

PSYCHOLOGY APPLIED TO TEACHING



11
ELEVENTH EDITION

SNOWMAN | BIEHLER



Psychology Applied to Teaching

Eleventh Edition

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- | | |
|------------------------------------------------------------------------------------------------|-----------------------------|
| • Techniques for creating effective bridges between curriculum goals and student's experiences | Chapters 6, 7, 8, 9, 11, 13 |
|------------------------------------------------------------------------------------------------|-----------------------------|
-

Assessment Strategies

- | | |
|---------------------------------------------------------------------|------------|
| • Types of assessments | Chapter 14 |
| • Characteristics of assessments | Chapter 14 |
| • Scoring assessments | Chapter 14 |
| • Uses of assessments | Chapter 14 |
| • Understanding of measurement theory and assessment-related issues | Chapter 15 |
-

III. Communication Techniques

<i>Basic, Effective Verbal and Nonverbal Communication Techniques</i>	Chapters 9, 13
-----------------------------------------------------------------------	----------------

<i>Effect of Cultural and Gender Differences on Communications in the Classroom</i>	Chapters 4, 5
-------------------------------------------------------------------------------------	---------------

Types of Questions That Can Stimulate Discussion in Different Ways and for Different Purposes

- | | |
|------------------------------------------------------------------|-----------------------|
| • Probing for learner understanding | Chapters 4, 10, 11 |
| • Helping students articulate their ideas and thinking processes | Chapters 2, 8, 9 |
| • Promoting risk-taking and problem-solving | Chapters 10, 11 |
| • Facilitating factual recall | Chapters 4, 5, 8, 11 |
| • Encouraging convergent and divergent thinking | Chapters 2, 4, 10, 11 |
| • Stimulating curiosity | Chapters 4, 6 |
| • Helping students to question | Chapters 8, 9, 10 |
-

IV. Profession and Community

The Reflective Practitioner

- | | |
|-------------------------------------------------------------------------------------------------------------------------------|----------------|
| • Types of resources available for professional development and learning | Chapters 1, 16 |
| • Ability to read and understand articles and books about current views, ideas, and debates regarding best teaching practices | Chapters 1, 16 |
| • Why personal reflection on teaching practices is critical, and approaches that can be used to achieve this | Chapters 1, 16 |
-

The Larger Community

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| • Role of the school as a resource to the larger community | Chapter 5 |
| • Factors in the students' environment outside of school (family circumstances, community environments, health and economic conditions) that may influence students' life and learning | Chapters 3, 5 |
| • Basic strategies for involving parents/guardians and leaders in the community in the educational process | Chapter 5 |
| • Major laws related to students' rights and teacher responsibilities | Chapter 6 |

Preface to the Eleventh Edition

This edition of *Psychology Applied to Teaching*, like those that preceded it, can be characterized by two words: change and continuity. Although these two terms carry opposing meanings, in the context of this book they complement each other.

Change is inescapable in educational psychology for several reasons. First, the theories on which this field rests are relatively young and so are still evolving. Second, new types of research and new ways of conducting research continue to be formulated. Third, new issues that affect and concern educators continually come to the fore. We have done our best to address each of these changes and hope, as a result, that students will be better able to understand the forces that shape contemporary education.

Yet, in the face of these changes, this book has been dedicated, ever since its first edition, to the same basic goal: providing a practical, student-oriented approach to educational psychology. The book is written to be used in three ways: (1) as a text that provides basic information, organized and presented so that it will be understood, remembered, and applied; (2) as a source of practical ideas about instructional techniques for student teachers and beginning teachers; and (3) as a means for teachers to improve their effectiveness as they gain experience in the classroom.

Major Features of This Edition

Because of its central role in American society, education is a dynamic enterprise. Tens of thousands of people—including classroom teachers, school administrators, state education officials, politicians, and educational and psychological researchers—are constantly searching for and trying out new ideas to increase student learning and achievement. This is especially true of educational and psychological researchers. Since the last edition of this text many new developments have occurred in social, emotional, and cognitive development; learning processes; motivation; classroom assessment and management; standardized testing; bilingual education; inclusion of students with disabilities; and the use of computer-based technology to support student learning and achievement. The Eleventh Edition of *Psychology Applied to Teaching* is extensively revised and updated, incorporating new developments in all its domains. Almost half (48 percent) of the references were published since the year 2000, and 71 percent date from 1995 or later.

