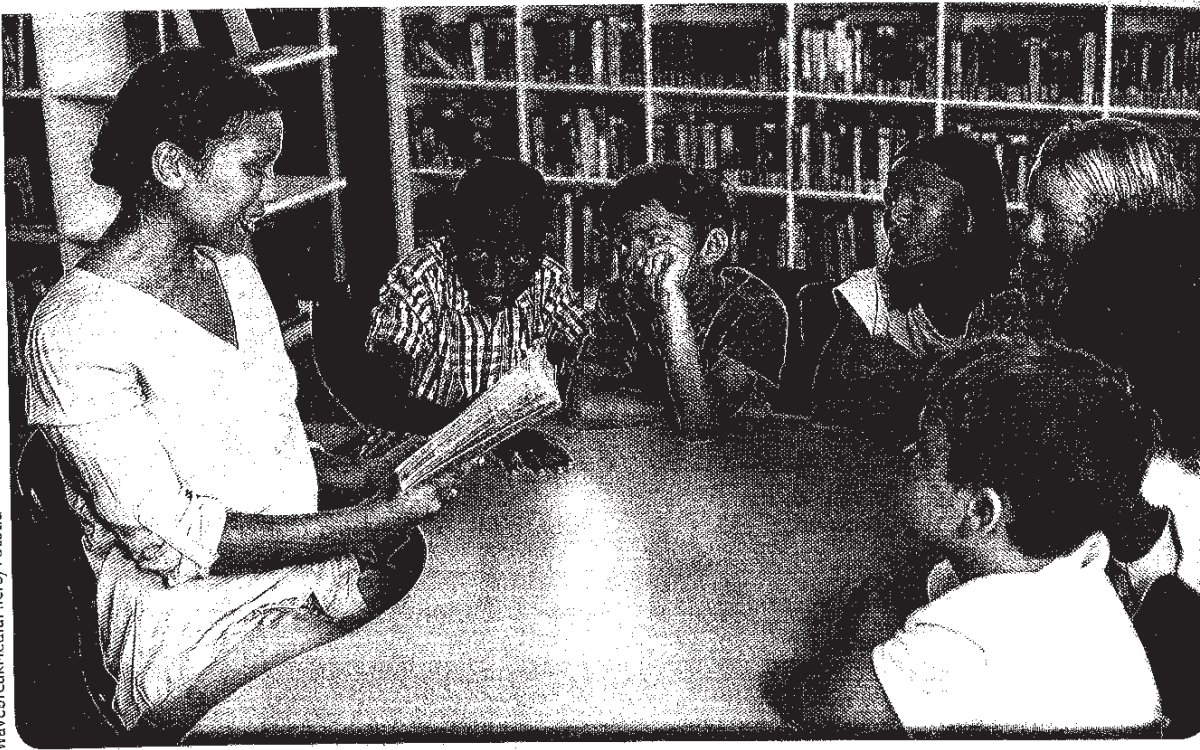


EDUCATIONAL PSYCHOLOGY

THEORY AND PRACTICE

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CHAPTER ONE

Educational Psychology: A Foundation for Teaching

CHAPTER OUTLINE

What Makes a Good Teacher?

Knowing the Subject Matters
(But So Does Teaching Skill)

Mastering Teaching Skills

Can Good Teaching Be Taught?

The Intentional Teacher

21st Century Skills

Common Core and College- and
Career-Ready Standards

What Is the Role of Research in Educational
Psychology?

The Goal of Research in Educational Psychology

The Value of Research in Educational Psychology to
You the Teacher

Teaching as Decision Making

Research + Common Sense = Effective Teaching

LEARNING OUTCOMES

At the end of this chapter, you should be able to:

- 1.1 Identify attributes of effective teachers
- 1.2 Describe the role of educational research in informing classroom practice
- 1.3 Discuss how you can become an intentional teacher

CHAPTER OUTLINE (CONTINUED)

Research on Effective Programs

Impact of Research on Educational Practice

How Can I Become an Intentional Teacher?

Teacher Certification

Beyond Certification

Ellen Mathis, a new teacher, is trying to teach creative writing to her third-grade class, but things are just not going the way she'd hoped. Her students are not producing much, and what they do write is not very imaginative and full of errors. For example, she recently assigned a composition on "My Summer Vacation," and all one of her students wrote was "On my summer vacation I got a dog and we went swimming and I got stinged by a bee."

Ellen wonders whether her students are just not ready for writing and need several months of work on such skills as capitalization, punctuation, and usage before she tries another writing assignment. However, one day Ellen notices some compositions in the hall outside of Leah Washington's class. Leah's third-graders are just like Ellen's, but their compositions are fabulous. The students wrote pages of interesting material on an astonishing array of topics. At the end of the day, Ellen catches Leah in the hall. "How do you get your kids to write such great compositions?" she asks.

Leah explains how she first got her children writing on topics they cared about and then gradually introduced "mini-lessons" to help them become better authors. She had the students work in small groups and help each other plan compositions. Then the students critiqued and helped edit one another's drafts, before finally "publishing" final versions.

"I'll tell you what," Leah offers. "I'll schedule my next writing class during your planning period. Come see what we're doing."

Ellen agrees. When the time comes, she walks into Leah's class and is overwhelmed by what she sees. Children are writing everywhere: on the floor, in groups, at tables. Many are talking with partners. Leah is conferencing with individual children. Ellen looks over the children's shoulders and sees one student writing about her pets, another writing a gory story about zombies, and another writing about a dream. Marta Delgado, a Hispanic student, is writing a funny story about her second-grade teacher's attempts to speak Spanish. One student is even writing a very good story about her summer vacation!

After school, Ellen meets with Leah, bursting with questions. "How did you get students to do all that writing? How can you manage all that noise and activity? How did you learn to do this?"

"I did go to a series of workshops on teaching writing," admits Leah. "But if you think about it, everything I'm doing is basic educational psychology."

Ellen is amazed. "Educational psychology? I took that course in college. I got an A in it! But I don't see what it has to do with your writing program."

"Well, let's see," said Leah. "To begin with, I'm using a lot of motivational strategies I learned in ed psych. For instance, when I started my writing instruction this year, I read students some funny and intriguing stories written by other classes, to arouse their curiosity. I got them motivated by letting them write about whatever they wanted, and also by having 'writing celebrations' in which students read their finished compositions to the class for applause and comments. My educational psychology professor was always talking about adapting to students' needs. I do this by conferencing with students and helping them with the specific problems they're having. I first learned about cooperative learning in ed psych, and later on I took some workshops on it. I use cooperative learning groups to let students give each other immediate feedback on their writing, to let them model effective writing for each other, and to get them to encourage each other to write. The groups also solve a lot of my management problems by keeping each other on task and dealing with many classroom routines. I remember that we learned about evaluation in ed psych. I use a flexible form of evaluation. Everybody eventually gets an A, but only when their composition meets a high standard, which may take many drafts."

Ellen is impressed. She and Leah arrange to visit each other's classes a few more times to exchange ideas and observations, and in time, Ellen's writers are almost as good as Leah's. But what most impresses her is the idea that educational psychology can be useful in her day-to-day teaching. She drags out her old textbook and finds that concepts that

(continued)

had seemed theoretical and abstract in her ed psych class actually help her think about current teaching challenges.

USING YOUR EXPERIENCE

CREATIVE THINKING Based on Leah's explanation of her writing instruction, brainstorm with one or more partners

about educational psychology—what it is and what you will learn this semester. Guidelines: (1) The more ideas you generate, the better; (2) build on others' ideas as well as combining them; and (3) make no evaluation of ideas at this time. Take this list out a few times during the semester to review, evaluate, or even add ideas.

