

SEVENTH EDITION

# EDUCATIONAL PSYCHOLOGY

THEORY AND PRACTICE

ROBERT E. SLAVIN

# EDUCATIONAL PSYCHOLOGY

## Theory and Practice

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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 for practice 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 that 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 words *for example* 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 in the seventh edition as well as in earlier editions. In addition, I have made changes throughout the text, adding new examples, refining language, and deleting dated or unessential material. I am fanatical about keeping the text up to date, so this edition has more than 2,000 reference citations, about half of which are from 1995 or later. Although most 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. Only a few years ago, direct instruction and related teacher effectiveness research



were dominant in educational psychology. Then discovery learning, portfolio and performance assessments, and other humanistic strategies returned. Now, emphasis on “back to the basics” is returning, which requires teachers more than ever to plan outcomes and teach purposefully, qualities that I emphasize in this edition as *intentional teaching*. In the first and second 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. With this edition, 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 with intentionality.

The seventh edition presents new research and practical applications of these and many other topics. Throughout, this edition reflects the “cognitive revolution” that is transforming educational psychology and teaching. The accompanying figure presents a concept map of the book’s organization.

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 give you the intellectual and practical skills you need to do the most important job in the world—teaching.

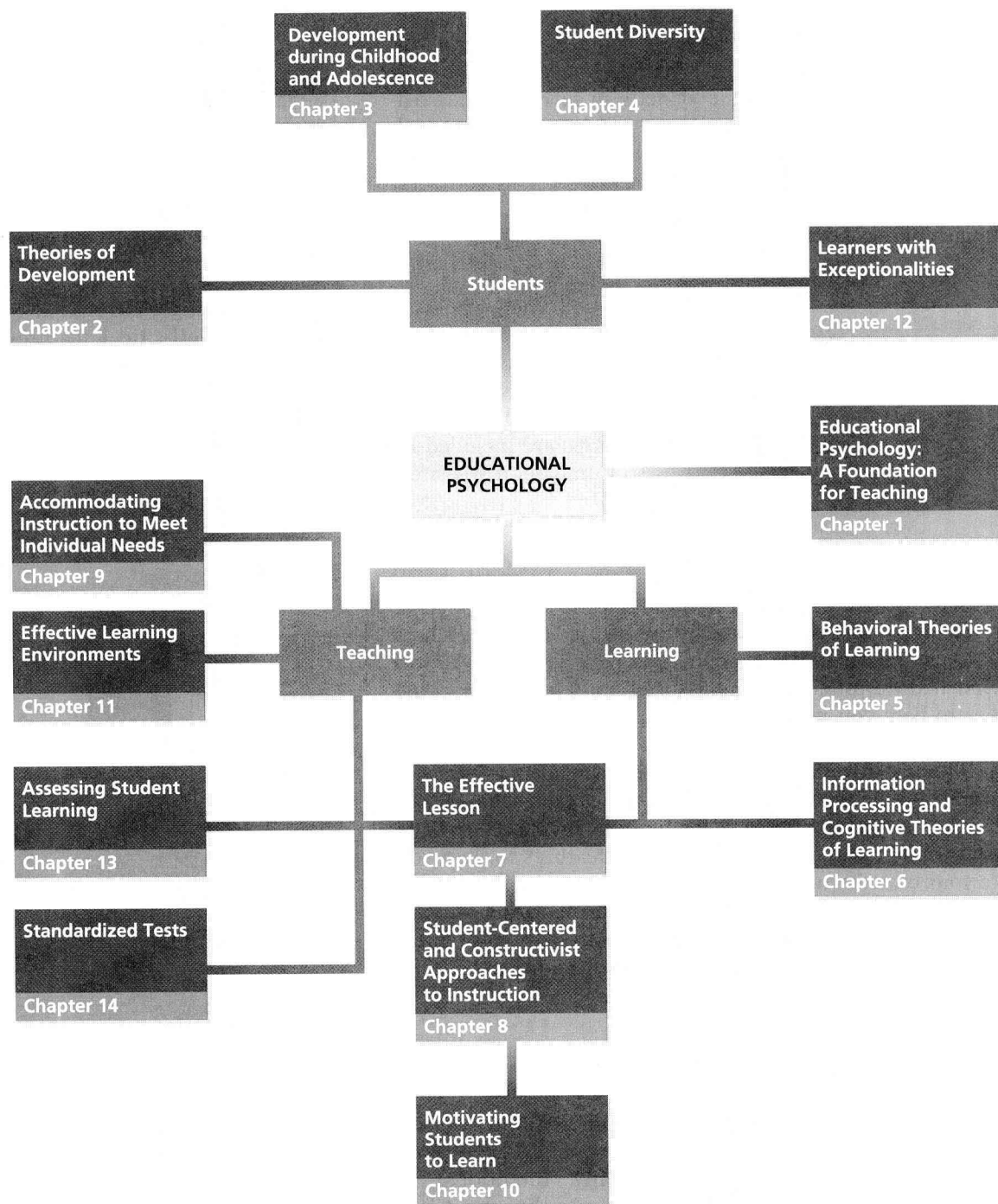
## HOW THIS BOOK IS ORGANIZED

The chapters in this book address three principal themes: students, teaching, and learning (see the Concept Map). 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 for things to try.