Noteworthy themes of this edition include:

- **Advances in social cognitive theory**—the subject of a *brand-new chapter*. Because of the many recent developments in cognitive research, this edition devotes a full chapter (Chapter 9) to social cognitive theory. The chapter gives particular attention to the twin concepts of self-regulation and self-efficacy.
- **Debate on critical issues** in educational psychology in the new *Take a Stand! feature*. All the editions of *Psychology Applied to Teaching* have framed the crucial issues in contemporary education in ways that encourage students to consider the research and make informed judgments. This edition goes a step further with a feature called “Take a Stand!” Later in this preface we describe this feature in more detail.
- **Emphasis on educational technology**. Each chapter contains at least one section, and sometimes several, on how technology can be used to address the main themes and concepts of that chapter. For example, the reader will find discussions of how such technology tools as multimedia, hypermedia, tutorial programs, simulation programs, telecommunications, and the World Wide Web can be used to foster cognitive development, address individual differences, promote

greater multicultural understanding, make learning easier for students with disabilities, promote learning and problem solving for all students, increase motivation for learning, help teachers manage their classroom, and aid in assessment of students. In addition, all chapters provide addresses for World Wide Web sites that contain useful supplementary information and links to other relevant sites. Marginal icons direct readers to the textbook's own web site, which provides connections to extended web resources.

- **Emphasis on classroom applications.** *Psychology Applied to Teaching* was the first educational psychology textbook to provide numerous specific examples and guidelines for applying psychological concepts and research findings to classroom teaching. That orientation not only continues but is augmented by Chapter 11, "Approaches to Instruction," which links the writing of instructional objectives with five approaches to instruction that flow from different conceptions of learning.
- **Emphasis on diverse learners.** To help prospective and new teachers understand and cope with the wide range of student diversity they will almost certainly face, we provide extensive treatment of this issue in two chapters: Chapter 4, "Understanding Student Differences," and Chapter 5, "Addressing Cultural and Socioeconomic Diversity." In addition, and where appropriate, we discuss aspects of student diversity in other chapters.
- **Emphasis on real-life contexts.** The Case in Print feature offers newspaper articles about actual classrooms, illustrating the relationship between chapter content and real-life classroom practices. Because of this feature's popularity with both students and instructors, we have included it in every chapter of this edition.
- **Reflective teaching.** The concept of reflective teaching, its importance, and the role that a personal journal can play in helping one become a more reflective teacher are introduced in Chapter 1. This theme is picked up again in Chapter 16, where students learn how to construct a personal journal and how useful this activity is to practicing teachers.

The following lists explain some, though not all, of the major changes made to each chapter.

Chapter 1: Applying Psychology to Teaching

- A new section that correlates the content of *Psychology Applied to Teaching* with the content of the Praxis II, a standardized exam often required for teacher certification, and with the standards for teacher preparation of the Interstate New Teacher Assessment and Support Consortium (INTASC).
- Attention to the increased national emphasis on using scientific research to inform educational practice: for example, the requirement of the No Child Left Behind Act that schools receiving federal funds create and maintain programs on the basis of scientific research; the suggestions of the Task Force on Psychology and Education of the American Psychological Association (APA) for using research to improve teaching and learning; and the APA's publication of standards to strengthen the relationship between educational psychology and teacher education.
- Description of current research that demonstrates the greater effectiveness of certified versus noncertified teachers.
- A new section that describes how the complexity of teaching and learning affects educational research.
- A new Case in Print profiling an award-winning teacher.

Chapter 2: Theories of Psychosocial and Cognitive Development

- Additional criticisms of Erikson's theory of psychosocial development.
- Additional criticisms of Kohlberg's theory of moral development.
- New research on the percentages of adolescents in each identity status, the acceleration of cognitive development through science instruction, the use of

technology to foster cognitive development, and the effectiveness of character education programs.

- New Case in Print on character education.

Chapter 3: Age-Level Characteristics

- New findings on gender differences in physical development, motor skill proficiency, play preferences, and gender typing among preschool and kindergarten children.
- Additional material on primary grade children's use of language to aid cognition.
- Research on meeting the cognitive and emotional needs of middle school students.
- Updated discussion of sexual activity, after-school employment, and incidence of depression and suicide among high school students.
- Discussion of the similarities and differences of the concepts of self-description, self-esteem, and self-concept.
- New Case in Print on middle school anxieties.