InTASC 3

Learning Environments

InTASC 8

Instructional Strategies

InTASC 10

Leadership and Collaboration

What is **educational psychology**? Educational psychology is the study of learners, learning, and teaching. However, for students who are or expect to be teachers, educational psychology is something more. It is the accumulated knowledge, wisdom, and seat-of-the-pants theory that every teacher should possess to intelligently solve the daily problems of teaching. Educational psychology cannot tell you as a teacher what to do, but it can give you the principles to use in making a good decision and a language to discuss your experiences and thinking (Ormrod, 2016; Woolfolk, Winne, & Perry, 2015). Consider the case of Ellen Mathis and Leah Washington. Nothing in this or any other educational psychology text will tell you exactly how to teach creative writing to a particular group of third-graders. However, Leah uses concepts of educational psychology to consider how she will teach writing and then to interpret and solve problems she runs into, as well as to explain to Ellen what she is doing. Educational psychologists carry out research on the nature of students and on effective methods of teaching in order to help educators understand principles of learning and give them the information they need to think critically about their craft and make teaching decisions that will work for their students.

WHAT MAKES A GOOD TEACHER?

Everyone knows that good teaching matters. One recent study found, for example, that a single year with an outstanding (top 5%) teacher adds \$50,000 to a student's lifetime earnings! (Chetty, Friedman, & Rockoff, 2014). But what is it that makes a good teacher so effective? Is it warmth, humor, and the ability to care about students and value their diversity? Is it planning, hard work, and self-discipline? What about leadership, enthusiasm, a contagious love of learning, and speaking ability? Most people would agree that all of these qualities are needed to make a good teacher, and they would certainly be correct. But these qualities are not enough.

Knowing the Subject Matters (But So Does Teaching Skill)

There is an old joke that goes like this:

Question: What do you need to know to be able to teach a horse?

Answer: More than the horse!

This joke makes the obvious point that the first thing a teacher must have is some knowledge or skills that the learner does not have; you must know the subject matter you plan to teach. But if you think about teaching horses (or children), you will soon realize that although subject matter knowledge is necessary, it is not enough. A rancher may have a good idea of how a horse is supposed to act and what a horse is supposed to be able to do, but if he doesn't have the skills to make an untrained, scared, and unfriendly animal into a good saddle horse, he's going to end up with nothing but broken ribs and teeth marks for his trouble. Children are a lot smarter and a little more forgiving than horses, but teaching them has this in common with teaching horses: Knowledge of how to transmit information and skills is at least as important as knowledge of the information and skills themselves. We have all had teachers who were brilliant and thoroughly knowledgeable in their fields but who could not teach. Ellen Mathis may know as much as Leah Washington about what good writing should be, but she started off with a lot to learn about how to get third-graders to write well.

InTASC 4

Content Knowledge

InTASC 5

Application of Content

For effective teaching, subject matter knowledge is not a question of being a walking encyclopedia. Libraries of books and the magic of the Internet make vast amounts of knowledge readily available, so walking encyclopedias are not much in demand these days. What makes teachers effective is that they not only know their subjects, but also can communicate their knowledge to students. The celebrated high school math teacher Jaime Escalante taught the concept of positive and negative numbers to students in a Los Angeles barrio by explaining that when you dig a hole, you might call the pile of dirt $+1$, the hole -1 . What do you get when you put the dirt back in the hole? Zero. Escalante's ability to relate the abstract concept of positive and negative numbers to everyday experience is one example of how the ability to communicate knowledge goes far beyond simply knowing the facts.

Mastering Teaching Skills

The link between what a teacher wants students to learn and students' actual learning is called *instruction*, or **pedagogy**. Effective instruction is not a simple matter of one person with more knowledge transmitting that knowledge to another (Baumert et al., 2010; Gess-Newsome, 2012). If telling were teaching, this book would be unnecessary. Rather, effective instruction demands the use of many strategies.

For example, suppose Paula Wilson wants to teach a lesson on statistics to a diverse class of fourth-graders. To do so, Paula must accomplish many related tasks. She must make sure that the class is orderly and that students know what behavior is expected of them. She must find out whether students have the prerequisite skills; for example, students need to be able to add and divide to find averages. If any do not, Paula must find a way to teach students those skills. She must engage students in activities that lead them toward an understanding of statistics, such as having students roll dice, play cards, or collect data from experiments; and she must use teaching strategies that help students remember what they have been taught. The lessons should also take into account the intellectual and social characteristics of students in the fourth grade and the intellectual, social, and cultural characteristics of these particular students. Paula must make sure that students are interested in the lesson and motivated to learn statistics. To see whether students are learning what is being taught, she may ask questions or use quizzes or have students demonstrate their understanding by setting up and interpreting experiments, and she must respond appropriately if these assessments show that students are having problems. After the series of lessons on statistics ends, Paula should review this topic from time to time to ensure that it is remembered.

These tasks—motivating students, managing the classroom, assessing prior knowledge, communicating ideas effectively, taking into account the characteristics of the learners, assessing learning outcomes, and reviewing information—must be attended to at all levels of education, in or out of schools. They apply as much to the training of astronauts as to the teaching of reading. How these tasks are accomplished, however, differs widely according to the ages of the students, the objectives of instruction, and other factors.

What makes a good teacher is the ability to carry out all the tasks involved in effective instruction. Warmth, enthusiasm, and caring are essential (Cornelius-White, 2007; Eisner, 2006; Marzano, 2011b), as are subject matter knowledge and understanding of how children learn (Baumert et al., 2010; Carlisle et al., 2011; Wiggins & McTighe, 2007). But it is the successful accomplishment of all the tasks of teaching that makes for instructional effectiveness.

Can Good Teaching Be Taught?

Some people think that good teachers are born that way. Outstanding teachers sometimes seem to have a magic, a charisma that mere mortals could never hope to achieve. Yet research has begun to identify the specific behaviors and skills that make a “magic” teacher (Borman & Kimball, 2005). An outstanding teacher does nothing that any other teacher cannot also do—it is just a question of knowing the principles of effective teaching and how to apply them. Take one small example: In a high school history class, two students in the back of the class are whispering to each other, and they are not discussing the Treaty of Paris! The teacher slowly walks toward them without looking, continuing his lesson as he walks. The students stop whispering and pay attention. If you didn't know what to look for, you might miss this brief but critical interchange and

InTASC 2

**Learning
Differences**

InTASC 6

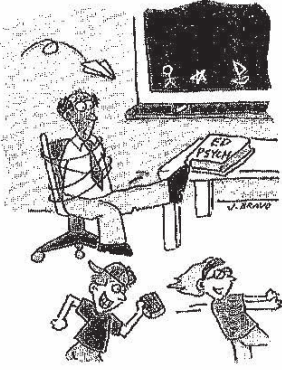
Assessment

InTASC 7

**Planning
for Instruction**

Connections 1.1

For more on effective instruction, see Chapter 7. Pedagogical strategies are also presented throughout the text in features titled The Intentional Teacher.



"If only I could get to my ed psych text . . ."

believe that the teacher just has a way with students, a knack for keeping their attention. But the teacher is simply applying principles of classroom management that anyone could learn: Maintain momentum in the lesson, deal with behavior problems by using the mildest intervention that will work, and resolve minor problems before they become major ones. When Jaime Escalante gave the example of digging a hole to illustrate the concept of positive and negative numbers, he was also applying several important principles of educational psychology: Make abstract ideas concrete by using many examples, relate the content of instruction to the students' backgrounds, state rules, give examples, and then restate rules.

Can good teaching be taught? The answer is definitely yes (Ball & Forzani, 2010). Good teaching has to be observed and practiced, but there are principles of good teaching that teachers need to know, which can then be applied in the classroom. The major components of effective instruction are summarized in Figure 1.1.