## NEW AND EXPANDED COVERAGE

Among the many topics that receive new or greater coverage in this edition are action research (Chapter 1), research on the brain (Chapter 6), transfer of learning (Chapter 7), problem solving (Chapter 8), technology applications (Chapter 9), comprehensive school reform (Chapter 9), intrinsic and extrinsic motivation (Chapter 10), preventing serious behavior problems (Chapter 11), inclusion and IDEA ’97 (Chapter 12), accountability (Chapter 14), and professional portfolio development (Appendix).



**Concept Map: Text Organization in Relation to the Concept of Educational Psychology**

## FEATURES

Each chapter of the text opens with a vignette depicting a real-life situation that educators 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 **Using Your Experience** sections that follow each vignette. This section 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.

SELF-ASSESSMENT 169

### Self-Assessment

**PRAXIS II: PRINCIPLES OF TEACHING AND LEARNING**

**Topic II: Creating an Environment for Student Learning.** Communicate challenging learning expectations to each student. Establish and maintain consistent standards of classroom behavior.

**Topic III: Teaching for Student Learning.** Make learning goals and instructional procedures clear to students. Monitor students' understanding of content through a variety of means, providing feedback to students to assist learning, and adjusting learning act.

**SELF-CHECK**

**INTASC Standard 2: Student Learning.** A teacher must understand how students learn and develop and must provide learning opportunities that support a student's intellectual, social, and personal development.

**INTASC Standard 5: Learning Environment.** A teacher must be able to use an understanding of individual and group motivation and behavior to create learning environments that encourage positive social interaction, active engagement in learning, and self-motivation.

Also new to this edition are **Technology Case Studies** in most chapters, which show how technology can be used to help teachers address issues raised in the chapter. The new **Teacher Action Checklist** feature provides chapter-specific intentional teaching strategies to help you make connections between theory and its classroom practice.

The **Theory into Practice** sections in each chapter help you acquire and develop the tools you need to be a good teacher. These sections present specific strategies for applying information to the classroom. In addition, each chapter offers features to help you regulate your own learning: a chapter outline to guide your study objectives; glossary and cross-referenced **Connections** annotations in the margins; a **Chapter Summary** to help you review your reading; and a list of **Key Terms** with page references at the end of each chapter.

**THEORY into Practice**

**Keyword Mnemonics**

One of the most extensively studied methods of using imagery and **mnemonics** (memory devices) to help paired-associate learning is the **keyword method**, which was originally developed for teaching foreign language vocabulary but was later applied to many other areas (Hall, 1991; Pressley, 1991). The example used earlier of employing vivid imagery to recall the French word *l'esclave* is an illustration of the keyword method. In that case, the keyword was screen. It is called a keyword because it evokes the connection between the word *l'esclave* and the mental picture. The Russian word for building, *skrin*, pronounced "sahn," might be recalled by using the keyword *skrin* and imagining the sun coming up behind a building with an onion dome on top. Atkinson and Raugh (1975) used this method to teach students a list of 120 Russian words over a three-day period. Other students were given English translations of the Russian words and allowed to study as they wished. At the end of the experiment, the students who used the keyword method recalled 72 percent of the words, while the other students recalled only 46 percent. This result has been repeated dozens of times, using a wide variety of languages (Pressley, Levin, & Delancy, 1982), with students from preschoolers to adults. However, young children seem to require pictures of the mental images they are meant to form, while older children (starting in upper elementary school) learn equally well making their own mental images (Willoughby, Porter, Reicks, & Vansledright, 1999). For

**mnemonics**  
Devices or strategies for aiding the memory.

**keyword method**  
A strategy for improving memory by using images to link pairs of items.

## 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 new feature in each chapter, substantially revised for this edition, **The Intentional Teacher** is designed to help you develop and apply a set of strategies to carry out your intentionality. It will help you internalize a set of questions that can aid you in planning, teaching, and

28 CHAPTER 3 THEORIES OF DEVELOPMENT

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students in the class smacked. Later, Ms. Quinter asked Frank whether he would like to write another poem for a citywide poetry contest. He said he'd rather not, because he really didn't think he was that good, and besides, he didn't have the time. ■

### USING YOUR Experience

**Critical Thinking** Who do you think Frank reacted the way he did? How could Ms. Quinter alter her approach so as to motivate Frank?

**Critical Thinking** Compare and contrast these three scenarios. Explain which one(s) involved a behavioral, cognitive, social, moral, or physical development dilemma. Specify the dilemmas.

**What Are Some Views of Human Development?**

The term **development** refers to how people grow, adapt, and change over the course of their lifetimes, through physical development, personality development, sociocultural development, cognitive development (thinking), and language.

To help you assess your own learning and relate it to your entry into the teaching profession, new **Self-Check** features show the INTASC teaching standards addressed in each section, and **Self-Assessment** features at the end of each chapter are keyed to PRAXIS II assessments and standards. The answers to these features are included in the Instructor's Resource Manual and the Companion Website.