Chapter 4: Understanding Student Differences

- Recent refinements of and research on Sternberg's triarchic theory.
- New research on how technology affects intelligence and cognitive style, the cross-cultural validity of Sternberg's mental self-government styles of learning, gender differences in cognitive skills and academic performance, and the effects of gender bias.

Chapter 5: Addressing Cultural and Socioeconomic Diversity

- Suggestions for Teaching in Your Classroom expanded from one section to three.
- Reorganized, revised, and expanded section on ethnicity and social class that includes new material on native Hawaiian and Native American children's preferences for particular instructional formats and processes, Japanese versus Western children's preferences for particular learning processes, and the effect of social class on learning.
- Recent developments in bilingual education.
- New Case in Print on attempts to address the achievement gap between minority and white students.

Chapter 6: Accommodating Student Variability

- Current data on the implementation of IDEA.
- New section on identifying students with learning disabilities.
- New material on characteristics of—and treatment options for—students with attention-deficit/hyperactivity disorder (ADHD).
- New research on ability grouping and its effects on students of low socioeconomic status; on improving reading skills of students with learning disabilities; on methods of identifying gifted and talented students; and on uses of technology for students with disabilities.
- New Case in Print on apparent ethnic/racial biases in special education.

Chapter 7: Behavioral Learning Theory: Operant Conditioning

- New research on the effect of computer-based instruction on learning and the effect of token economies, extinction, and time-out on behavior.
- New material on the debate about corporal punishment.
- New Case in Print on one school's successful behavior management program.
- Material on social learning theory transferred to a new chapter (9) on social cognitive theory.

Chapter 8: Information-Processing Theory

- Suggestions for Teaching in Your Classroom expanded from one section to two.
- New material on relationship between neurological functioning as measured by PET scans and performance on memory tasks.

- New table summarizing instructional implications of the control processes of short-term memory.
- New research on the role of working memory in learning, visual forms of encoding, students' spontaneous use of learning strategies, the effect of mnemonics on essay-test performance, and the use of technology to help students process information more efficiently and effectively.

Chapter 9: Social Cognitive Theory

- This is a *new* chapter, based on the latest developments in social cognitive theory. Anchored in Albert Bandura's triadic reciprocal causation model, it highlights the effect on learning of two of the theory's central variables—self-regulation and self-efficacy—and summarizes the self-regulatory model proposed by social cognitive theorist Barry Zimmerman.
- The chapter also describes how self-regulation is applied to academic achievement, the conditions that make it possible for students to become self-regulated learners, new research that bears on the validity of social cognitive theory, and how technology can be used to promote self-regulated learning.
- As with the other chapters in *Psychology Applied to Teaching*, this chapter offers specific classroom applications through its Suggestions for Teaching in Your Classroom section, Case in Print feature, and the many examples that appear in its different sections.

Chapter 10: Constructivist Learning Theory, Problem Solving, and Transfer

- New Table 10.2 that describes the characteristics of a constructivist classroom.
- New material in Suggestions for Teaching that illustrates how to teach from a constructivist perspective and also satisfy state learning standards.
- New section on the nature of near and far transfer.
- New material on how such technology as multimedia simulations, virtual reality environments, and the Jasper Woodbury series can be used to promote the goals of constructivist learning theory. Several web sites that offer constructivist-oriented activities are described.
- New research on factors that influence the extent to which teachers adopt a constructivist approach to teaching and on when to use worked examples to help students become better problem solvers.

Chapter 11: Approaches to Instruction

- New figure that compares objectives written according to Mager's guidelines with those that follow Gronlund's model.
- New sections on encouraging students to become self-directed learners and the challenges facing teachers who wish to adopt a constructivist approach to teaching.
- New material on how technology can facilitate a cognitive approach to teaching, including problem- and project-based learning.
- New research on the effectiveness of direct instruction, the value of a humanistic approach to teaching, and uses of technology to support cooperative learning.

Chapter 12: Motivation

- New figure that summarizes recent research on the effect of extrinsic rewards on intrinsic motivation.
- New section on the social cognitive view of motivation that draws extensively from the work of Albert Bandura, Dale Schunk, and Barry Zimmerman.
- Suggestions for Teaching in Your Classroom expanded into two parts: "Motivating Students to Learn" and "Satisfying Deficiency Needs and Strengthening Self-Perceptions."
- Revised table (Table 12.2) comparing and illustrating the related concepts of self-description, self-esteem (also known as self-worth), self-concept, and self-efficacy.

