GLOBAL EDITION

THIRTEENTH EDITION

Educational Psychology

ANITA WOOLFOLK

The Ohio State University

PEARSON

Boston Columbus Indianapolis New York San Francisco
Amsterdam Cape Town Dubai London Madrid Milan Munich Paris Montreal Toronto
Delhi Mexico City São Paulo Sydney Hong Kong Seoul Singapore Taipei Tokyo

Brief Contents

1 Learning, Teaching, and Educational Psychology 28

PART I: STUDENTS

2 Cognitive Development 56

3 The Self, Social, and Moral Development 98

4 Learner Differences and Learning Needs 144

5 Language Development, Language Diversity, and Immigrant Education 196

6 Culture and Diversity 234

PART II: LEARNING AND MOTIVATION

7 Behavioral Views of Learning 276

8 Cognitive Views of Learning 314

9 Complex Cognitive Processes 352

10 The Learning Sciences and Constructivism 394

11 Social Cognitive Views of Learning and Motivation 436

12 Motivation in Learning and Teaching 468

PART III: TEACHING AND ASSESSING

13 Creating Learning Environments 512

14 Teaching Every Student 554

15 Classroom Assessment, Grading, and Standardized Testing 594

Contents

1 Learning, Teaching, and Educational Psychology 28

Teachers' Casebook—Leaving No Student Behind: What Would You Do? 28
Overview and Objectives 29
Learning and Teaching Today 30
Students Today: Dramatic Diversity and Remarkable Technology 30
Confidence in Every Context 31
High Expectations for Teachers and Students 31
Do Teachers Make a Difference? 33
Teacher–Student Relationships 33
The Cost of Poor Teaching 33
What Is Good Teaching? 34
Inside Three Classrooms 34
A Bilingual First Grade 34
A Suburban Fifth Grade 34
An Inclusive Class 35
So What Is Good Teaching 35
Models of Good Teaching 35
Measures of Effective Teaching 38
Beginning Teachers 38
The Role of Educational Psychology 39
In the Beginning: Linking Educational Psychology and Teaching 39
Educational Psychology Today 40
Is It Just Common Sense? 40
Helping Students 40
Answer Based on Research 40
Skipping Grades 40
Answer Based on Research 41
Students in Control 41
Answer Based on Research 41
Obvious Answers? 41
Using Research to Understand and Improve Learning 42
Correlation Studies 42
Experimental Studies 42
Single-Subject Experimental Designs 43
Clinical Interviews and Case Studies 43
Ethnography 43
The Role of Time in Research 44
Quantitative Versus Qualitative Research 44
Point/Counterpoint: What Kind of Research Should Guide Education? 45
Teachers as Researchers 46
Theories for Teaching 47
Supporting Student Learning 48
Summary 50
Key Terms 52
Teachers' Casebook—Leaving No Student Behind: What Would They Do? 53

PART I: STUDENTS

2 Cognitive Development 56

Teachers' Casebook—Symbols and Cymbals: What Would You Do? 56
Overview and Objectives 57
A Definition of Development 58
Three Questions Across the Theories 58
What Is the Source of Development? Nature Versus Nurture 58
What Is the Shape of Development? Continuity Versus Discontinuity 59
Timing: Is It Too Late? Critical Versus Sensitive Periods 59
Beware of Either/Or 59
General Principles of Development 60
The Brain and Cognitive Development 60
The Developing Brain: Neurons 61
The Developing Brain: Cerebral Cortex 63
Adolescent Development and the Brain 64
Putting It All Together: How the Brain Works 65
Neuroscience, Learning, and Teaching 65
Point/Counterpoint: Brain-Based Education 66
Instruction and Brain Development 67
The Brain and Learning to Read 68
Emotions, Learning, and the Brain 69
Lessons for Teachers: General Principles 69
Piaget's Theory of Cognitive Development 70
Influences on Development 71
Basic Tendencies in Thinking 71
Organization 71
Adaptation 72
Equilibration 72
Four Stages of Cognitive Development 72
Infancy: The Sensorimotor Stage 72
Early Childhood to the Early Elementary Years: The Preoperational Stage 73
Guidelines: Family and Community Partnerships—Helping Families Care for Preoperational Children 75
Later Elementary to the Middle School Years: The Concrete-Operational Stage 75
High School and College: Formal Operations 77

Guidelines: Teaching the Concrete-Operational Child 77
Do We All Reach the Fourth Stage? 79
Information Processing, Neo-Piagetian, and Neuroscience Views of Cognitive Development 79
Guidelines: Helping Students to Use Formal Operations 79
Some Limitations of Piaget's Theory 80
The Trouble with Stages 80
Underestimating Children's Abilities 81
Cognitive Development and Culture 82
Vygotsky's Sociocultural Perspective 82
The Social Sources of Individual Thinking 83
Cultural Tools and Cognitive Development 84
Technical Tools in a Digital Age 84
Psychological Tools 85
The Role of Language and Private Speech 85
Private Speech: Vygotsky's and Piaget's Views Compared 85
The Zone of Proximal Development 87
Private Speech and the Zone 87
The Role of Learning and Development 87
Limitations of Vygotsky's Theory 87
Implications of Piaget's and Vygotsky's Theories for Teachers 88
Piaget: What Can We Learn? 88
Understanding and Building on Students' Thinking 88
Activity and Constructing Knowledge 89
Vygotsky: What Can We Learn? 89
The Role of Adults and Peers 90
Assisted Learning 90
An Example Curriculum: Tools of the Mind 90
Reaching Every Student: Teaching in the "Magic Middle" 91
Guidelines: Applying Vygotsky's Ideas in Teaching 92
Cognitive Development: Lessons for Teachers 92
Summary 92
Key Terms 95
Teachers' Casebook—Symbols and Cymbals: What Would They Do? 96