The Intentional Teacher

There is no formula for good teaching, no seven steps to Teacher of the Year. Teaching involves planning and preparation, and then dozens of decisions every hour. Yet one attribute seems to be characteristic of outstanding teachers: **intentionality**. Intentionality means doing things for a reason, on purpose. Intentional teachers constantly think about the outcomes they want for their students and about how each decision they make moves children toward those outcomes (Fisher & Frey, 2011). Intentional teachers know that maximum learning does not happen by chance.

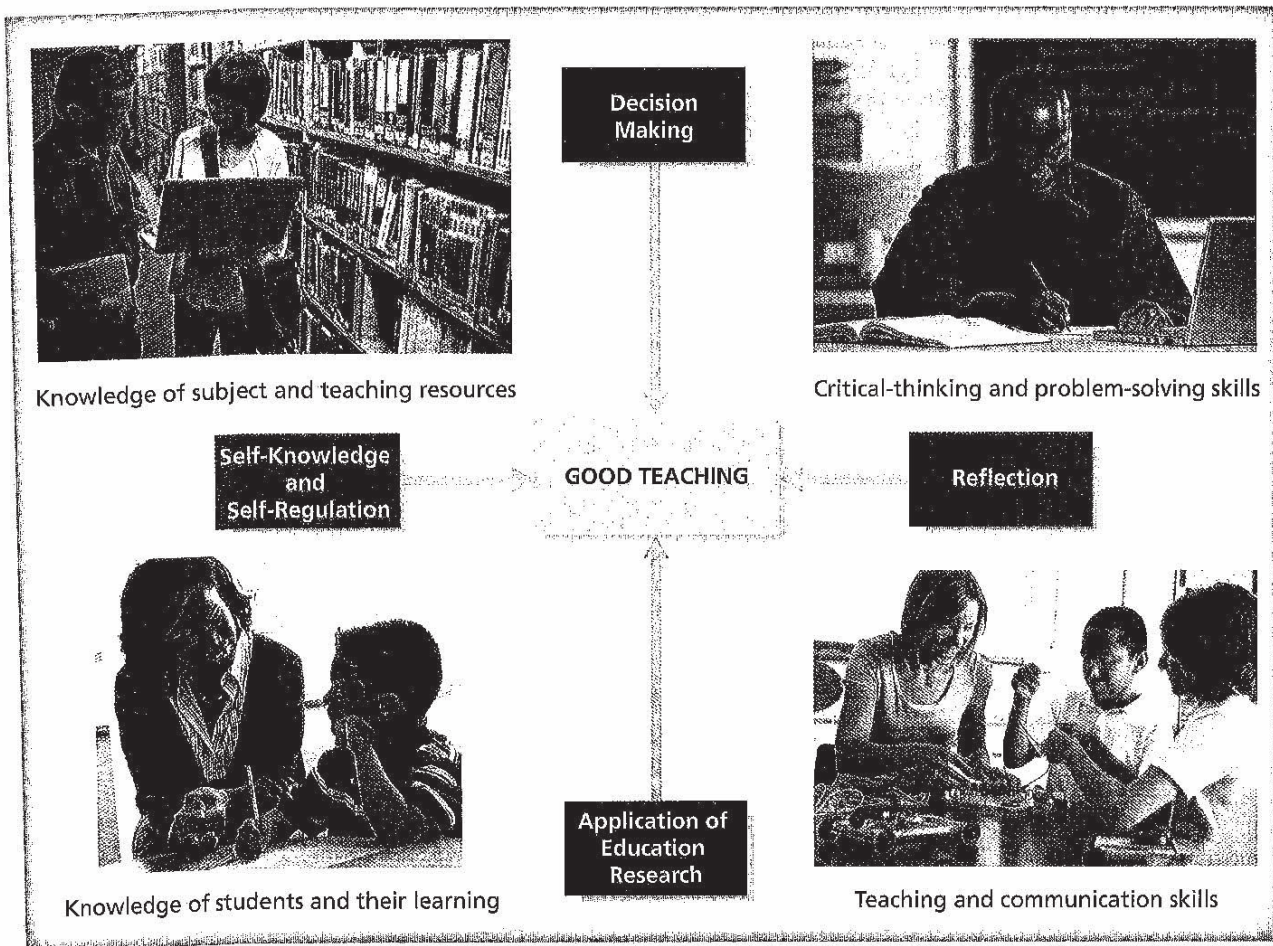


FIGURE 1.1 • Components of Good Teaching

Yes, children do learn in unplanned ways all the time, and many will learn from even the most chaotic lesson. But to really challenge students, to get their best efforts, to help them make conceptual leaps and organize and retain new knowledge, teachers need to be intentional: purposeful, thoughtful, and flexible, without ever losing sight of their goals for every child.

The idea that teachers should always do things for a reason seems obvious. Yet in practice, it is difficult to constantly make certain that all students are engaged in activities that lead to important learning outcomes. Teachers very frequently fall into strategies that they themselves would recognize, on reflection, as being time fillers rather than instructionally essential activities. For example, an otherwise outstanding third-grade teacher once assigned seatwork to one of her reading groups. The children were given two sheets of paper with words in squares. Their task was to cut out the squares on one sheet and then paste them onto synonyms on the other. When all the words were pasted correctly, lines on the pasted squares formed an outline of a cat, which the children were then to color. Once the children pasted a few squares, the puzzle became clear, so they could paste the remainder without paying any attention to the words themselves. For almost an hour of precious class time, these children happily cut, pasted, and colored—not high-priority skills for third-graders. The teacher would have said that the objective was for children to learn or practice synonyms, of course; but in fact the activity could not possibly have moved the children forward on that skill. Similarly, many teachers have one child laboriously work a problem on a whiteboard while the rest of the class has nothing important to do. Some secondary teachers spend most of the class period going over homework and classwork and end up doing very little teaching of new content. Again, these may be excellent teachers in other ways, but they sometimes lose sight of what they are trying to achieve and how they are going to achieve it.

Intentional teachers are constantly asking themselves what goals they and their students are trying to accomplish. Is each portion of their lesson appropriate to students' background knowledge, skills, and needs? Is each activity or assignment clearly related to a valued outcome? Is each instructional minute used wisely and well? An intentional teacher trying to build students' synonym skills might have them work in pairs to master a set of synonyms in preparation for individual quizzes. An intentional teacher might have all children work a given problem while one works at the board, so that all can compare answers and strategies together. An intentional teacher might quickly give homework answers for students to check themselves, ask for a show of hands for correct answers, and then review and reteach only those exercises missed by many students to save time for teaching of new content. An intentional teacher uses a wide variety of instructional methods, experiences, assignments, and materials to be sure that children are achieving all sorts of cognitive objectives, from knowledge to application to creativity, and that at the same time children are learning important affective objectives, such as love of learning, respect for others, and personal responsibility. An intentional teacher constantly reflects on his or her practices and outcomes (Fisher & Frey, 2011; Marzano, 2011b).

