especially in the later grades.

ANSWER BASED ON RESEARCH. Maybe. The first two conclusions in the report *A Nation Deceived: How Schools Hold Back America's Brightest Children* are: (1) Acceleration is the most effective curriculum intervention for children who are gifted, and (2) for students who are bright, acceleration has long-term beneficial effects, both academically and socially (Colangelo, Assouline, & Gross, 2004). One example of the positive long-term effects is that mathematically talented students who skipped grades in elementary or secondary school were more likely to go on to earn advanced degrees and publish widely cited articles in scientific journals (Park, Lubinski, & Benbow, 2013). Whether acceleration is the best solution for a student depends on many specific individual characteristics, including the intelligence and maturity of the student as well as the other available options. For some students, moving quickly through the material and working in advanced courses with older students is a very good idea. See Chapter 4 for more on adapting teaching to students' abilities.

STUDENTS IN CONTROL. Does giving students more control over their own learning—more choices—help them learn?

Commonsense Answer. Of course! Students who choose their own learning materials and tasks will be more engaged and thus learn more.

ANSWER BASED ON RESEARCH. Not so fast! Sometimes giving students more control and choice can support learning, but sometimes not. For example, giving lower-ability students choice in learning tasks sometimes means the students just keep practicing what they already do well instead of tackling tougher assignments. This happened when hairdressing students were given choices.

The lower-ability students kept practicing easy tasks such as washing hair but were reluctant to try more difficult projects such as giving permanents. When they developed portfolios to monitor their progress and received regular coaching and advice from their teachers, the students made better choices—so guided choice and some teacher control may be useful in some situations (Kicken, Brand-Gruwel, van Merriënboer, & Slot, 2009). OBVIOUS ANSWERS? Years ago, Lily Wong (1987) demonstrated that just seeing research results in writing can make them seem obvious. She selected 12 findings from research on teaching. She presented 6 of the findings in their correct form and 6 in exactly the opposite form to both college students and experienced teachers. Both the college students and the teachers rated about half of the wrong findings as “obviously” correct. In a follow-up study, another group of subjects was shown the 12 findings and their opposites and was asked to pick which ones were correct. For 8 of the 12 findings, the subjects chose the wrong result more often than the right one. Recently, Paul Kirschner and Joren van Merriënboer (2013) made a similar point when they challenged several “urban legends” in education about the assertion that learners (like the hairdressing students just described) know best how to learn. These strongly held beliefs about students today as self-educating digital natives who can multitask, have unique learning styles, and always make good choices about how to learn *have no strong basis in research*, but they are embraced nonetheless.

You may have thought that educational psychologists spend their time discovering the obvious. The preceding examples point out the danger of this kind of thinking. When a principle is stated in simple terms, it can sound simplistic. A similar phenomenon takes place when we see a professional dancer or athlete perform; the well-trained performer makes it look easy. But we see only the results of the training, not all the work that went into mastering the individual movements. And bear in mind that any research finding—or its opposite—may sound like common sense. The issue is not what *sounds* sensible, but what is

demonstrated when the principle is put to the test in research—our next topic (Gage, 1991).

Using Research to Understand and Improve Learning

STOP & THINK Quickly, list all the different research methods you can think of. Educational psychologists design and conduct many different kinds of research studies. Some of these are *descriptive studies*—their purpose is simply to describe events in a particular class or several classes.