354 CHAPTER 10 MOTIVATING STUDENTS TO LEARN


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### TECHNOLOGY CASE STUDY

**Using Technology to Facilitate Lab Work**

*Joseph Herrera is a science teacher at Lincoln Middle School.*

"Some students do not like dissecting frogs. Because of this, they do not learn as much as they should about frog anatomy and an important dissection lab. Usually I have students who get nervous just watching their lab partner dissect the frog. In my classroom, I started using the Interactive Frog Dissection program available on the Internet. Students can perform an entire frog dissection and are given immediate feedback during the tutorial. I have found the tool to be very effective for teaching students who otherwise would not learn the material very well." ■



### Teacher Action Checklist

**Using Games to Motivate**

**Standards Addressed:** Science: ability to choose topics and use of technology in science support specialist, Science: Chemistry: grade 10 and 11: longer after dissection services, Science: Science: 100

**Purpose:** To provide a motivational way for students to review important facts and concepts about ancient Egyptian civilization and to identify important vocabulary and names pertaining to ancient Egypt.

**Materials:**

- Online, electronic, video, and print reference materials about ancient Egypt
- For the word and phrase lists: paper and pencils
- For the puzzle boards: chart paper, eraser and markers, Post-it notes
- For the wheel: poster board and cardboard at least 10" x 10" (can be as large as 15" x 15"), a black marker, and a brass paper fastener
- For money: play money in increments of \$100

**Procedure:**

- After learning about ancient Egyptian civilization and its rulers, students enjoy playing Wheel of Fortune, adapted from the popular television game show *Wheel of Fortune*. The object of this game is to solve a word puzzle by correctly guessing all the letters that spell a word or phrase in

revising your practice in intentional ways. In each chapter, you will consider answers to the following questions from a new vantage point grounded in chapter content, and you will find new examples at all grade levels and in all subject areas to illustrate those answers. The Intentional Teacher focuses your attention on these questions:

1. *What do I expect my students to know and be able to do at the end of this lesson? How does this contribute to course objectives and to students' needs to become capable individuals?*
2. *What knowledge, skills, needs, and interests do my students have that must be taken into account in my lesson?*
3. *What do I know about the content, child development, learning, motivation, and effective teaching strategies that I can use to accomplish my objectives?*
4. *What instructional materials, technology, assistance, and other resources are available to help me accomplish my objectives?*
5. *How will I plan to assess students' progress toward my objectives?*
6. *How will I respond if individual children or the class as a whole are not on track toward success? What is my backup plan?*

The Intentional Teacher 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.

## STUDENT SUPPLEMENTS

- A new **GradeAid** study guide includes exercises, self-check quizzes, practice tests, concept maps, and other activities to help you master the textbook material.
- A new **Praxis Guide** provides information about the Praxis I and II tests, which many states require for teacher certification. It also correlates the material in the textbook to the Praxis II tests and provides practice tests and other study tools.
- The **Companion Website** ([www.ablongman.com/slavin](http://www.ablongman.com/slavin)) contains many exciting and useful features, such as additional practice tests and answers to the textbook Self-Check and Self-Assessment features. The website also illustrates NCATE and INTASC standards and correlates them to content in the text. Additional features include online cases with study questions, video clips, and flashcards for practice of key terms.
- A new **iSearch: Education** guide is designed to help you select and evaluate research from the Internet to help you find the best and most credible information. It includes a practical discussion of search engines, detailed information on evaluating online sources, citation guidelines for web resources, web activities, and web links. The iSearch guide also contains a Quick Guide to ContentSelect.

## INSTRUCTOR SUPPLEMENTS

- The **Instructor's Resource Manual** contains chapter overviews, annotated lecture outlines, suggested readings and media, answers to the textbook Self-Check and Self-Assessment features, and handout masters.
- The **Intentional Teacher Video** offers vignettes tied to chapter content that showcase intentional teachers and situations that educators encounter.

96 CHAPTER 3 DEVELOPMENT DURING CHILDHOOD AND ADOLESCENCE
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### THE INTENTIONAL TEACHER

Using What You Know about Early Childhood, Middle Childhood, and Adolescent Students to Improve Teaching and Learning

Intentional teachers realize that students in their early years, in middle childhood, and in adolescence face different challenges as they develop physically, cognitively, and socially. They will adjust lesson goals to the different levels of development and modify their instruction when they find that particular students need additional or different support in their growth toward independence.

11 **What do I expect my students to know and be able to do at the end of this lesson? How does this contribute to course objectives and to students' need to become capable individuals?**

Teachers need to build understanding of the issues that typically arise at their students' age levels, and they need to develop understanding of the areas that can be involved as students move from one level to the next. For example, you might build into your long-term plans activities that capitalize on the important influence of the peer culture. Examples include allowing students to study content through connections to topical interests such as fashion, music, and sports.

12 **What knowledge, skills, needs, and interests do my students have that must be taken into account in my lesson?**

Instruction is most appropriate when it addresses students' current functioning. Both formal and informal measures can provide information about your students' linguistic, physical, and cognitive development. For example, if you were a teacher of young

children, you might check for students' concepts about print. Can they identify the front of a book? Do they track from left to right? If you were a middle-school teacher, you might use informal conversation and academic materials to assess your students' English language skills. As students reach, you might listen for how they are becoming increasingly reflective about their inner lives, a sign that marks the adolescent thought process.

