

EDUCATIONAL PSYCHOLOGY

Theory and Practice

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EDUCATIONAL PSYCHOLOGY

THEORY AND PRACTICE

eleventh edition

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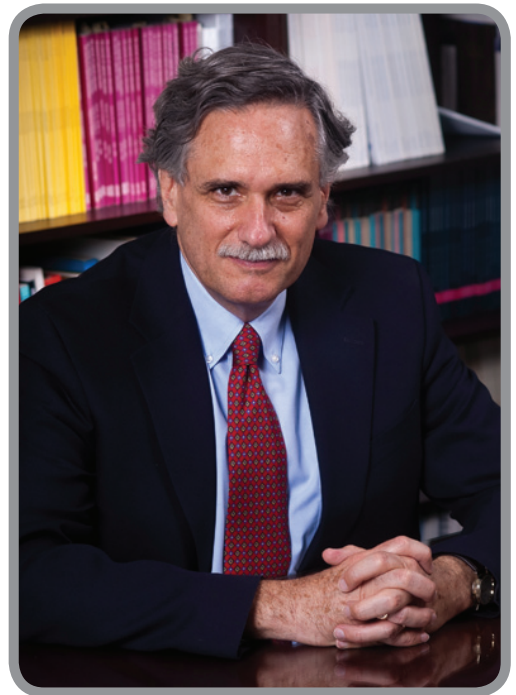
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PREFACE

When I first set out to write *Educational Psychology: Theory and Practice*, I had a very clear purpose in mind. I wanted to give tomorrow's teachers the intellectual grounding and practical strategies they will need to be effective instructors. Most of the textbooks published then, I felt, fell into one of two categories: stuffy or lightweight. The stuffy books were full of research but were ponderously written, losing the flavor of the classroom and containing few guides to practice. The lightweight texts were breezy and easy to read but lacked the dilemmas and intellectual issues brought out by research. They contained suggestions of the "Try this!" variety, without considering evidence about the effectiveness of those strategies.

My objective was to write a text that:

- Presents information that is as complete and up to date as the most research-focused texts but is also readable, practical, and filled with examples and illustrations of key ideas.
- Includes suggestions for practice based directly on classroom research (tempered by common sense) so I can have confidence that when you try what I suggest, it will be likely to work.
- Helps you transfer what you learn in educational psychology to your own teaching by making explicit the connection between theory and practice through numerous realistic examples. Even though I have been doing educational research since the mid-1970s, I find that I never really understand theories or concepts in education until someone gives me a compelling classroom example; and I believe that most of my colleagues (and certainly teacher education students) feel the same way. As a result, the word *example* or similar words appear hundreds of times in this text.
- Appeals to readers; therefore, I have tried to write in such a way that you will almost hear students' voices and smell the lunch cooking in the school cafeteria as you read.

These have been my objectives for the book from the first edition to this, the eleventh edition. With every edition, I have made changes throughout the text, adding new examples, refining language, and deleting dated or unessential material. I am meticulous about keeping the text up to date, so this edition has more than 2,000 reference citations, 75 percent of which are from 2000 or later. The eleventh edition is updated with more than 656 new references. Although some readers may not care much about citations, I want you and your professors to know what research supports the statements I've made and where to find additional information.

The field of educational psychology and the practice of education have changed a great deal in recent years, and I have tried to reflect these changes in this edition. Several years ago, direct instruction and related teacher effectiveness research were dominant in educational psychology. Then constructivist methods, portfolio and performance assessments, and other humanistic strategies returned. Next, the emphasis was on accountability, which requires teachers more than ever to plan outcomes and teach purposefully, qualities that I emphasize in this edition as *intentional teaching*. Today, the Common Core State Standards are increasing accountability pressures but also inviting more thoughtful teaching and learning, including writing, cooperative learning, and experimentation. In the earliest editions of this text, I said that we shouldn't entirely discard discovery learning and humanistic methods despite the popularity, then, of direct instruction. In the next editions, I made just the opposite plea: that we shouldn't completely discard direct instruction despite the popularity of active, student-centered teaching and constructivist methods of instruction. I continue to advocate a balanced approach to instruction. No matter what their philosophical orientations, experienced teachers know that they must be proficient in a wide range of methods and must use them thoughtfully.