Research finds that one of the most powerful predictors of a teacher's impact on students is the belief that what he or she does makes a difference. This belief, called **teacher efficacy** (Thurlings, Evers, & Vermeulen, 2015; Woolfolk-Hoy, Hoy, & Davis, 2009), is at the heart of what it means to be an intentional teacher. Teachers who believe that success in school is almost entirely due to children's inborn intelligence, home environment, or other factors that teachers cannot influence are unlikely to teach in the same way as those who believe that their own efforts are the key to children's learning. An intentional teacher, one who has a strong belief in her or his efficacy, is more likely to put forth consistent effort, to persist in the face of obstacles, and to keep trying relentlessly until every student succeeds (Farr, 2010). Intentional teachers achieve a sense of efficacy by constantly assessing the results of their instruction; trying new strategies if their initial instruction doesn't work; and continually seeking ideas from colleagues, books, online resources, magazines, workshops, and other sources to enrich and solidify their teaching skills (Corbett, Wilson, & Williams, 2005). Their sense of efficacy is one of the major factors behind teachers who are innovative and embrace change (Thurlings et al., 2015). Collective efficacy can have a particularly strong impact on student achievement (Woolfolk-Hoy et al., 2009). Groups of teachers, such as the entire faculty of an elementary school or all teachers in a secondary academic department, can attain collective efficacy by working together to examine their practices and outcomes, seeking professional development, and helping each other succeed (see Borko, 2004; Sachs, 2000; York-Barr, Sommers, & Hur, 2008). Countries that are particularly successful in helping all children

InTASC 1

Learner
Development

InTASC 2

Learning
Differences

InTASC 5

Application
of Content



MyEdLab

Video Example 1.1

Two first-grade teachers are interviewed about their instructional methods. Note how the interview process encourages the teachers to reflect on their own teaching. Teachers can ask themselves similar questions, leading to informed reflection.

succeed are ones that provide opportunities for teachers to work together and to take collective responsibility for their students (Sahlberg, 2012; Sawchuk, 2012; Stewart, 2010; Tucker, 2012).

The most important purpose of this book is to give you, tomorrow's teacher, the intellectual grounding in research, theory, and practical wisdom you will need in order to become an intentional, effective teacher. To plan and carry out effective lessons, discussions, projects, and other learning experiences, teachers need to know a great deal. Besides knowing your subjects, you need to understand the developmental levels and needs of your students. You need to understand how learning, memory, problem-solving skill, and creativity are acquired and how to promote their acquisition. You need to know how to set objectives, organize activities designed to help students attain those objectives, and assess students' progress toward them. You need to know how to motivate children, how to use class time effectively, and how to respond to individual differences among students. Intentional teachers are continually experimenting with strategies to solve problems of instruction and then observing the results of their actions to see if they were effective (Schunk, 2016). They pay attention to research on effective teaching and incorporate research findings in their daily teaching (Fleischman, 2006). Like Leah Washington in the vignette that opened this chapter, intentional teachers are constantly combining their knowledge of principles of educational psychology, their experience, and their creativity to make instructional decisions and help children become enthusiastic and effective learners.

This text highlights the ideas that are central to educational psychology and the related research. It also presents many examples of how these ideas apply in practice, emphasizing teaching practices, not only theory or suggestions, that have been evaluated and found to be effective. The text is designed to help you develop skills in **critical thinking** for teaching: a logical and systematic approach to the many dilemmas that are found in practice and research. No text can provide all the right answers for teaching, but this one tries to pose the right questions and to engage you by presenting realistic alternatives and the concepts and research behind them.

Many studies have looked at the differences between expert and novice teachers and between more and less effective teachers. One theme runs through these studies: Expert teachers are critical thinkers (Hogan, Rabinowitz, & Craven, 2003; Mosenthal, Lipson, Torncello, Russ, & Mekkelsen, 2004; Shulman, 2000). Intentional teachers are constantly upgrading and examining their own teaching practices, reading and attending conferences to learn new ideas, and using their own students' responses to guide their instructional decisions. There's an old saying to the effect that there are teachers with 20 years of experience and there are teachers with 1 year of experience 20 times. Teachers who get better each year are the ones who are open to new ideas and who look at their own teaching critically. Perhaps the most important goal of this book is to get you in the habit of using informed reflection to become one of tomorrow's expert teachers.

The importance of intentional teaching and critical thinking becomes even clearer when you reflect on the changes that will be taking place in teaching over the next 10–20 years. By 2030, the work of teachers will be utterly transformed (see Berry et al., 2011). During your teaching career, there will be dramatic changes in the role of technology, especially as access to the Internet becomes universal. New forms of schooling beyond the physical school, and forms of teaching that blend technological and traditional teaching, are already here and will be expanding. The role of research is certain to grow, and in coming years teachers will be able to choose from an array of programs, each of which has been scientifically evaluated and found to be effective (Slavin, 2013). New models of teacher preparation and inservice will become commonplace (Cochran-Smith & Power, 2010; Rose, 2010). Teachers are being held more and more accountable for their students' learning (Danielson, 2010; Darling-Hammond et al., 2012; David, 2010b; Schmoker, 2012; Stumbo & McWalters, 2010). All of these changes mean that teachers in 2030 will have to be flexible, resilient, and capable of using new approaches to new problems (Christenbury, 2010; Steele, 2010). For a long time, teachers could always fall back on their own experiences as students, and teach like their own teachers taught them. Those days are gone.

21st Century Skills

Back when I was growing up, the 21st century was expected to be totally different from the 20th. The Jetsons, for example, projected an image of flying cars, robots in every home, and all sorts of amazing technology. Serious futurologists expected more or less the same. The reality has turned

out to be a little more down-to-earth, but nevertheless, developments in technology and globalization have dramatically changed key aspects of our economy and society. In particular, economic security, both for individuals and for nations, depends more than ever on innovation, creativity, and design. The ability to work cooperatively with others, to see many solutions to problems, and to be flexible and responsive to rapid change are all becoming keys to success, as traditional “strong back” jobs disappear to be replaced by “strong mind” careers.

All of these changes have profound significance for education. They lead educators to put a strong value on skills, attitudes, and ways of working that more closely resemble new workforce conditions. It should go without saying that students need extensive experience with technology, but that is not enough. They also need extensive experience working in groups, solving problems, and learning to read critically and think creatively (Beers, 2011; Marzano & Heflebower, 2012). Ironically, these kinds of experiences are at the core of the progressive philosophy of John Dewey and many others, which date back to the beginning of the 20th century (Rotherham & Willingham, 2009). What has changed is that these ideas are no longer optional, because they correspond so closely to today’s needs. Moreover, these skills are now needed for everyone, from the executive office to the shop floor.

Consistent with this line of reasoning, a Partnership for 21st Century Skills has been created to promote policies defining and supporting student outcomes that align with today’s needs (see P. Johnson, 2009; Partnership for 21st Century Skills, 2009). The Partnership has created a framework that organizes 21st century skills in four categories, synthesizing suggestions from dozens of stakeholder groups at all levels of education:

1. Core subjects and 21st century themes (such as language arts, mathematics, science, global awareness, and financial literacy) (see Cutshall, 2009; Hersh, 2009; Trefil & O’Brien-Trefil, 2009; Zhao, 2009)
2. Learning and innovation skills (such as creativity, critical thinking, and problem solving) (see Azzam, 2009; Graseck, 2009)
3. Information, media, and technology skills (see Barab, Gresalfi, & Arici, 2009; Ferriter, 2009a, b; Sprenger, 2009)
4. Life and career skills (such as initiative and self-direction) (see Gerdes & Ljung, 2009)

Common Core and College- and Career-Ready Standards

For many years, each state in the United States has had its own standards, which are expectations of what each child should know and be able to do in a given subject at a given age. Each state has also had its own assessments of attainment of those standards, generally using multiple-choice tests, and its own criteria for passing. These multiple-choice tests have been criticized in their own right for assessing only the most basic of skills, and the diversity of standards and assessments has led to wild differences between states in passing rates on state tests.