As a high school teacher, you might recognize that maturing adolescents are beginning to take a more active role in the learning process, accept responsibility for their own learning, seek for real-life applications of what is being learned, and bring their own experiences into consideration. They are more autonomous, less dependent on others than younger children. You might adapt your instruction to afford more individual choice of research projects and reading material, encouraging collaborative investigations by groups of students.

13 **What do I know about the content, child development, learning, motivation, and effective teaching strategies that I can use to accomplish my objectives?**

Students' relationships with peers change over time. Observe students' peer interaction so that you can encourage prosocial behavior. For example, you might observe friendships during free time, taking notes about the different forms of play you observe, or you might listen to older students' lunch table con-

**INTASC Standard 3: Diverse Learners.** A teacher must understand how students differ in their approaches to learning and create instructional opportunities that are adapted to students with diverse backgrounds and exceptionalities.

Add information about adolescence in the last column of your comparison chart, using the same categories as before: Early Childhood, Middle Childhood, and Adolescence.

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### CHAPTER SUMMARY

**HOW DO CHILDREN DEVELOP DURING THE PRESCHOOL YEARS?**

Physically, young children develop strength and coordination of the large muscles first and then of the small muscles (as in cutting with scissors or writing). Cognitive abilities corresponding to Piaget's sensorimotor and preoperational stages also include the acquisition of language. Oral language is usually acquired by age 3 and includes the development of vocabulary, grammatical rules, and conventions of dis-



- The printed **Assessment Package** and the **Computerized Test Bank** provide a variety of assessment items for each chapter.
- The **PowerPoint™ Presentation** consists of outline slides for use in the classroom.
- **CourseCompass™**, Allyn and Bacon's online course management system, helps instructors manage all aspects of teaching the course and comes preloaded with features such as fully revised test bank questions.
- The **Digital Media Archive CD-ROM for Education** provides an array of media products to help liven up your classroom presentations. It electronically provides charts, graphs, tables, figures, video and audio clips, and electronic images on one cross-platform CD-ROM. Visit [www.ablongman.com/dma](http://www.ablongman.com/dma) for more information.
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- New for 2003, **VideoWorkshop** for Educational Psychology features 50 minutes of video footage on an easy-to-navigate CD-ROM. VideoWorkshop is free for students and includes a Student Learning Guide with observation questions, application questions, a connecting to the web feature, and textbook-specific correlation grids. An Instructor's Teaching Guide is also available, containing learning objectives, video summaries, and an answer key for the Student Learning Guide.

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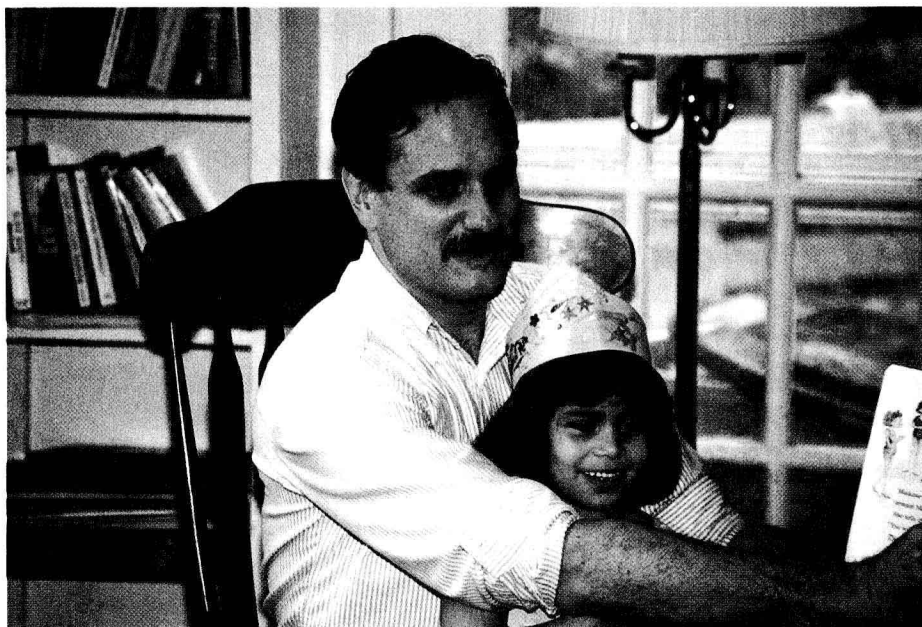
Finally, it is customary to acknowledge the long-suffering patience of one's spouse and children. In my case, this acknowledgment is especially appropriate. My wife, Nancy Madden, kept our classroom research going while I was in the throes of writing. Our children contributed to this work by providing examples for sections of Chapter 3. They also provided me with a sense of purpose for writing; I had to keep thinking about the kind of school experience I want for them as a way of making concrete my concern for the school experiences of all children.

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R. E. S.