The eleventh edition presents new research and practical applications of many topics. Throughout, this edition reflects the "cognitive revolution" that has transformed educational psychology and teaching. No one can deny that teachers matter or that teachers' behaviors have a profound impact on student achievement. To make that impact positive, teachers must have both a deep understanding of the powerful principles of psychology as they apply to education and a clear sense of how these principles can be applied. The intentional teacher is one who constantly reflects on his or her practices and makes instructional decisions based on a clear conception of how these practices affect students. Effective teaching is neither a bag of tricks nor a set of abstract principles;

rather, it is intelligent application of well-understood principles to address practical needs. I hope this edition will help you develop the intellectual and practical skills you need to do the most important job in the world—teaching.

NEW AND EXPANDED COVERAGE

Among the many topics that receive new or expanded coverage in this edition are:

- Common Core State Standards
- The future of teaching (Chapter 1)
- Action research (Chapter 1)
- Nature vs. nurture (Chapter 2)
- Vygotsky's theories (Chapter 2)
- Bronfenbrenner's theories (Chapter 2)
- Enhancing socioemotional development (Chapter 3)
- Parent involvement (Chapter 4)
- Emerging research in information processing and neuroscience (Chapter 6)
- The latest research on peer interaction and cooperative learning (Chapter 8)
- A completely rewritten and expanded section on technology applications (Chapter 9)
- New research on tutoring and small group remediation for struggling readers (Chapter 9)
- More on differentiated instruction (Chapter 9)
- Research on mindset (Chapter 10)
- More on intrinsic incentives (Chapter 10)
- More on learning vs. performance goals (Chapter 10)
- New sections on bullying and classroom management (Chapter 11)
- Expanded coverage of Response to Intervention (Chapter 12)
- Expanded coverage of autism spectrum disorder (Chapter 12)
- More on performance assessments (Chapter 13)
- Detailed coverage of the Common Core State Standards (Chapter 14)
- Additional coverage of value-added assessments (Chapter 14)
- More on data-informed teaching (Chapter 14)
- New information on testing accommodations for English learners (Chapter 14)
- More on computerized assessment (Chapter 14)

HOW THIS BOOK IS ORGANIZED

The chapters in this book address three principal themes: students, teaching, and learning. Each chapter discusses important theories and includes many examples of how these theories apply to classroom teaching.

This book emphasizes the intelligent use of theory and research to improve instruction. The chapters on teaching occupy about one-third of the total pages in the book, and the other chapters all relate to the meaning of theories and research practice. Whenever possible, the guides in this book present specific programs and strategies that have been evaluated and found to be effective, not just suggestions of things to try.

FEATURES

Licensure

This text has always had a very strong focus on helping its readers understand how educational psychology is used in teacher licensure tests like Praxis and the National Evaluation Series. And this edition has multiple tools to help you apply your learning to licensure and certification. In each chapter you can both identify and practice the appropriate knowledge and skills you have attained.

- To help you assess your own learning and prepare for licensure exams, Certification Pointers identify content likely to be on certification tests.
- A special marginal icon identifies content that correlates to InTASC standards. These correspond closely to Praxis, and many state assessments are patterned on Praxis. For those of you using the Pearson eText, when you click on the InTASC, you can read the appropriate standard without having to leave the page.
- In addition, Self-Assessment: Practicing for Licensure features at the end of each chapter are designed to resemble the types of questions and content typically encountered on state certification tests. Pearson eText users can answer these questions and receive immediate feedback.

InTASC 8

Instructional Strategies

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 expertise development, 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.

- Finally, there is an appendix that maps the entire *Praxis II: Principles of Learning and Teaching* test to the book's content.

Embedded Video Examples and Explanations

In the Pearson etext, you will note that instead of photographs there are videos. The use of videos instead of photographs provides deeper and more complete examples.

Predictable books such as *The Three Little Pigs* and *There Was an Old Lady Who Swallowed a Fly* allow beginning readers to rely on what they already know about literacy while learning sound-letter relationships. Stories are predictable if a child can remember what the author is going to say and how it will be stated. Repetitive structures, rhyme and rhythm, and a match between pictures and text increase predictability.

Children's understanding of literacy is enhanced when adults point out the important features of print. Statements such as "We must start at the front, not at the back of the book"; "Move your finger; you're covering the words and I can't see to read them"; and "You have to point to each word as you say it, not to each letter, like this" help to clarify the reading process. You can indicate features in print that are significant and draw attention to patterns of letters, sounds, or phrases.



The preschool child in this video has very clear ideas about literacy already. What types of activities would you expect that she and her family engage in regularly?