All of this is changing, and the changes will have a big impact on your life as a teacher. Many states have adopted **Common Core State Standards**, based in large part on the 21st century skills discussed earlier. Two large consortia of states have adopted specific measures aligned with the Common Core State Standards. These are called Smarter Balanced and PARCC (see Chapter 14 for descriptions). Other states have created their own college- and career-ready standards, which are often similar to Common Core assessments. These assessments are intended to indicate how students are moving toward success in college and careers, and to move teachers and schools toward innovative approaches to teaching in line with preparation for success in colleges and the workplace in the 21st century. The standards emphasize the following (see Kendall, 2011):

- Flexible, creative problem solving
- Ability to use technology
- Ability to participate in active discussions in one-to-one, small-group, and whole-class settings
- Focus on writing, speaking, and argumentation in groups
- Alignment of standards with college and career readiness

- Focus in reading on classic texts as well as new and multicultural texts
- Focus in math on problem solving in real-world contexts, mathematical reasoning, precision, and argumentation

The Common Core State Standards and other **college- and career-ready standards** are controversial, and they may or may not matter to your students' learning (see Barton, 2010; Lovelless, 2012; and Schmidt & Huang, 2012 for opposing views), but they certainly matter to teachers and administrators, especially in states whose assessment systems are based on them. In preparation for Common Core and other college- and career-ready assessments, states and districts are doing a lot of professional development (Silver, Dewing, & Perini, 2012) and publishers are changing textbooks and software to match the standards. These changes are discussed in Chapter 14.

Most chapters of this text include a feature that presents information on Common Core and college- and career-ready standards and how they are related to the topic of the chapter. Beyond this, the Common Core and college- and career-ready standards are discussed throughout the main parts of the text, as appropriate.

All too often, educational policies and practices lag behind changes in society and the economy. The emphasis on the Common Core and college- and career-ready standards is intended to help you think more deeply about how each of the decisions you make about curriculum, teaching methods, use of technology, and assessments contributes to helping students succeed, not only by today's standards, but also in tomorrow's world.

ON THE WEB



For more on the Common Core, see ccsso.org, www.corestandards.org, www.nea.org, and engageny.org. For more on college and career-ready standards, see CCSSO (2015) and U.S. Department of Education (2015). Also, most state departments of education now discuss Common Core and/or college- and career-ready standards on their websites.

MyEdLab Self-Check 1.1

WHAT IS THE ROLE OF RESEARCH IN EDUCATIONAL PSYCHOLOGY?

Teachers who are intentional, critical thinkers are likely to enter classrooms equipped with knowledge about research in educational psychology. Every year, educational psychologists discover or refine principles of teaching and learning that are useful for practicing teachers. Some of these principles are just common sense backed up with evidence, but others are more surprising. One problem educational psychologists face is that almost everyone has ideas on the subject of educational psychology. Most adults have spent many years in schools watching what teachers do. Add to that a certain amount of knowledge of human nature, and *voilà!* Everyone is an amateur educational psychologist. For this reason, professional educational psychologists are often accused of studying the obvious (see Ball & Forzani, 2007).

However, as we have painfully learned, the obvious is not always true. For example, most people assume that if students are assigned to classes according to their ability, the resulting narrower range of abilities in a class will let the teacher adapt instruction to the specific needs of the students and thereby increase student achievement. This assumption turns out to be false. Many teachers believe that scolding students for misbehavior will improve conduct. Many students will indeed respond to a scolding by behaving better, but for others, scolding may be a reward for misbehavior that actually increases it. Some "obvious" truths even conflict with one another. For example, most people would agree that students learn better from a teacher's

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Learner
Development

InTASC 2

Learning
Differences

instruction than by working alone. This belief supports teacher-centered direct instructional strategies, in which a teacher actively works with the class as a whole. However, most people would also agree that students often need instruction tailored to their individual needs. This belief, also correct, would demand that teachers divide their time among individuals, or at least among groups of students with differing needs, which would result in some students working independently while others receive your close attention. If schools could provide tutors for every student, there would be no conflict; direct instruction and individualization could coexist. In practice, however, classrooms typically have 20 to 30 students; as a result, more direct instruction (the first goal) almost always means less individualization (the second goal). Your task as an intentional teacher is to balance these competing goals according to the needs of particular students and situations.

The Goal of Research in Educational Psychology

The goal of research in educational psychology is to carefully examine “obvious” as well as less-than-obvious questions, using objective methods to test ideas about the factors that contribute to learning (Levin, O’Donnell, & Kratochwill, 2003; McComb & Scott-Little, 2003). The products of this research are principles, laws, and theories. A **principle** explains the relationship between factors, such as the effects of alternative grading systems on student motivation. **Laws** are simply principles that have been thoroughly tested and found to apply in a wide variety of situations. A **theory** is a set of related principles and laws that explains a broad aspect of learning, behavior, or another area of interest. Without theories, the facts and principles that are discovered would be like disorganized specks on a canvas. Theories tie together these facts and principles to give us the big picture. However, the same facts and principles may be interpreted in different ways by different theorists. As in any science, progress in educational psychology is slow and uneven. A single study is rarely a breakthrough, but over time, evidence accumulates on a subject and allows theorists to refine and extend their theories.

The Value of Research in Educational Psychology to You the Teacher

It is probably true that the most important knowledge teachers gain is learned on the job—in internships, while student teaching, or during their first years in the classroom. However, you as a teacher make hundreds of decisions every day, and each decision has a theory behind it, regardless of whether you are aware of it. The quality, accuracy, and usefulness of those theories ultimately determine your success. For example, one teacher may offer a prize to the student with the best attendance, on the theory that rewarding attendance will increase it. Another may reward the student whose attendance is most improved, on the theory that it is poor attenders who most need incentives to come to class. A third may not reward anyone for attendance but instead try to increase attendance by teaching more interesting lessons. Which teacher’s plan is most likely to succeed? This depends in large part on the ability of each teacher to understand the unique combination of factors that shape the character of her or his classroom and therefore to apply the most appropriate theory.

Teaching as Decision Making

The aim of research in educational psychology is to test the various theories that guide the actions of teachers and others involved in education. There are many common situations, such as the following example, in which a teacher might use educational psychology.

Mr. Harris teaches an eighth-grade social studies class. He has a problem with Tom, who frequently misbehaves. Today, Tom makes a paper airplane and flies it across the room when Mr. Harris turns his back, to the delight of the entire class.

What should Mr. Harris do?

As an intentional teacher, Mr. Harris considers a range of options for solving this problem, each of which comes from a theory about why Tom is misbehaving and what will motivate him to behave more appropriately.

Connections 1.2

For more on effectively handling misbehavior, see Chapter 5.

Connections 1.3

For more on ability grouping, see Chapter 9.



MyEdLab

Video Example 1.2

Bob Slavin tells a story about his participation in a study that involved observing the behaviors of children with behavioral or emotional disorders. Why was his study ruined? What lesson can you learn from this example about using research to be an effective teacher?

Action

1. Reprimand Tom.
2. Ignore Tom.
3. Send Tom to the office.
4. Tell the class that it is everyone's responsibility to maintain a good learning environment and that if any student misbehaves, 5 minutes will be subtracted from recess.
5. Explain to the class that Tom's behavior is interfering with lessons that all students need to know and that his behavior goes against the rules the class set for itself at the beginning of the year.

Theory

1. A reprimand is a form of punishment. Tom will behave to avoid punishment.
2. Attention may be rewarding to Tom. Ignoring him would deprive him of this reward.
3. Being sent to the office is punishing. It also deprives Tom of the (apparent) support of his classmates.
4. Tom is misbehaving to get his classmates' attention. If the whole class loses out when he misbehaves, the class will keep him in line.
5. The class holds standards of behavior that conflict with both Tom's behavior in class and the class's reaction to it. By reminding the class of its own needs (to learn the lesson) and its own rules set at the beginning of the year, the teacher might make Tom see that the class does not really support his behavior.

Each of these actions is a common response to misbehavior. But which theory (and therefore which action) is correct?

The key might be in the fact that his classmates laugh when Tom misbehaves. This response is a clue that Tom is seeking their attention. If Mr. Harris scolds Tom, this might increase Tom's status in the eyes of his peers and thus reward his behavior. Ignoring misbehavior might be a good idea if a student were acting up to get your attention, but in this case it is apparently the class's attention that Tom is seeking. Sending Tom to the office does deprive him of his classmates' attention and therefore may be effective. But what if Tom is looking for a way to get out of class to avoid work? What if he struts out to confront the powers that be, to the obvious approval of his classmates? Making the entire class responsible for each student's behavior is likely to deprive Tom of his classmates' support and to improve his behavior; but some students may think that it is unfair to punish them for another student's misbehavior. Finally, reminding the class (and Tom) of its own interest in learning and its usual standards of behavior might work if the class does, in fact, value academic achievement and good behavior.