# About the Author

Robert Slavin is co-Director of the Center for Research on the Education of Students Placed at Risk, Johns Hopkins University, and Chairman of the Success for All Foundation. He received his Ph.D. in Social Relations from Johns Hopkins in 1975, and since that time he has authored more than 200 articles and book chapters on such topics as cooperative learning, ability grouping, school and classroom organization, desegregation, mainstreaming, and research review. Dr. Slavin is the author or coauthor of 15 books, including *Cooperative Learning*, *School and Classroom Organization*, *Effective Programs for Students at Risk*, *Preventing Early School Failure*, and *Every Child, Every School: Success for All*. In 1985 Dr. Slavin received the Raymond Cattell Early Career Award for Programmatic Research from the American Educational Research Association. In 1988 he received the Palmer O. Johnson Award for the best article in an AERA journal. In 1994 he received the Charles A. Dana Award, in 1998 he received the James Bryant Conant Award from the Education Commission of the States, and in 2000 he received the Distinguished Service Award from the Council of Chief State School Offices. Dr. Slavin is pictured here with his daughter Becca.



# Chapter 1

## CHAPTER OUTLINE

### WHAT MAKES A GOOD TEACHER?

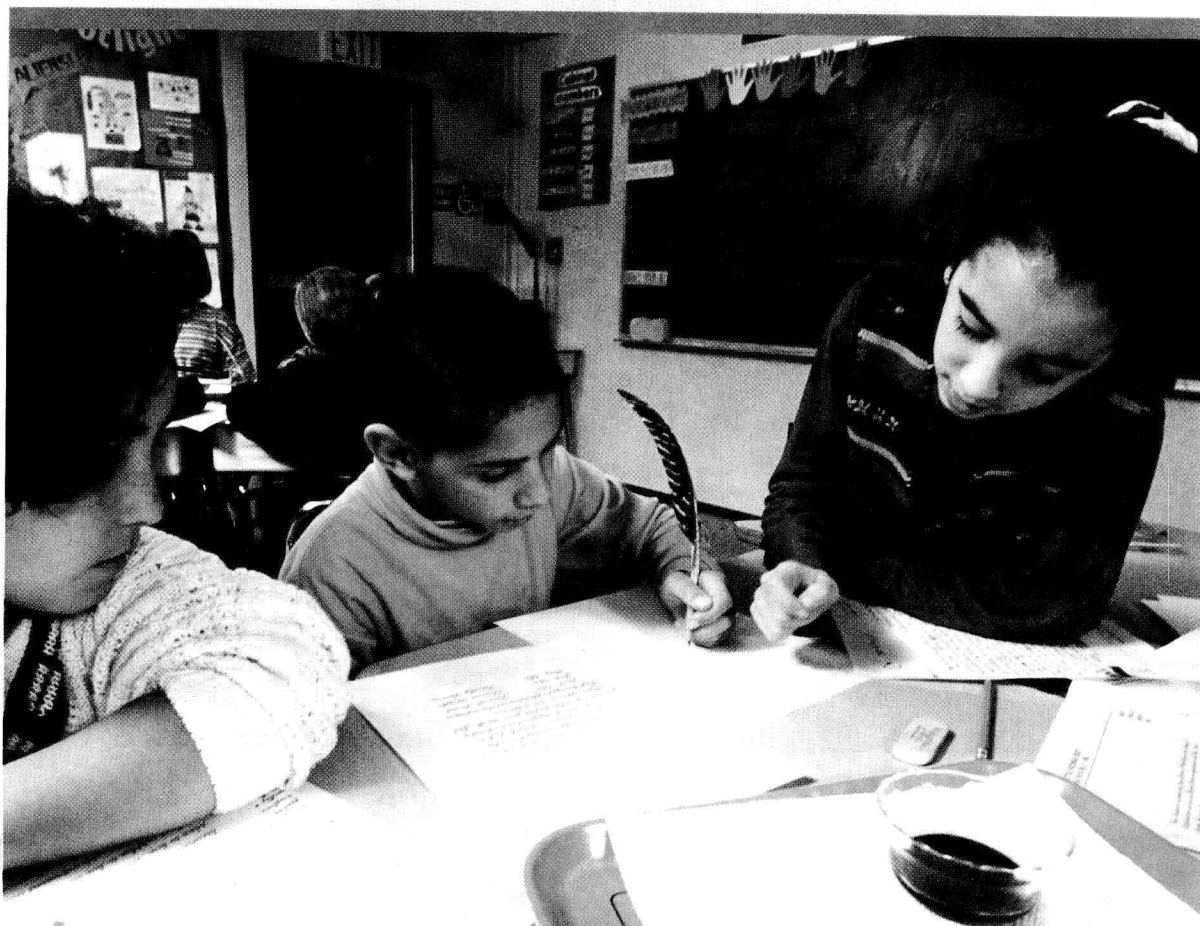
Knowing the Subject Matters  
(but So Does Teaching Skill)  
Mastering the Teaching Skills  
Can Good Teaching Be Taught?  
The Intentional Teacher

### WHAT IS THE ROLE OF RESEARCH IN EDUCATIONAL PSYCHOLOGY?

The Goal of Research in Educational  
Psychology  
The Value of Research in Educational  
Psychology to the Teacher  
Teaching as Decision Making  
Research + Common Sense =  
Effective Teaching  
Research on Effective Programs  
Impact of Research on Educational Practice