Bob Slavin provides an example of developmental changes in children's egocentric thinking. How will your understanding of egocentrism help you as a teacher?

THE INTENTIONAL TEACHER

Teaching in Light of Principles of Cognitive, Language, and Literacy Development

Intentional teachers use what they know about predictable patterns of cognitive, literacy, and language development to make instructional decisions.

- They are aware of what children of the age they teach are able to do now and of the next steps in their development, and help give their students opportunities to grow into new ways of thinking.
- They assess their children's thinking processes, using observation as well as formal measures, to understand their cognitive levels and barriers to their growth.
- They modify their instruction if they find either that it is not challenging their students to make conceptual growth or if they find that many students are struggling due to developmental unreadiness.
- They give students many opportunities to work with diverse peers so that they can regularly experience how peers at slightly different cognitive levels proceed to solve problems.
- They give students many opportunities to solve complex, practical problems that force them to encounter cognitive issues appropriate to their developmental levels, such as puzzling science experiments and intriguing math problems.
- They take into account cultural, family, and community factors in their teaching without using these factors as excuses to demand less of certain students.
- They proactively invite parents and community members to be involved with their teaching, so that students can see a consistency of expectations between school, home, and community and so that families and community members can better reinforce the school's goals for the children they share.

In the Pearson eText, watch a classroom video. Then use the guidelines in the "Intentional Teacher" to answer a set of questions that will help you reflect on and understand the teaching and learning presented in the video.



In line with the emphasis on reflective, intentional practice, I've added a feature that is intended to bring a bit of myself from behind the curtain that usually divides author and readers. I've made available live interviews, called Personal Reflections, in which I reflect on my own experiences as a teacher, researcher, and parent to illuminate various aspects of the text. In these video podcasts, I offer examples and further explanations where I think I might be able to help you better understand a concept or an application. Readers of the eText can simply click on these videos to watch them without leaving their book.

The Intentional Teacher

One attribute seems to be a characteristic of all outstanding teachers: intentionality, or the ability to do things for a reason, purposefully. Intentional teachers constantly think about the outcomes they want for their students and how each decision they make moves students toward those outcomes. A key feature in each chapter, The Intentional Teacher is designed to help you develop and apply a set of strategies to carry out your intentionality.

The Intentional Teacher features will help you combine your increasing knowledge of principles of educational psychology, your growing experience with learners, and your creativity to make intentional instructional decisions that will help students become enthusiastic, effective learners. For those using the Pearson eText, you will be able to actually take the strategies described in each Intentional Teacher feature and observe and analyze their use in real classrooms. After answering a series of questions, you will be given feedback that allows you to compare your analysis with an expert's analysis.

Using Your Experience

Each chapter of the text opens with a vignette depicting a real-life situation that teachers encounter. Throughout the chapter narrative, I refer to the issues raised in the vignette. In addition, you have the opportunity to respond to the vignette in several related features, such as the Using Your Experience sections that follow each vignette. Each of these sections provides critical and creative thinking questions and cooperative learning activities that allow you to work with the issues brought up in the vignette, activate your prior knowledge, and begin thinking about the ideas the chapter will explore.

Common Core and 21st Century Learning

Throughout this book, a substantially revised feature presents information on 21st century learning and Common Core State Standards that relates to the topic of the chapter. Beyond this, 21st century learning skills and Common Core are discussed within the main parts of the text, as appropriate.

Educational policies and practices usually lag behind changes in society and the economy. The emphasis on 21st century learning is intended to help educators think more deeply about how each of the decisions they make about curriculum, teaching methods, use of technology, assessments, and so on contributes to helping students succeed not only by today's standards, but also in tomorrow's world.

Cartoons

Throughout the text is a series of cartoons created just for this book by my colleague, James Bravo, to illustrate key concepts in educational psychology. These are intended to be humorous and also to make you reflect.

Theory into Practice

The Theory into Practice sections in each chapter help you acquire and develop the tools you need to be an effective teacher. These sections present specific strategies to apply in your classroom. New Theory into Practice sections have been added throughout this edition.

INSTRUCTOR RESOURCES

- The **Instructor's Resource Manual** contains chapter overviews, suggested readings, answers to the textbook Self-Assessment features, and handout masters. The Instructor's Manual is available for download from the Instructor Resource Center at www.pearsonhighered.com/irc.