Research in education and psychology bears directly on the decision Mr. Harris must make. Developmental research indicates that as students enter adolescence, the peer group becomes all-important to them, and they try to establish their independence from adult control, often by flouting or ignoring rules. Basic research on behavioral learning theories shows that when a behavior is repeated many times, some reward must be encouraging the behavior, and that if the behavior is to be eliminated, the reward must first be identified and removed. This research would also suggest that Mr. Harris consider problems with the use of punishment (such as scolding) to stop undesirable behavior. Research on specific classroom management strategies has identified effective methods to use both to prevent a student like Tom from misbehaving in the first place and to deal with his misbehavior when it does occur. Finally, research on rule setting and classroom standards indicates that student participation in setting rules can help convince each student that the class as a whole values academic achievement and appropriate behavior, and that this belief can help keep individual students in line.

Armed with this information, Mr. Harris can choose a response to Tom's behavior based on an understanding of why Tom is doing what he is doing and what strategies are available to deal with the situation. He may or may not make the right choice, but because he knows several theories that could explain Tom's behavior, he will be able to observe the outcomes of his strategy and, if it is ineffective, to learn from that and try something else that will work. Research does not give Mr. Harris a specific solution; that requires his own experience and judgment. But research

does give Mr. Harris basic concepts of human behavior to help him understand Tom's motivations and an array of proven methods that might solve the problem. And using research to help him make teaching decisions is one way Mr. Harris can achieve a sense of his own efficacy as a teacher.

Research + Common Sense = Effective Teaching

As the case of Mr. Harris illustrates, no theory, no research, no book can tell teachers what to do in a given situation. Making the right decisions depends on the context within which the problem arises, the objectives you have in mind, and many other factors, all of which must be assessed in the light of educated common sense. For example, research in mathematics instruction usually finds that a rapid pace of instruction increases achievement (Good, Grouws, & Ebmeier, 1983). Yet you may quite legitimately slow down and spend a lot of time on a concept that is particularly critical or may let students take time to discover a mathematical principle on their own. It is usually much more efficient (that is, it takes less time) to teach students skills or information directly than it is to let them make discoveries for themselves, but if you want students to gain a deeper understanding of a topic or to learn how to find information or to figure things out for themselves, then the research findings about pace can be temporarily shelved.

The point is that although research in educational psychology can sometimes be translated directly to the classroom, it is best to apply the principles with a hefty dose of common sense and a clear view of what is being taught to whom and for what purpose.

Research on Effective Programs

Research in educational psychology provides evidence not only about principles of effective practice but also about the effectiveness of particular programs or practices (Fleischman, 2006). For example, in the vignette at the beginning of this chapter, Leah Washington uses a specific approach to creative writing instruction that has been extensively evaluated as a whole (Harris, Graham, & Pressley, 2001). In other words, there is evidence that, on average, children whose teachers are using such methods learn to write better than those whose teachers use more traditional approaches. There is evidence on the effectiveness of dozens of widely used programs, from methods in particular subjects to strategies for reforming entire schools. The What Works Clearinghouse (<http://ies.ed.gov/ncee/wwc/>) and the Best Evidence Encyclopedia (www.bestevidence.org) review research in all subjects and grade levels. An intentional teacher should be aware of research on programs for his or her subject and grade level and should be willing to seek out professional development opportunities in methods known to make a difference for children.

THEORY INTO PRACTICE

Teaching as Decision Making

If there were no educational problems to solve, there would be no need for teachers to function as professionals. Professionals distinguish themselves from nonprofessionals in part by the fact that they must make decisions that influence the course of their work.

You must decide (1) how to recognize problems and issues, (2) how to consider situations from multiple perspectives, (3) how to call up relevant professional knowledge to formulate actions, (4) how to take the most appropriate action, and (5) how to judge the consequences (Silver, Strong, & Perini, 2007).

For example, Ms. O'Hara has a student named Shanika in her social studies class. Most of the time, Shanika is rather quiet and withdrawn. Her permanent record indicates considerable academic ability, but a casual observer would never know it. Ms. O'Hara asks herself the following questions:

(continued)

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Learner
Development

1. What problems do I perceive in this situation? Is Shanika bored, tired, uninterested, or shy, or might her participation be inhibited by something I or others are doing or not doing? What theories of educational psychology might I consider?
2. I wonder what Shanika thinks about being in this class. Does she feel excluded? Does she care about the subject matter? Is she concerned about what I or others think about her lack of participation? Why or why not? What theories of motivation will help me make a decision?
3. What do I know from theory, research, or practice that might guide my actions to involve Shanika more directly in class activities?
4. What might I actually do in this situation to enhance Shanika's involvement?
5. How would I know if I were successful with Shanika?

If Ms. O'Hara asks and tries to answer these questions—not only in the case of Shanika, of course, but for other students as well—she will improve her chances to learn about her work by doing her work. Philosopher John Dewey taught that the problems teachers face are the natural stimuli for reflective inquiry. Intentional teachers accept challenges and think productively about them (Marzano, 2011b).

ON THE WEB

For educator-friendly reviews of research on effective programs, see bestevidence.org and ies.ed.gov (type WWC into the search engine).



Impact of Research on Educational Practice

Many researchers and educators have bemoaned the limited impact of research in educational psychology on teachers' practices (see, for example, Kennedy, 2008). Indeed, research in education has nowhere near as great an impact on educational practice as research in medicine has on medical practice (Riehl, 2006). Yet research in education does have a profound *indirect* impact on educational practice, even if teachers are not aware of it. It affects educational policies, professional development programs, and teaching materials. For example, the Tennessee class size study (Finn, Pannozzo, & Achilles, 2003), which found important effects of class size in the early grades on student achievement, had a direct impact on state and federal proposals for class size reduction (Wasley, 2002). Research on beginning reading (National Reading Panel, 2000) dramatically transformed curriculum, instruction, and professional development for this subject. Research on the effects of career academies in high schools (Kemple, 1997) has led to a substantial increase in such programs.

It is important for you to become an intelligent consumer of research and not to take every finding or every expert's pronouncement as truth from Mount Olympus (Fleischman, 2006; Gibbs, 2009; Slavin, 2011). The following section briefly describes the methods of research that most often produce findings of use to educators.



"In light of research on class size, we're not cutting class, we're helping our classmates get a better education!"

THEORY INTO PRACTICE

How to Be an Intelligent Consumer of Educational Psychology Research

Let's say you're in the market for a new car. Before laying out your hard-earned money, you'll probably review the findings from various consumer research reports. You may want to know something about how various cars have performed in crash tests, which cars have the best gas mileage, or what the trade-in values of particular models are. Before embarking on this major investment, you want to feel as confident as you can about your decision. If you've been in this situation before, you probably remember that all of your research helped you make an informed decision.

Now that you are about to enter the profession of teaching, you should apply a similar consumer orientation in your decision making (Andrews, 2014; Fleischman, 2014). As a teacher, you will be called on to make hundreds of decisions each day. Your car-buying decision is influenced by a combination of sound research findings and common sense, and your decisions about teaching and learning should follow this same pattern. Teaching and learning are complex concepts subject to a wide variety of influences, so your knowledge of relevant research will serve to guide you in making informed choices.