### WHAT RESEARCH METHODS ARE USED IN EDUCATIONAL PSYCHOLOGY?

Experiments  
Correlational Studies  
Descriptive Research  
Action Research



# Brief Contents

1.	Educational Psychology: A Foundation for Teaching	1
2.	Theories of Development	27
3.	Development during Childhood and Adolescence	65
4.	Student Diversity	101
5.	Behavioral Theories of Learning	137
6.	Information Processing and Cognitive Theories of Learning	171
7.	The Effective Lesson	219
8.	Student-Centered and Constructivist Approaches to Instruction	255
9.	Accommodating Instruction to Meet Individual Needs	291
10.	Motivating Students to Learn	327
11.	Effective Learning Environments	365
12.	Learners with Exceptionalities	407
13.	Assessing Student Learning	457
14.	Standardized Tests	515



# Contents

<i>Features</i>	xv
<i>Preface</i>	xvii
<i>About the Author</i>	xxv

## Chapter 1

### EDUCATIONAL PSYCHOLOGY: A FOUNDATION FOR TEACHING 1

#### WHAT MAKES A GOOD TEACHER? 3

Knowing the Subject Matters (but So Does Teaching Skill)	3
Mastering the Teaching Skills	4
Can Good Teaching Be Taught?	5
The Intentional Teacher	7

#### TEACHER ACTION CHECKLIST: *Helping Students Write Creatively about Setting* 10

#### WHAT IS THE ROLE OF RESEARCH IN EDUCATIONAL PSYCHOLOGY? 10

The Goal of Research in Educational Psychology	11
The Value of Research in Educational Psychology to the Teacher	11
Teaching As Decision Making	12

#### THEORY INTO PRACTICE: *Teaching as Decision Making* 14

Research + Common Sense = Effective Teaching	14
Research on Effective Programs	15
Impact of Research on Educational Practice	15

#### THEORY INTO PRACTICE: *How to Be an Intelligent Consumer of Educational Psychology Research* 16

#### WHAT RESEARCH METHODS ARE USED IN EDUCATIONAL PSYCHOLOGY? 17

Experiments	18
Correlational Studies	20
Descriptive Research	22
Action Research	22

#### CHAPTER SUMMARY 23

#### KEY TERMS 24

#### SELF-ASSESSMENT 24

## Chapter 2

### THEORIES OF DEVELOPMENT 27

#### WHAT ARE SOME VIEWS OF HUMAN DEVELOPMENT? 28

Aspects of Development	28
Issues of Development	29

#### HOW DID PIAGET VIEW COGNITIVE DEVELOPMENT? 30

How Development Occurs	30
Piaget's Stages of Development	32

#### HOW IS PIAGET'S WORK VIEWED TODAY? 40

Criticisms and Revisions of Piaget's Theory	40
---------------------------------------------	----

#### THEORY INTO PRACTICE: *Educational Implications of Piaget's Theory* 41

Neo-Piagetian and Information-Processing Views of Development	42
---------------------------------------------------------------	----

#### HOW DID VYGOTSKY VIEW COGNITIVE DEVELOPMENT? 43

How Development Occurs	44
------------------------	----

#### TEACHER ACTION CHECKLIST: *Using Scaffolding to Help Students Use the Web for Research* 45

Applications of Vygotskian Theory in Teaching	46
-----------------------------------------------	----

#### THEORY INTO PRACTICE: *Classroom Applications of Vygotsky's Theory* 47

#### HOW DID ERIKSON VIEW PERSONAL AND SOCIAL DEVELOPMENT? 48

Stages of Psychosocial Development	49
Implications and Criticisms of Erikson's Theory	52

#### WHAT ARE SOME THEORIES OF MORAL DEVELOPMENT? 52

Piaget's Theory of Moral Development	53
Kohlberg's Stages of Moral Reasoning	54

#### THEORY INTO PRACTICE: *Fostering Moral Development in the Classroom* 57

Criticisms of Kohlberg's Theory	58
---------------------------------	----

#### THE INTENTIONAL TEACHER: *Using What You Know about Human Development to Improve Teaching and Learning* 60

#### CHAPTER SUMMARY 61

#### KEY TERMS 62

#### SELF-ASSESSMENT 63

## Chapter 3

### DEVELOPMENT DURING CHILDHOOD AND ADOLESCENCE 65

#### HOW DO CHILDREN DEVELOP DURING

##### THE PRESCHOOL YEARS? 66

Physical Development in Early Childhood 68

Language Acquisition 68

Bilingual Education 71

TECHNOLOGY CASE STUDY: *Using Technology in Preschool* 72

THEORY INTO PRACTICE: *Promoting Literacy Development in Young Children* 72

Socioemotional Development 73

#### WHAT KINDS OF EARLY CHILDHOOD EDUCATION PROGRAMS EXIST? 76

Day-Care Programs 76

Preschools 76

Compensatory Preschool Programs 77

Early Intervention 77

Kindergarten Programs 78

Developmentally Appropriate Practice 78

#### HOW DO CHILDREN DEVELOP DURING

##### THE ELEMENTARY YEARS? 79

TEACHER ACTION CHECKLIST: *Cross-Age Literacy Tutoring for English-Language Learners* 80