- The **PowerPoint™ Presentation** highlights key concepts and summarizes text content. The PowerPoint™ Presentation is available for download from the Instructor Resource Center at www.pearsonhighered.com/irc.

- The **Online Test Bank**. The *Test Bank* that accompanies this text contains both multiple-choice and essay questions. There are also higher- and lower-level questions covering all of the content in the text.

- **TestGen**. Test Gen is a powerful test generator available exclusively from Pearson Education publishers. You install TestGen on your personal computer (Windows or Macintosh) and create your own tests for classroom testing and for other specialized delivery options, such as over a local area network or on the web. A test bank, which is also called a Test Item File (TIF), typically contains a large set of test items, organized by chapter and ready for your use in creating a test, based on the associated textbook material. Assessments—including equations, graphs, and scientific notation—may be created for both print or testing online.

The tests can be downloaded in the following formats:

- TestGen Testbank file – PC
- TestGen Testbank file – MAC
- TestGen Testbank – Blackboard 9 TIF
- TestGen Testbank – Blackboard CE/Vista (WebCT) TIF
- Angel Test Bank (zip)

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EDUCATIONAL PSYCHOLOGY

THEORY AND PRACTICE



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 State 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

Research on Effective Programs

Impact of Research on Educational Practice

LEARNING OUTCOMES

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

- Identify attributes of effective teachers
- Describe the role of educational research in informing classroom practice
- Describe the research methods used in educational psychology and the rationale for each
- Discuss how you can become an intentional teacher

CHAPTER OUTLINE (continued)

What Research Methods Are Used in Educational Psychology?

Experiments

Correlational Studies

Descriptive Research

Action Research

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 one another 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 ninjas, 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.

(continued)

She drags out her old textbook and finds that concepts that 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 (Anderman, 2011). 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 effective methods of teaching to understand principles of learning and give educators 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?

What makes a good teacher? Is it warmth, humor, and the ability to care about people? 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 has a lot to learn about how to get third-graders to write well.

For effective teaching, subject matter knowledge is not a question of being a walking encyclopedia. Vast knowledge is readily available. However, effective teachers not only know their subjects but also can communicate their knowledge to students. The celebrated high school math

InTASC 4

Content Knowledge

InTASC 5

Application of Content

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, 2011), as are subject matter knowledge and understanding of how children learn (Baumert et al., 2010; 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 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

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 . . ."

using many examples, relate the content of instruction to the students' background, 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. 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.