How can knowing the simple formula *research + common sense = effective teaching* help you to be a more intelligent consumer of educational psychology research? The following recommendations show how you can put this formula into practice:

1. **Be a consumer of relevant research.** It's obvious you can't apply what you don't know. As a professional, you should maintain a working knowledge of relevant research. In addition to your course texts, which will be excellent resources for you in the future, you should become familiar with the professional journals in your field. Teacher-oriented journals such as *Educational Leadership* and *Phi Delta Kappan* contain easy-to-read summaries of research, for example. Websites such as bestevidence.org summarize program evaluations in a user-friendly way. In addition, check out *Annual Editions: Educational Psychology*, a yearly publication that reprints articles from various professional journals. Don't overlook the value of networking with other teachers, face to face or via the Internet. The example of Ellen Mathis and Leah Washington is an excellent illustration of how collaboration can expand your knowledge of what works.
2. **Teach intentionally.** As stated earlier in this chapter, there is no recipe for the ingredients that make up a commonsense approach to teaching. However, behaviors consistent with being an intentional teacher are about as close as we can get. Intentional teachers are thoughtful. Like Mr. Harris, you should consider multiple perspectives on classroom situations. When you take action, be purposeful and think about why you do what you do. Like other intentional teachers, you can follow your actions with careful reflection, evaluating whether your actions have resulted in the desired outcomes. You probably learned about the "scientific method" sometime during high school. Intentional teachers employ such a method in teaching, formulating a working hypothesis based on observations and background knowledge, collecting data to test the hypothesis, effectively organizing and analyzing the data, drawing sound conclusions based on the data, and taking a course of action based on the conclusions. For many experienced teachers, this cycle becomes automatic and internalized. When applied systematically, these practices can serve

Certification Pointer

For teacher certification tests, you may need to show that you know how to access the professional literature, professional associations, and professional development activities to improve your teaching.



MyEdLab

Video Example 1.3

Bob Slavin describes one of his early experiences as a classroom teacher, working with an autistic boy. How is Bob's work with Mark a demonstration of critical thinking? Consider this experience, as well as that of Leah Washington in the Chapter One opening vignette. What can you learn from these experiences that will help you become an intentional teacher?

InTASC 7

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Professional Learning and Ethical Practice

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Leadership and Collaboration

(continued)

to validate research and theory and, as a result, increase your growing professional knowledge base (Schoenfeld, 2014).

3. **Share your experiences.** When you combine knowledge of research with your professional common sense, you will find yourself engaged in more effective practices. As you and your students experience success, share your findings. Avenues for dissemination are endless. In addition to publishing articles in traditional sources such as professional journals and organizational newsletters, don't overlook the importance of preparing schoolwide in-service demonstrations, papers for state and national professional conferences, and presentations to school boards. In addition, the Internet offers various newsgroups where teachers engage in ongoing discussions about their work.

MyEdLab Self-Check 1.2

HOW CAN I BECOME AN INTENTIONAL TEACHER?

Think about the best, most intentional teachers you ever had—the ones who seemed so confident, so caring, so skilled, so enthusiastic about their subject. Chances are, when they took educational psychology, they were as scared, uncertain, and overwhelmed about becoming a teacher as you might be today. Yet they kept at it and made themselves the great teachers you remember. You can do the same.

Teacher Certification

Before you can become an *intentional* teacher, you have to become a *certified* teacher. Each state, province, and country has its own requirements, but in most places you at least have to graduate from a 4-year college with a specified distribution of courses, although various alternative certification programs exist as well. You also will need to have a satisfactory student teaching experience. In most states, however, these are not enough. You also have to pass a teacher certification test, or licensure test. Many states base their requirements on the 10 principles of effective teaching shown in Figure 1.2. Developed by the Interstate Teacher Assessment and Support Consortium (InTASC), they form the basis for most teacher certification tests, whether developed by InTASC, by the Educational Testing Service (ETS), or by individual state departments of education (see Darling-Hammond, 2008).

The Praxis Series™ Professional Assessments for Beginning Teachers, developed by the Educational Testing Service, is the test most commonly used by states to certify teachers (ETS, 2012). The Praxis Series includes three categories of assessment that correlate with significant stages in teacher development. These are Praxis I: Academic Skills Assessment for entering a teacher training program, Praxis II: Subject Assessments for licensure for entering the profession, and Praxis III: Classroom Performance Assessments after the first year of teaching. Praxis II measures both general teaching skills and subject knowledge of over 120 topics ranging from agriculture to world literature. It is the test you take upon completing your teacher preparation program.

Detailed information about the Praxis series of tests can be found at ets.org. From this website you can access the tests-at-a-glance page, which includes test outlines, sample questions with explanations for the best answers, and test-taking strategies. There is also a list of state-by-state requirements to determine which Praxis tests each state uses, if any. Note that individual universities may also use Praxis, even if their states do not require it.

Each state, province, or institution that uses the Praxis tests sets its own passing requirements. The passing score for each test for each state is listed on the website and in a booklet you receive with your score report.

Connections 1.4

For additional help in preparing for licensure, see the appendix.

Standard #1: Learner Development

The teacher understands how learners grow and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences.

Standard #2: Learning Differences

The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.

Standard #3: Learning Environments

The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self motivation.

Standard #4: Content Knowledge

The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to ensure mastery of the content.

Standard #5: Application of Content

The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.

Standard #6: Assessment

The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teacher's and learner's decision making.

Standard #7: Planning for Instruction

The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, curriculum, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context.

Standard #8: Instructional Strategies

The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.

Standard #9: Professional Learning and Ethical Practice

The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, other professionals, and the community), and adapts practice to meet the needs of each learner.

Standard #10: Leadership and Collaboration

The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other school professionals, and community members to ensure learner growth, and to advance the profession.

FIGURE 1.2 • Interstate Teacher Assessment and Support Consortium (InTASC) Model Core Teaching Standards

Source: Council of Chief State School Officers. (2011). *The Interstate New Teacher Assessment and Support Consortium (InTASC) model core teaching standards: A resource for state dialogue*. Washington, DC: Author.

Many states, including California, Texas, Florida, and New York, have developed their own teacher certification tests. These usually include sections much like the Praxis Principles of Learning and Teaching.

Throughout this text you will find tips on topics likely to appear on teacher certification tests. These marginal notes, called *Certification Pointers*, highlight knowledge that is frequently required on state teacher licensure exams, including Praxis Principles of Learning and Teaching. Also see the appendix at the end of the text that correlates the content of each chapter to corresponding topics within the Praxis Principles of Learning and Teaching exam.

Certification Pointer

Teacher certification tests include a section on teacher professionalism. One aspect that is emphasized is being able to read and understand research on current ideas and debates about teaching practices.

Beyond Certification

Getting a teaching certificate is necessary but not sufficient to becoming an intentional teacher. Starting with your student teaching experience and continuing into your first job, you can create or take advantage of opportunities to develop your skills as an intentional teacher in a number of ways.

SEEK MENTORS Experienced teachers who are themselves intentional teachers are your best resource (Nieto, 2009). Not only are they highly effective, but they also understand and can describe what they're doing (and, ideally, can help you learn to do those things). Talk with experienced teachers in your school, observe them teaching, and ask them to observe you and share ideas, as Ellen Mathis did in the vignette at the beginning of this chapter. Many school systems provide induction programs to help new teachers develop in the crucial first years, but even if yours does not, you can create one for yourself by seeking out experienced and helpful mentors.

SEEK PROFESSIONAL DEVELOPMENT Districts, universities, state departments of education, and other institutions provide all sorts of professional development workshops for teachers on a wide range of topics. Take advantage of every opportunity to participate. The best professional development includes some sort of coaching or follow-up, in which someone who knows a given technique or program comes to your class to observe you implementing the program and gives you feedback (see Darling-Hammond & Richardson, 2009; Hirsh & Hord, 2008; Neufield & Roper, 2003). Workshops in which many teachers from your school participate together, and then have opportunities to discuss successes and challenges, can also be very effective (see Calderón, 1999).