Physical Development during Middle Childhood 81

Cognitive Abilities 81

Socioemotional Development in Middle Childhood 81

THEORY INTO PRACTICE: *Promoting the Development of Self-Esteem* 83

THEORY INTO PRACTICE: *Helping Children Develop Social Skills* 85

#### HOW DO CHILDREN DEVELOP DURING THE MIDDLE SCHOOL AND HIGH SCHOOL YEARS? 86

Physical Development during Adolescence 86

Cognitive Development 87

Characteristics of Hypothetical-Deductive Reasoning 88

Implications for Educational Practice 88

Socioemotional Development in Adolescence 90

Identity Development 90

James Marcia's Four Identity Statuses 90

Self-Concept and Self-Esteem 91

Social Relationships 92

Emotional Development 93

Problems of Adolescence 93

THEORY INTO PRACTICE: *Providing Developmental Assets for Adolescents* 95

THE INTENTIONAL TEACHER: *Using What You Know about Early Childhood, Middle Childhood, and Adolescent Students to Improve Teaching and Learning* 96

#### CHAPTER SUMMARY 96

#### KEY TERMS 98

#### SELF-ASSESSMENT 99

## Chapter 4

### STUDENT DIVERSITY 101

#### WHAT IS THE IMPACT OF CULTURE ON TEACHING AND LEARNING? 102

#### HOW DOES SOCIOECONOMIC STATUS AFFECT

##### STUDENT ACHIEVEMENT? 104

The Role of Child-Rearing Practices 104

The Link between Income and Summer Learning 105

The Role of Schools as Middle-Class Institutions 106

School and Community Factors 106

TECHNOLOGY CASE STUDY: *Accommodating Different Learning Styles* 107

Is the Low Achievement of Children from Low-Income Groups Inevitable? 107

Implications for Teachers 108

#### HOW DO ETHNICITY AND RACE AFFECT STUDENTS' SCHOOL EXPERIENCES? 108

Racial and Ethnic Composition of the United States 109

Academic Achievement of Students

from Under-Represented Groups 109

Why Have Students from Under-Represented Groups Lagged in Achievement? 110

Effects of School Desegregation 111

THEORY INTO PRACTICE: *Teaching in a Culturally Diverse School* 113

#### HOW DO LANGUAGE DIFFERENCES AND BILINGUAL PROGRAMS AFFECT STUDENT ACHIEVEMENT? 114

Bilingual Education 115

Effectiveness of Bilingual Programs 116

#### WHAT IS MULTICULTURAL EDUCATION? 117

Dimensions of Multicultural Education 118

#### HOW DO GENDER AND GENDER BIAS AFFECT STUDENTS' SCHOOL EXPERIENCES? 120

TEACHER ACTION CHECKLIST: *Getting to Know the Classroom Community: A Sharing Activity for Middle School/High School* 120

Do Males and Females Think and Learn Differently?	121
Sex-Role Stereotyping and Gender Bias	123

<b>THEORY INTO PRACTICE: <i>Avoiding Gender Bias in Teaching</i></b>	123
----------------------------------------------------------------------	-----

## HOW DO STUDENTS DIFFER IN INTELLIGENCE AND LEARNING STYLES? 125

Definitions of Intelligence	125
<b>THEORY INTO PRACTICE: <i>Multiple Intelligences</i></b>	127
Origins of Intelligence	128
Theories of Learning Styles	130
Aptitude–Treatment Interactions	130

## CHAPTER SUMMARY 131

<b>THE INTENTIONAL TEACHER: <i>Using What You Know about Student Diversity to Improve Teaching and Learning</i></b>	132
---------------------------------------------------------------------------------------------------------------------	-----

## KEY TERMS 134

## SELF-ASSESSMENT 134

# Chapter 5

## BEHAVIORAL THEORIES OF LEARNING 137

### WHAT IS LEARNING? 138

### WHAT BEHAVIORAL LEARNING THEORIES HAVE EVOLVED? 139

Pavlov: Classical Conditioning	140
Thorndike: The Law of Effect	140
Skinner: Operant Conditioning	142

### WHAT ARE SOME PRINCIPLES OF BEHAVIORAL LEARNING? 143

The Role of Consequences	144
Reinforcers	144

### THEORY INTO PRACTICE: *Classroom Uses of Reinforcement* 146

Intrinsic and Extrinsic Reinforcers	147
-------------------------------------	-----

### THEORY INTO PRACTICE: *Practical Reinforcers* 147

Punishers	148
Immediacy of Consequences	149
Shaping	151
Extinction	151
Schedules of Reinforcement	153
Maintenance	155
The Role of Antecedents	156

## HOW HAS SOCIAL LEARNING THEORY CONTRIBUTED TO OUR UNDERSTANDING OF HUMAN LEARNING? 159

Bandura: Modeling and Observational Learning	159
----------------------------------------------	-----

## THEORY INTO PRACTICE: *Observational Learning* 160

Meichenbaum's Model of Self-Regulated Learning	161
Strengths and Limitations of Behavioral Learning Theories	163

## TEACHER ACTION CHECKLIST: *Dealing with Resistant or Uncooperative Student Behavior Using Patrick Schloss's 10R Technique* 164

## CHAPTER SUMMARY 165

<b>THE INTENTIONAL TEACHER: <i>Using What You Know about Behavioral and Social Learning Theory to Improve Teaching and Learning</i></b>	166
-----------------------------------------------------------------------------------------------------------------------------------------	-----