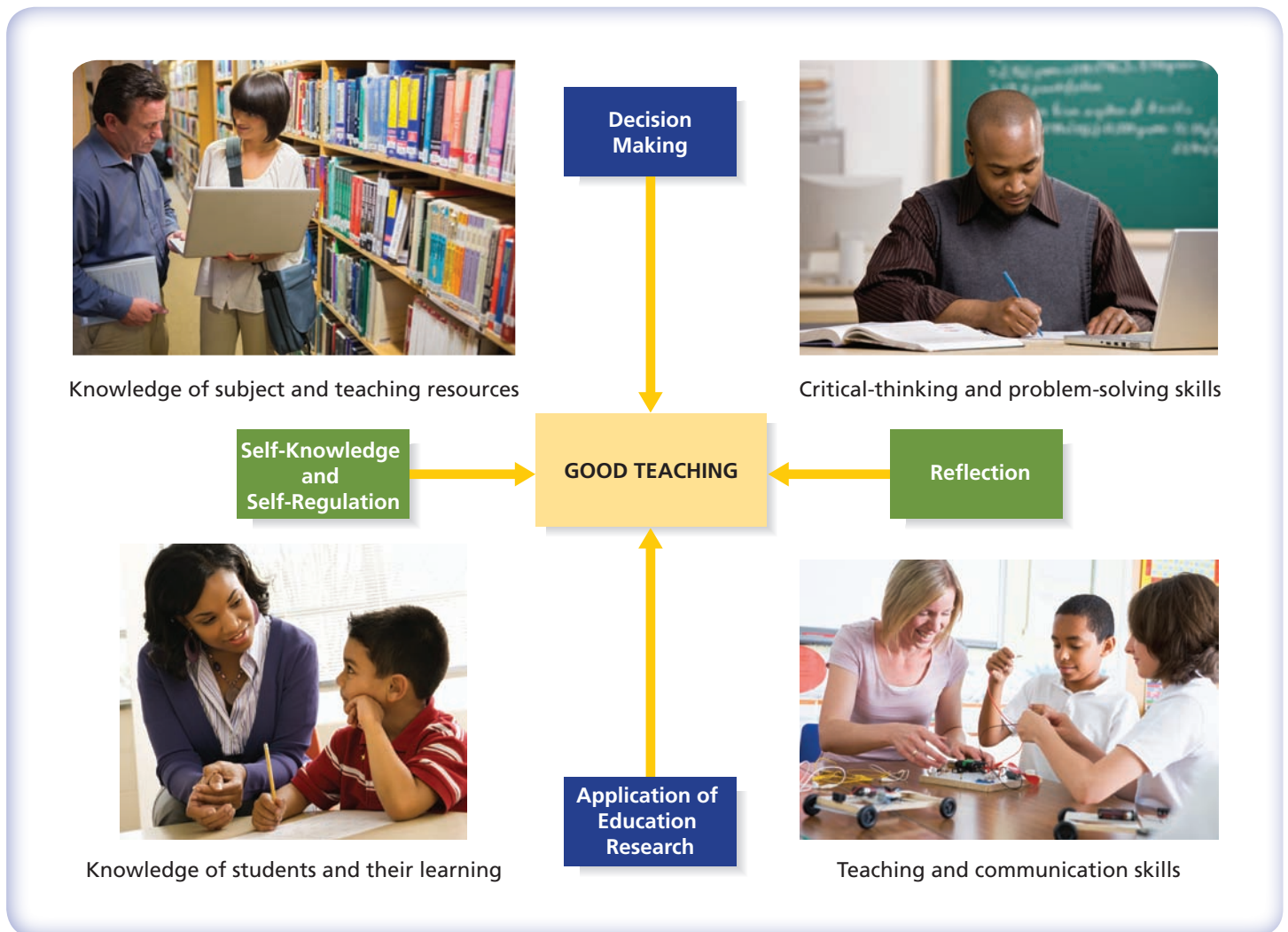


FIGURE 1.1 • Components of Good Teaching

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, 2011).

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** (Henson, 2002; 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). 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 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

InTASC 1

[Learner Development](#)

InTASC 2

[Learning Differences](#)

InTASC 5

[Application of Content](#)



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.

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 (Duck, 2000). 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 **critical-thinking** skills 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 comes through these studies: Expert teachers are critical thinkers (Hogan, Rabinowitz, & Craven, 2003; Mosenthal, Lipson, Tornicello, 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, it is certain that 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 blending technological and traditional teaching, are already here, and will be expanding. New models of teacher preparation and inservice will become commonplace (Cochran-Smith & Power, 2010; Rose, 2010). New forms of school governance, such as charter schools, will continue to grow. Teachers are being held more and more accountable for their students' learning (Danielson, 2010; Darling-Hammond et al., 2012; David, 2010; Schmoker, 2012; Stumbo & McWalters, 2010). All of these changes mean that teachers in 2020 or 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. More serious futurologists expected more or less the same. The reality has turned out to be a little more prosaic, but nevertheless, developments in technology and globalization have dramatically changed key aspects of our economy and society. In particular, economic security, for both 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, as they happen to correspond 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 State 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, usually 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 about to change, and the changes will have a big impact on your life as a teacher. Almost all states have adopted **Common Core standards**, based in large part on the 21st century skills discussed earlier. As of this writing, there are two large consortia of states, each developing assessments aligned with the Common Core. These assessments will solve some of the problems of state-to-state variation, but more importantly to teachers, they are intended to move teachers and schools toward innovative approaches to teaching in line with the needs of colleges and the workplace in the 21st century. The standards will 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 (Voltaire, Shakespeare, Frost, Poe) as well as new and multi-cultural texts
- Focus in math on problem solving in real-world contexts, mathematical reasoning, precision, and argumentation

The Common Core standards may or may not matter to your students' learning (see Barton, 2010; Loveless, 2012; and Schmidt & Huang, 2012 for opposing views), but they will surely matter to teachers and administrators. In preparation for the Common Core assessments, states and districts are doing a lot of professional development (Silver, Dewing, & Perini, 2012) and publishers are changing textbooks and software to match Common Core standards. These changes are discussed in Chapter 14.

Throughout this book, a feature in most chapters presents information on Common Core standards and 21st century learning that relates to the topic of the chapter. Beyond this, the Common Core is discussed throughout the main parts of the text, as appropriate.