TALK TEACHING Talk to your colleagues, your former classmates, your friends who teach, even your friends who don't teach. Share your successes, your failures, your questions. Teaching can be an isolating experience if it's just you and your students. Take every opportunity to share ideas and commiserate with sympathetic colleagues (Nieto, 2009). Join a book club to discuss articles and books on teaching (Hoerr, 2009).

InTASC 9

Professional Learning and Ethical Practice

InTASC 10

Leadership and Collaboration

ON THE WEB

When your friends and colleagues are worn out from your passion for teaching, try virtual colleagues on the Web. The following examples are just a few of the many teacher-oriented websites and blogs that offer opportunities to share advice, opinions, and observations.

Edublogs (edublogs.com)

The Knowledge Loom (knowledgeloom.org)

K-12 Practitioner's Circle (nces.ed.gov)

Typepad (typepad.com)

The Vent (proteacher.com)

There are websites for elementary teachers (elementary-teacher-resources.com), for middle school teachers (middleschool.net), and for teachers of various subjects, by topic (sitesforteachers.com). Resources for school librarians can be found at sldirectory.com. Resources for teachers using technology in their classrooms can be found at www.teachervision.com (search for educational technology).

PROFESSIONAL PUBLICATIONS AND ASSOCIATIONS Intentional teachers do a lot of reading. Your school may subscribe to teacher-oriented journals, or you might choose to do so. For example, look for *Teacher Magazine*, *Theory Into Practice*, *Learning*, *Young Children*, *Phi Delta Kappan*, *Educational Leadership*, or subject-specific journals such as *Reading Teacher* and *Mathematics Teacher*. Take a look at Edutopia (online at edutopia.org).

In addition, check out professional associations in your subject area or area of interest. The national teachers' unions—the American Federation of Teachers (AFT) and the National Education Association (NEA)—have publications, workshops, and other resources from which you can benefit greatly. Your state department of education, regional educational laboratory, or school district office may also have useful resources. Here are a few of the many useful websites:

American Educational Research Association: aera.net
 American Federation of Teachers: aft.org
 Canadian Educational Research Association: cea-ace.ca
 Council for Exceptional Children: cec.sped.org
 International Reading Association: reading.org
 National Association for Bilingual Education: nabe.org
 National Association for the Education of Young Children: naeyc.org
 National Association of Black School Educators: nabse.org
 National Council for the Social Studies: ncss.org
 National Council of Teachers of English: ncte.org
 National Council of Teachers of Mathematics: nctm.org
 National Education Association: nea.org
 National Institute for Literacy: nifl.gov
 National Middle School Association: nmsa.org
 National Science Teachers Association: nsta.org

Certification Pointer

The teacher professionalism section of Praxis II and other certification tests may ask you to identify the titles of several professional journals in your particular field of teaching (e.g., *Journal of Educational Psychology*, *Educational Leadership*, *Phi Delta Kappan*).

Certification Pointer

Teaching certification tests might expect you to know which professional associations offer meetings, publications, and dialogue with other teachers (e.g., American Educational Research Association, International Reading Association, American Federation of Teachers, National Education Association).

ON THE WEB

To find journals reporting research in education, try the following:

Educational Leadership: ascd.org
Phi Delta Kappan: pdkintl.org
Theory Into Practice: ehc.osu.edu
Journal of Teaching Writing: journals.iupui.edu
Education Week: edweek.org
Journal of Research in Childhood Education: tandfonline.com
Review of Educational Research: rer.sagepub.com
Better: Evidence-Based Education: bestevidence.org

MyEdLab Self-Check 1.3

SUMMARY

What Makes a Good Teacher?

Good teachers know their subject matter and have mastered pedagogical skills. They accomplish all the tasks involved in effective instruction with warmth, enthusiasm, and caring. They are intentional teachers, and they use principles of educational psychology in their decision making and teaching. They combine research and common sense.

What Is the Role of Research in Educational Psychology?

Educational psychology is the systematic study of learners, learning, and teaching. Research in educational psychology focuses on the processes by which information, skills, values, and attitudes are communicated between teachers and students in the classroom and on applications of the principles of psychology to instructional practices. Such research shapes educational policies, professional development programs, and teaching materials.

How Can I Become an Intentional Teacher?

Before you can become an intentional teacher, you have to become a certified teacher. Each state has its own requirements regarding education, student teaching, and licensure testing. These include the Test for Teaching Knowledge and the Praxis series. You can further develop your skills as an intentional teacher by seeking mentors, pursuing professional development, and talking to colleagues and friends about your experiences.

KEY TERMS

Review the following key terms from the chapter.

college and career-ready standards	10	law	11
Common Core State Standards	9	pedagogy	5
critical thinking	8	principle	11
educational psychology	4	teacher efficacy	7
intentionality	6	theory	11

SELF-ASSESSMENT: PRACTICING FOR LICENSURE

Directions: The chapter-opening vignette addresses indicators that are often assessed in state licensure exams. Reread the chapter-opening vignette and then respond to the following questions.

1. In the first paragraph, Ellen Mathis does not understand why her students are nonproductive and unimaginative in their writing. According to educational psychology research, which of the following teacher characteristics is Ellen most likely lacking?
 - a. Classroom management skills
 - b. Content knowledge
 - c. Intentionality
 - d. Common sense
2. Leah Washington talks with Ellen Mathis about getting students to write interesting compositions. Which of the following statements summarizes Leah's approach to teaching writing?
 - a. Select teaching methods, learning activities, and instructional materials that are appropriate and motivating for students.
 - b. Have students of similar abilities work together so the teacher can adapt instruction to meet the needs of each group.
 - c. When working on writing activities, consider the teacher to be the instruction center.
 - d. Individualization is the first goal of instruction; direct instruction is the second goal.
3. According to research on the development of expertise, what characteristic separates novice teachers from expert teachers?
 - a. Novice teachers tend to rely on their pedagogical skills because their content knowledge is less complex than that of experts.
 - b. Expert teachers do more short-term memory processing than novices because their thinking is more complex.

- c. Novice teachers have to constantly upgrade and examine their own teaching practices, whereas experts use a “best practices” approach.
 - d. Expert teachers are critical thinkers.
4. Educational psychologists are often accused of studying the obvious. However, they have learned that the obvious is not always true. All of the following statements demonstrate this idea except one. Which one is obvious *and* supported by research?
- a. Student achievement is increased when students are assigned to classes according to their ability.
 - b. Scolding students for misbehavior improves student behavior.
 - c. Whole-class instruction is more effective than individualized instruction.
 - d. Intentional teachers balance competing goals according to the needs of particular students and situations.
5. Leah Washington discusses many of her teaching strategies with Ellen Mathis. One can easily see that Leah views teaching as a decision-making process. She recognizes problems and issues, considers situations from multiple perspectives, calls on her professional knowledge to formulate action, and
- a. selects the most appropriate action and assesses the consequence.
 - b. chooses a strategy that agrees with her individual beliefs about teaching.
 - c. consults with expert teachers and administrators to assist with her plan of action.
 - d. allows students to make instructional decisions based on their interests and needs.
6. The products of research are principles, laws, and theories. Leah Washington describes many principles and theories of educational psychology as she speaks with Ellen Mathis about teaching students to write compositions. First, describe an instruction action with which Ellen Mathis is having difficulties (e.g., Ellen assigns all students the same topic), and then describe principles and theories she can use to engage her students in exciting and meaningful lessons.
7. Intentional teachers are aware of resources available for professional learning. They continually refine their practices to address the needs of all students. List four actions you could take to find information to help you teach your students with limited English proficiency.

MyEdLab Licensure Exam 1.1 Answer questions and receive instant feedback in your Pearson eText in MyEdLab.