CORRELATION STUDIES. Often, the results of descriptive studies include reports of correlations. We will take a minute to examine this concept, because you will encounter many correlations in the coming chapters. A *correlation* is a number that indicates both the strength and the direction of a relationship between two events or measurements. Correlations range from 1.00 to -1.00 . The closer the correlation is to either 1.00 or -1.00 , the stronger the relationship. For example, the correlation between weight and height is about .70 (a strong relationship); the correlation between weight and number of languages spoken is about .00 (no relationship at all). The sign of the correlation tells the direction of the relationship. A *positive correlation* indicates that the two factors increase or decrease together. As one gets larger, so does the other. Weight and height are positively correlated because greater weight tends to be associated with greater height. A *negative correlation* means that increases in one factor are related to *decreases* in the other, for example, the less you pay for a theater or concert ticket, the greater your distance from the stage. It is important to note that correlations do not prove cause and effect (see Figure 1.3). For example, weight and height are correlated—heavier people tend to be taller than lighter people. But gaining weight obviously does not cause you to grow taller. Knowing a person's weight simply allows you to make a general prediction about that person's height. Educational psychologists identify correlations so they can make predictions about important events in the classroom.

EXPERIMENTAL STUDIES. A second type of research—*experimentation*—allows educational psychologists to go beyond predictions and actually study cause and effect. Instead of just observing and describing an existing situation, the investigators introduce changes and note the results. First, a number of comparable groups of participants are created. In psychological research, the term *participants* (also called *subjects*) generally refers to the people being studied—such as teachers or eighth graders. One common way to make sure that groups of participants are essentially the same is to assign each person to a group using a random procedure. *Random* means each participant has an equal chance of being in any group. *Quasi-experimental studies* meet most of the criteria for true experiments, with the important exception that the participants are not assigned

to groups at random. Instead, existing groups such as classes or schools participate in the experiments. In experiments or quasi-experiments, for one or more of the groups studied, the experimenters change some aspect of the situation to see if this change or “treatment” has an expected effect. The results in each group are then compared. Usually, statistical tests are conducted. When differences are described as *statistically significant*, it means that they probably did not happen simply by chance. For example, if you see $p < .05$ in a study, this indicates that the result reported could happen by chance less than 5 times out of 100, and $p < .01$ means less than 1 time in 100.

A number of the studies we will examine attempt to identify cause-and-effect relationships by asking questions such as this: If some teachers receive training in how to teach spelling using word parts (*cause*), will their students become better spellers than students whose teachers did not receive training (*effect*)? This actually was a *field experiment* because it took place in real classrooms and not a simulated laboratory situation. In addition, it was a *quasi-experiment* because the students were in existing classes and had not been randomly assigned to teachers, so we cannot be certain the experimental and control groups were the same before the teachers received their training. The researchers handled this by looking at improvement in spelling, not just final achievement level, and the results showed that the training worked (Hurry et al., 2005).

SINGLE-SUBJECT EXPERIMENTAL DESIGNS.

The goal of *single-subject experimental studies* is to determine the effects of a therapy, teaching method, or other intervention. One common approach is to observe the individual for a baseline period (A) and assess the behavior of interest; try an intervention (B) and note the results; then remove the intervention and go back to baseline conditions (A); and finally reinstate the intervention (B). This form of single-subject design is called an ABAB experiment. For example, a teacher might record how much time students are out of their seats without permission during a week-long baseline period (A), and then try ignoring those who are out of their seats, but praising those who are seated and record how many are wandering out of their seats for the week (B). Next, the teacher returns to baseline conditions (A) and records results, and then reinstates the praise-and-ignore strategy (B) (Landrum & Kauffman, 2006). When this intervention was first tested, the praise-and-ignore strategy proved effective in increasing the time students spent in their seats (C. H. Madsen, Becker, Thomas, Koser, & Plager, 1968).

CLINICAL INTERVIEWS AND CASE STUDIES.