- New research on the effect of interest on motivation, the role of academic self-concept in motivation and learning, and the use of technology to motivate students.
- New Case in Print describing one school's innovative approach to increasing students' interest in literature.

Chapter 13: Classroom Management

- New material on the role of integrated learning systems in classroom management.
- Updated statistics on school safety.
- Additional material on biological, gender-related, and psychosocial reasons for school violence.
- New research on classroom interventions and schoolwide programs to reduce violence and improve discipline.
- New Case in Print on a school anger management program.

Chapter 14: Assessment of Classroom Learning

- New material on criteria for constructing a useful classroom test, the benefits of scoring rubrics, potential disadvantages and shortcomings of performance tests, a mastery approach to grading, and using technology to aid classroom assessment.
- New research on the validity of performance assessments.

Chapter 15: Understanding and Using Standardized Tests

- The section on high-stakes testing has been rewritten in response to the No Child Left Behind Act and the spirited reaction by educators to its features, consequences, and implications. This new section describes the main features of NCLB, problems with its implementation, arguments about its actual and likely effects, research findings to date, and recommendations for improving high-stakes testing.
- The technology section has also been extensively rewritten to reflect recent developments in using computer-based technology to prepare students for high-stakes assessments and to administer and score standardized tests (such as computer scoring of essays and computer adaptive testing).
- The new Case in Print focuses on various effects of NCLB.

Chapter 16: Becoming a Better Teacher by Becoming a Reflective Teacher

- The section on student evaluations has been expanded to include discussion of the Constructivist Learning Environment Survey (CLES), a relatively new instrument that assesses the extent to which students believe the classroom environment adheres to constructivist learning principles. Figure 16.2 contains the 25 items that make up the instrument.
- The section on classroom observation schedules has been revised to include a discussion and examples of checklists.
- We have added a new section on the effectiveness of reflective teaching techniques.

Special Features of the Text

The pedagogic features introduced in earlier editions have been improved and augmented to make this Eleventh Edition even more useful and effective.

New Take a Stand! In this era of accountability, teachers are frequently criticized and called upon to defend their profession and their practices. Although many veteran teachers do this quite confidently and effectively, the novice teacher often feels ill prepared to engage the public. To provide students with a brief model of how one can articulate a compelling position on an educational issue, we have created the

new feature called Take a Stand! In Chapters 2 through 15, the senior author draws on his thirty years of experience and knowledge of the research literature to take a strong but supportable stand on an issue that relates to the chapter content. Further, the feature encourages students to do the same—to articulate and discuss their own opinions on key issues. At the textbook web site this feature is extended with additional resources and pedagogy. For users of our Eduspace course this feature will be integrated with the discussion board.

Key Points At the beginning of each chapter, Key Points are listed under major headings. They also appear in the margins of pages opposite sections in which each point is discussed. The Key Points call attention to sections of the text that are considered to be of special significance to teachers and thus serve as instructional objectives.

Suggestions for Teaching in Your Classroom Most chapters include summaries of research findings and principles relating to a particular topic. These are followed by detailed descriptions of various ways in which the information and concepts might be applied in classrooms. Numerous examples of applications at different grade levels are supplied, and readers are urged to select applications that will fit their own particular personality, style, and teaching situation and record their ideas in a Reflective Journal. The Suggestions for Teaching are intended to be read while the book is used as a text and referred to by future teachers and in-service teachers after they have completed coursework. For ease in reference, these suggestions are printed on a colored background.

Case in Print This feature, which uses recent news articles to demonstrate how a basic idea or technique in a chapter is being applied by educators from the primary grades through high school, has proven to be extremely popular with users. Following each article are several open-ended questions designed to encourage the student to think more deeply about the issue in question. The purpose of the Case in Print feature is to illustrate to preservice teachers that the psychological theory and research that their instructors require them to learn does have real-world relevance. A Case in Print can be found in every chapter, and eleven of the sixteen are new to this edition. Additional Cases in Print can be found on the textbook web site.

Pause and Reflect Knowing how difficult it is for students to meaningfully grasp the abstract concepts that make up educational psychology, we have added a new feature to help students make connections between one idea and another and between theory and actual classroom practice. As students read each chapter, they will encounter several Pause and Reflect headings that ask them to stop and think about a concept or issue raised in the chapter or consider how their own experiences relate to what they are reading.