## KEY TERMS 168

## SELF-ASSESSMENT 169

# Chapter 6

## INFORMATION PROCESSING AND COGNITIVE THEORIES OF LEARNING 171

### WHAT IS AN INFORMATION-PROCESSING MODEL? 173

Sensory Register	173
Short-Term or Working Memory	175
Long-Term Memory	178
Factors That Enhance Long-Term Memory	181
Other Information-Processing Models	182
Research on the Brain	184

### WHAT CAUSES PEOPLE TO REMEMBER OR FORGET? 188

Forgetting and Remembering	188
----------------------------	-----

### THEORY INTO PRACTICE: *Reducing Retroactive Inhibition* 189

Practice	192
----------	-----

## TEACHER ACTION CHECKLIST: *Teaching Memory Cues for Spelling* 193

### HOW CAN MEMORY STRATEGIES BE TAUGHT? 194

Verbal Learning	195
Paired-Associate Learning	195

### THEORY INTO PRACTICE: *Keyword Mnemonics* 196

Serial and Free-Recall Learning	197
---------------------------------	-----

### WHAT MAKES INFORMATION MEANINGFUL? 198

Rote versus Meaningful Learning	199
Schema Theory	200

## TECHNOLOGY CASE STUDY: *Using Technology to Make Graphic Organizers* 201

## HOW DO METACOGNITIVE SKILLS HELP STUDENTS LEARN? 203

### WHAT STUDY STRATEGIES HELP STUDENTS LEARN? 204

Note-Taking	204
Underlining	204
Summarizing	205

Writing to Learn 205

Outlining and Mapping 205

The PQ4R Method 205

THEORY INTO PRACTICE: *Teaching the PQ4R Method* 206**HOW DO COGNITIVE TEACHING STRATEGIES****HELP STUDENTS LEARN? 207**

Making Learning Relevant and Activating

Prior Knowledge 207

Organizing Information 210

THE INTENTIONAL TEACHER: *Using What You Know about Cognitive Theories of Learning to Improve Teaching and Learning* 212

CHAPTER SUMMARY 212

KEY TERMS 215

SELF-ASSESSMENT 216

## Chapter 7

**THE EFFECTIVE LESSON 219****WHAT IS DIRECT INSTRUCTION? 221****HOW IS A DIRECT INSTRUCTION LESSON TAUGHT? 223**

State Learning Objectives 223

THEORY INTO PRACTICE: *Planning a Lesson* 223

Orient Students to the Lesson 226

THEORY INTO PRACTICE: *Communicating Objectives to Students* 227

Review Prerequisites 227

Present New Material 228

Conduct Learning Probes 231

Provide Independent Practice 234

TECHNOLOGY CASE STUDY: *Using Technology to Facilitate Lab Work* 235

Assess Performance and Provide Feedback 236

Provide Distributed Practice and Review 237

**WHAT DOES RESEARCH ON DIRECT INSTRUCTION METHODS SUGGEST? 238**

Advantages and Limitations of Direct Instruction 239

**HOW DO STUDENTS LEARN AND TRANSFER CONCEPTS? 239**

Concept Learning and Teaching 240

Teaching for Transfer of Learning 241

**HOW ARE DISCUSSIONS USED IN INSTRUCTION? 244**

Subjective and Controversial Topics 244

Difficult and Novel Concepts 245

Affective Objectives 245

Whole-Class Discussions 245

Small-Group Discussions 247

TEACHER ACTION CHECKLIST: *Using a Lecture Format Effectively in High School* 247

CHAPTER SUMMARY 249

THE INTENTIONAL TEACHER: *Using What You Know about Direct Instruction to Improve Teaching and Learning* 250

KEY TERMS 252

SELF-ASSESSMENT 252

## Chapter 8

**STUDENT-CENTERED AND CONSTRUCTIVIST APPROACHES TO INSTRUCTION 255****WHAT IS THE CONSTRUCTIVIST VIEW OF LEARNING? 257**

Historical Roots of Constructivism 258

Top-Down Processing 259

Cooperative Learning 261

Discovery Learning 261

Self-Regulated Learning 262

Scaffolding 262

APA's Learner-Centered Psychological Principles 264

Constructivist Methods in the Content Areas 264

THEORY INTO PRACTICE: *Introducing Reciprocal Teaching* 266

Research on Constructivist Methods 269

**HOW IS COOPERATIVE LEARNING USED IN INSTRUCTION? 270**

Cooperative Learning Methods 270

THEORY INTO PRACTICE: *Student Teams–Achievement Divisions (STAD)* 271

Research on Cooperative Learning 274

**HOW ARE PROBLEM-SOLVING AND THINKING SKILLS TAUGHT? 275**TEACHER ACTION CHECKLIST: *Using Fermi Questions to Teach Math Concepts: Water Balloon Fun* 276

The Problem-Solving Process 276

TECHNOLOGY CASE STUDY: *Multiple Representations* 279

Teaching Creative Problem Solving 279

Teaching Thinking Skills 280

THE INTENTIONAL TEACHER: *Using What You Know about Student-Centered and Constructivist Approaches to Improve Teaching and Learning* 284

Critical Thinking 286

CHAPTER SUMMARY 287