Jean Piaget pioneered an approach called the *clinical interview* to understand children’s thinking. The clinical interview uses open-ended questioning to probe responses and to follow up on answers. Questions go wherever the child’s responses lead. Here is an example of a clinical interview with a 7-year-old. Piaget is trying to understand the child’s thinking about lies and truth, so he asks, “What is a lie?” “What is a

lie?—*What isn't true. What they say that they haven't done.*—Guess how old I am.—*Twenty.* No, I'm thirty.—Was that a lie you told me?—*I didn't do it on purpose.*— I know. But is it a lie all the same, or not?—*Yes, it is the same, because I didn't say how old you were.*—Is it a lie?—*Yes, because I didn't speak the truth.*—Ought you be punished?—*No.*—Was it naughty or not naughty?—*Not so naughty.*—Why?—*Because I spoke the truth afterwards!*” (Piaget, 1965, p. 144). Researchers also may employ case studies. A case study investigates one person or situation in depth. For example, Benjamin Bloom and his colleagues conducted in-depth studies of highly accomplished concert pianists, sculptors, Olympic swimmers, tennis players, mathematicians, and neurologists to try to understand what factors supported the development of outstanding talent. The researchers interviewed family members, teachers, friends, and coaches to build an extensive case study of each of these highly accomplished individuals (B. S. Bloom et al., 1985). Some educators recommend case study methods to identify students for gifted programs because the information gathered is richer than just test scores.

ETHNOGRAPHY. Ethnographic methods, borrowed from anthropology, involve studying the naturally occurring events in the life of a group to understand the meaning of these events to the people involved. In educational psychology research, ethnographies might study how students in different cultural groups are viewed by their peers or how teachers' beliefs about students' abilities affect classroom interactions. In some studies the researcher uses participant observation, actually participating in the group, to understand the actions from the perspectives of the people in the situation. Teachers can do their own informal ethnographies to understand life in their classrooms.

PROFESSIONAL KNOWLEDGE AND SKILLS

Effective teachers have good command of their subject matter and a solid core of teaching skills. They know how to use instructional strategies supported by methods of goal setting, instructional planning, and classroom management. In addition, they understand how to motivate students and how to communicate and work effectively with those of varying skill levels and culturally diverse backgrounds. Effective teachers also employ appropriate levels of technology in the classroom.

Subject-Matter Competence

In their wish lists of teacher characteristics, secondary school students increasingly have mentioned “teacher knowledge of their subjects” (NAASP, 1997). Having a thoughtful, flexible, conceptual understanding of subject matter is indispensable for being an effective teacher. Of course, knowledge of subject matter includes more than just facts, terms, and general concepts. It also includes knowledge about organizing ideas, connections among ideas, ways of thinking

and arguing, patterns of change within a discipline, beliefs about a discipline, and the ability to carry ideas from one discipline to another. Clearly, having a deep understanding of the subject matter is an important aspect of being a competent teacher (Abruscato & DeRosa, 2010; Eby, Herrell, & Jordan, 2011).

Instructional Strategies

At a broad level, two major approaches characterize how teachers teach: constructivist and direct instruction. The constructivist approach was at the center of William James' and John Dewey's philosophies of education. The direct instruction approach has more in common with E. L. Thorndike's view. The **constructivist approach** is a learner-centered approach that emphasizes the importance of individuals actively constructing their knowledge and understanding with guidance from the teacher. In the constructivist view, teachers should not attempt to simply pour information into children's minds. Rather, children should be encouraged to explore their world, discover knowledge, reflect, and think critically with careful monitoring and meaningful guidance from the teacher (Bonney & Sternberg, 2011; Lawson, 2010). Constructivists argue that for too long children have been required to sit still, be passive learners, and rote memorize irrelevant as well as relevant information (Gredler, 2009). Today constructivism may include an emphasis on *collaboration*—children working with each other in their efforts to know and understand (Slavin, 2011; Wentzel & Watkins, 2011). A teacher with a constructivist instructional philosophy would not have children memorize information rote but would give them opportunities to meaningfully construct knowledge and understand the material while guiding their learning (Johnson, 2010). By contrast, the **direct instruction approach** is a structured, teacher-centered approach characterized by teacher direction and control, high teacher expectations for students' progress, maximum time spent by students on academic tasks, and efforts by the teacher to keep negative affect to a minimum. An important goal in the direct instruction approach is maximizing student learning time (Estes, Mintz, & Gunter, 2011).