Journal Entries This feature is intended to help students prepare and use a Reflective Journal when they teach. Readers are urged to use the journal entries, which appear in the margins, to prepare a personal set of guidelines for reference before and during the student teaching experience and during the first years of teaching. A guide for setting up and using a Reflective Journal is included in Chapter 16, "Becoming a Better Teacher by Becoming a Reflective Teacher."

Links to the Textbook Web Site Because a wealth of material is available on the web site that supplements the text, this edition includes marginal icons to suggest points at which the reader may want to refer to the web site.

Resources for Further Investigation At the end of each chapter, an annotated bibliography is presented, offering sources of information on the major topics covered

in the chapter. Internet addresses for World Wide Web sites that provide additional useful information are also listed in this section. Please note that the web sites were active at the time we prepared the text, but we, of course, are not responsible for their continued presence. Readers can access the textbook's web site for live, recently updated links.

Summary A numbered set of summary statements appears after the Resources for Further Investigation. This feature is intended to help students review the main points of a chapter for upcoming examinations or class discussions.

Key Terms Also appearing at the end of each chapter is a list of key concepts discussed in the chapter. Understanding these topics is an essential part of understanding the chapter as a whole. To facilitate use of this feature, the page where each term is initially defined and discussed appears in parentheses.

Glossary A glossary of key terms and concepts is provided at the back of the book as an aid in reviewing for examinations or classroom discussion.

Instructional Components That Accompany the Text

Houghton Mifflin Video Cases Available online and organized by topic, each “case” is a 3- to 5-minute module consisting of video and audio files presenting actual classroom scenarios that depict the complex problems and opportunities teachers face every day. The video and audio clips are accompanied by “artifacts” to provide background information and allow preservice teachers to experience true classroom dilemmas in their multiple dimensions.

Instructor's Resource Manual This teaching aid provides for each chapter a detailed lecture outline with supplementary teaching suggestions, coverage of Key Points, supplementary discussion topics, student activities, extra references, listings of films, videotapes, software and Internet resources, and “Approaches to Teaching Educational Psychology,” a compendium of teaching tactics from professors across the country.

Test Bank The Test Bank has been thoroughly revised by Jack Snowman. It includes test items consisting of multiple-choice items in alternate forms, short-answer questions, and essay questions. Consistent with this text's long-standing emphasis on mastery, each multiple-choice and short-answer question reflects a Key Point and either the Knowledge, Comprehension, Application, or Analysis level of Bloom's taxonomy. Feedback booklets allow instructors to point out misconceptions in students' reasoning.

HM Class Prep CD-ROM with HM Testing This product offers resources for instructors, including much of the Instructor's Resource Manual in electronic format for easy customization, PowerPoint slides, videos on key topics on diversity and teacher decision-making, and an interactive computerized version of the Test Bank.

Eduspace For instructors who teach the course online, Houghton Mifflin's new Eduspace course offers a convenient format. Eduspace is Houghton Mifflin's proprietary version of Blackboard. In addition to its handy gradebook and other course management tools, Eduspace includes special interactive components such as videos, a discussion board, reflective journal questions, test items, and additional materials to aid students in studying and reflecting on what they have learned.

Dedicated Web Site Helping today's instructors and students learn how to use technology meaningfully is a primary strength of this text. As a corollary, a dedicated, interactive web site for both instructors and students is available; it can be

accessed from <http://education.college.hmco.com>. The site, updated by Gary and Katrina Daytner of Western Illinois University, offers a wide variety of study aids (including ACE practice tests and interactive glossary flashcards), project ideas, technology links, site-based cases, lesson plans, and more. Although the marginal icons in the text remind students to use the web site, we cannot possibly cross-reference all of our online material. We hope that both instructors and students will explore the web site and make full use of it.

Houghton Mifflin Teacher Education Web Site Houghton Mifflin's general education web site for students (go to <http://education.college.hmco.com/students>) provides additional pedagogic support and resources for beginning and experienced professionals in education, including the unique Project-Based Learning Space. This page links to five extended problem-based projects and provides background theory about project-based learning.

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While the content of a textbook is mostly the product of an author's knowledge, judgment, and communication skill, the suggestions of others play a significant role in shaping its final form. A number of reviewers made constructive suggestions and provided thoughtful reactions at various stages in the development of this edition. Thanks go out to the following individuals for their help:

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Brief Contents

Preface xxvii

1 Applying Psychology to Teaching 1

Part I Student Characteristics

2 Theories of Psychosocial and Cognitive Development 22

3 Age-Level Characteristics 67

4 Understanding Student Differences 103

5 Addressing Cultural and Socioeconomic Diversity 133

6 Accommodating Student Variability 171

Part II Learning and Instruction

7 Behavioral Learning Theory: Operant Conditioning 211

8 Information-Processing Theory 237

9 Social Cognitive Theory 276

10 Constructivist Learning Theory, Problem Solving, and Transfer 309

11 Approaches to Instruction 347

Part III Creating a Positive Learning Environment

12 Motivation 388

13 Classroom Management 422

Part IV Assessment of Students

14 Assessment of Classroom Learning 455

15 Understanding and Using Standardized Tests 491

16 Becoming a Better Teacher by Becoming a Reflective Teacher 522

Glossary 537

References 545

Author/Source Index 575

Subject Index 585

Credits 599

Contents

Preface xxvii

1	Applying Psychology to Teaching	1
	What Is Educational Psychology?	2
	How Will Learning About Educational Psychology Help You Be a Better Teacher?	2
	Teaching Is a Complex Enterprise	2
	Research That Informs Teachers	3
	Coursework and Competence	4
	The Nature and Values of Science	5
	Limitations of Unsystematic Observation	5
	Strengths of Scientific Observation	6
	Complicating Factors in the Study of Behavior and Thought Processes	7
	The Limited Focus of Research	7
	The Complexity of Teaching and Learning	7
	Selection and Interpretation of Data	8
	New Findings Mean Revised Ideas	8
	Good Teaching Is Partly an Art and Partly a Science	9
	● Case in Print <i>Teaching Can Be a Rewarding Experience</i>	12
	Reflective Teaching: A Process to Help You Grow from Novice to Expert	13
	Special Features of This Book	15
	Key Points	15
	Suggestions for Teaching in Your Classroom	16
	Take a Stand!	16
	Case in Print	16
	Emphasis on the Role of Technology in Learning and Instruction	16
	Resources for Further Investigation	18
	Pause and Reflect	18
	Journal Entries	18
	How This Book Will Help Prepare You to Meet Instructional Standards	19
	Praxis II and <i>Psychology Applied to Teaching</i>	19
	INTASC and <i>Psychology Applied to Teaching</i>	20
	Resources for Further Investigation	20
	Summary	21
	Key Terms	21

Part I Student Characteristics

2 Theories of Psychosocial and Cognitive Development 22

Erikson: Psychosocial Development 23

Basic Principles of Erikson's Theory 24

Epigenetic Principle 24

Psychosocial Crisis 24

Stages of Psychosocial Development 24

Trust Versus Mistrust (Birth to One Year) 24

Autonomy Versus Shame and Doubt (Two to Three Years; Preschool) 25

Initiative Versus Guilt (Four to Five Years; Preschool to Kindergarten) 25

Industry Versus Inferiority (Six to Eleven Years; Elementary to Middle School) 25

Identity Versus Role Confusion (Twelve to Eighteen Years; Middle Through High School) 25

Intimacy Versus Isolation (Young Adulthood) 25

Generativity Versus Stagnation (Middle Age) 25

Integrity Versus Despair (Old Age) 26

Helping Students Develop a Sense of Industry 26

• Take a Stand!

Promote Industry, Stamp Out Inferiority 27

Helping Students Formulate an Identity 27

Taking a Psychosocial Moratorium 27

Adolescent Identity Statuses 27

Cultural, Ethnic, and Gender Factors in Identity Status 30

Criticisms of Erikson's Theory 30

• Suggestions for Teaching in Your Classroom

Applying Erikson's Theory of Psychosocial Development 31

Piaget: Cognitive Development 33

Basic Principles of Piaget's Theory 33

Organization 33

Schemes 33

Adaptation 33

Relationships Among Organization, Adaptation, and Schemes 33

Equilibration, Disequilibrium, and Learning 33

Constructing Knowledge 34

Stages of Cognitive Development 34

Sensorimotor Stage (Infants and Toddlers) 35

Preoperational Stage (Preschool and Primary Grades) 35

Concrete Operational Stage (Elementary to Early Middle School) 37

Formal Operational Stage (Middle School, High School, and Beyond) 38

The Role of Social Interaction and Instruction in Cognitive Development 40

How Social Interaction Affects Cognitive Development 40

How Instruction Affects Cognitive Development 41

Criticisms of Piaget's Theory	41
<i>Underestimating Children's Capabilities</i>	41
<i>Overestimating Adolescents' Capabilities</i>	42
<i>Vague Explanations for Cognitive Growth</i>	42
<i>Cultural Differences</i>	42
● Suggestions for Teaching in Your Classroom	
<i>Applying Piaget's Theory of Cognitive Development</i>	43
Vygotsky: Cognitive Development	45
How One's Culture Affects Cognitive Development	45
<i>The Importance of Psychological Tools</i>	46
How Social Interaction Affects Cognitive Development	46
How Instruction Affects Cognitive Development	47
<i>Instruction and the Zone of Proximal Development</i>	49
Using Technology to Promote Cognitive Development	50
Technology Applied to Piaget	50
Technology Applied to Vygotsky	52
Piaget, Kohlberg, and Gilligan: Moral Development	53
Piaget's Analysis of the Moral Judgment of the Child	53
<i>Age Changes in Interpretation of Rules</i>	53
<i>Moral Realism Versus Moral Relativism</i>	53
Kohlberg's Description of Moral Development	55
<i>Kohlberg's Use of Moral Dilemmas</i>	55
<i>Kohlberg's Six Stages of Moral Reasoning</i>	55
<i>Criticisms and Evaluations of Kohlberg's Theory</i>	56
<i>Educational Implications of Kohlberg's Theory</i>	57
Gilligan's View of Identity and Moral Development	58
Does Moral Thinking Lead to Moral Behavior?	59
<i>The Hartshorne and May Studies</i>	59
● Case in Print <i>Teaching Students to Be Good Characters</i>	60
<i>Research on Character Education Programs</i>	61
● Suggestions for Teaching in Your Classroom	
<i>Encouraging Moral Development</i>	63
Resources for Further Investigation	64
Summary	65
Key Terms	66

3 Age-Level Characteristics 67

Preschool and Kindergarten (Three, Four, and Five Years)	68
Physical Characteristics: Preschool and Kindergarten	68
Social Characteristics: Preschool and Kindergarten	69
Emotional Characteristics: Preschool and Kindergarten	71
Cognitive Characteristics: Preschool and Kindergarten	72
Primary Grades (1, 2, and 3; Six, Seven, and Eight Years)	74
Physical Characteristics: Primary Grades	74
Social Characteristics: Primary Grades	75

Emotional Characteristics: Primary Grades	76
Cognitive Characteristics: Primary Grades	77
Elementary Grades (4 and 5; Nine and Ten Years)	78
Physical Characteristics: Elementary Grades	78
Social Characteristics: Elementary Grades	79
Emotional Characteristics: Elementary Grades	80
Cognitive Characteristics: Elementary Grades	81
Middle School (Grades 6, 7, and 8; Eleven, Twelve, and Thirteen Years)	83
Physical Characteristics: Middle School	83
Social Characteristics: Middle School	85
Emotional Characteristics: Middle School	87
Cognitive Characteristics: Middle School	87
● Take a Stand!	
<i>Meeting the Intellectual Needs of Middle School Students</i>	89
● Case in Print	
<i>Middle School Anxieties</i>	90
High School (Grades 9, 10, 11, and 12; Fourteen, Fifteen, Sixteen, and Seventeen Years)	91
Physical Characteristics: High School	91
Social Characteristics: High School	93
Emotional Characteristics: High School	94
Cognitive Characteristics: High School	97
Selecting Technologies for Different Age Levels	98
Technology and Literacy	98
Using Technology to Reduce Egocentrism	98
Effect of Technology on Cognitive and Interpersonal Reasoning	99
Resources for Further Investigation	100
Summary	100
Key Terms	102

4 Understanding Student Differences 103

The Nature and Measurement of Intelligence	104
The Origin of Intelligence Testing	104
What Traditional Intelligence Tests Measure	105
Limitations of Intelligence Tests	105
Contemporary Views of Intelligence	106
<i>David Wechsler's Global Capacity View</i>	106
<i>Robert Sternberg's Triarchic Theory</i>	107
<i>Howard Gardner's Multiple Intelligences Theory</i>	109
Using the New Views of Intelligence to Guide Instruction	111
<i>Sternberg's Triarchic Theory</i>	112
<i>Gardner's Multiple Intelligences Theory</i>	112
Using Technology to Develop Intelligence	112
Learning Styles	114
Reflectivity and Impulsivity	115
Field Dependence and Field Independence	116