3 The Self, Social, and Moral Development 98

Teachers' Casebook—Mean Girls: What Would You Do? 98
Overview and Objectives 99
Physical Development 100
Physical and Motor Development 100
Young Children 100
Elementary School Years 100
The Adolescent Years 101
Early and Later Maturing 101
Guidelines: Dealing with Physical Differences in the Classroom 102
Play, Recess, and Physical Activity 102
Cultural Differences in Play 102
Exercise and Recess 103
Physical Activity and Students with Disabilities 103
Challenges in Physical Development 103
Obesity 103
Eating Disorders 104
Guidelines: Supporting Positive Body Images in Adolescents 106
Bronfenbrenner: The Social Context for Development 106
The Importance of Context and the Bioecological Model 107
Families 107
Family Structure 107
Parenting Styles 108
Culture and Parenting 109
Attachment 109
Guidelines: Family and Community Partnerships 110
Divorce 110
Guidelines: Helping Children of Divorce 111
Peers 111
Cliques 111
Crowds 111
Peer Cultures 112
Friendships 112
Popularity 112
Causes and Consequences of Rejection 113
Aggression 114
Relational Aggression 114
Media, Modeling, and Aggression 115
Video Games and Aggressive Behavior 115
Reaching Every Student: Teacher Support 115
Guidelines: Dealing with Aggression and Encouraging Cooperation 116
Academic and Personal Caring 116
Teachers and Child Abuse 117
Society and Media 118
Identity and Self-Concept 119
Erikson: Stages of Psychosocial Development 119
The Preschool Years: Trust, Autonomy, and Initiative 120
The Elementary and Middle School Years: Industry Versus Inferiority 121
Adolescence: The Search for Identity 121
Guidelines: Encouraging Initiative and Industry 122
Identity and Technology 123
Guidelines: Supporting Identity Formation 124
Beyond the School Years 124
Racial-Ethnic Identity 125
Ethnic Identities: Outcome and Process 125
Racial Identity: Outcome and Process 125
Racial and Ethnic Pride 126
Self-Concept 126
The Structure of Self-Concept 126
How Self-Concept Develops 127
Self-Concept and Achievement 128
Sex Differences in Self-Concept of Academic Competence 128
Self-Esteem 129
Point/Counterpoint: What Should Schools Do to Encourage Students' Self-Esteem? 130

Understanding Others and Moral Development 131
Theory of Mind and Intention 131
Moral Development 131
Kohlberg's Theories of Moral Development 131
Criticisms of Kohlberg's Theory 132
Moral Judgments, Social Conventions, and Personal Choices 133
Moral Versus Conventional Domains 133
Implications for Teachers 134
Diversity in Moral Reasoning 135
Beyond Reasoning: Haidt's Social Intuitionist Model of Moral Psychology 135
Moral Behavior and the Example of Cheating 136
Who Cheats? 137
Dealing with Cheating 137
Personal/Social Development: Lessons for Teachers 138
Summary 138
Key Terms 141
Teachers' Casebook—Mean Girls: What Would They Do? 142

4 Learner Differences and Learning Needs 144

Teachers' Casebook—Including Every Student: What Would You Do? 144
Overview and Objectives 145
Intelligence 146
Language and Labels 146
Disabilities and Handicaps 146
Person-First Language 147
Possible Biases in the Application of Labels 147
What Does Intelligence Mean? 148
Intelligence: One Ability or Many? 148
Multiple Intelligences 149
What Are These Intelligences 149
Critics of Multiple Intelligences Theory 151
Gardner Responds 151
Multiple Intelligences Go to School 151
Multiple Intelligences: Lessons for Teachers 152
Intelligence as a Process 152
Measuring Intelligence 153
Binet's Dilemma 153
What Does an IQ Score Mean? 154
Group Versus Individual IQ Tests 154
The Flynn Effect: Are We Getting Smarter? 154
Guidelines: Interpreting IQ Scores 155
Intelligence and Achievement 155
Gender Differences in Intelligence 156
Heredity or Environment? 157
Being Smart About IQ Tests 157
Learning and Thinking Styles 157
Learning Styles/Preferences 158
Cautions About Learning Styles 158
The Value of Considering Learning Styles 159
Beyond Either/Or 159
Individual Differences and the Law 160
IDEA 160
Least Restrictive Environment 160
Individualized Education Program 161
The Rights of Students and Families 162
Section 504 Protections 162
Guidelines: Family and Community Partnerships—Productive Conferences 164
Students with Learning Challenges 165
Neuroscience and Learning Challenges 165
Students with Learning Disabilities 166
Student Characteristics 166
Teaching Students with Learning Disabilities 168
Students with Hyperactivity and Attention Disorders 168
Definitions 169
Treating ADHD with Drugs 169
Alternatives/Additions to Drug Treatments 169
Point/Counterpoint: Pills or Skills for Children with ADHD? 170
Lessons for Teachers: Learning Disabilities and ADHD 171
Students with Communication Disorders 171
Speech Disorders 172
Language Disorders 172
Students with Emotional or Behavioral Difficulties 173
Suicide 174
Guidelines: Disciplining Students with Emotional Problems 175
Drug Abuse 175
Prevention 176
Students with Intellectual Disabilities 177
Guidelines: Teaching Students with Intellectual Disabilities 178
Students with Health and Sensory Impairments 178
Cerebral Palsy and Multiple Disabilities 178
Seizure Disorders (epilepsy) 179
Other Serious Health Concerns: Asthma, HIV/AIDS, and Diabetes 179
Students with Vision Impairments 180
Students Who Are Deaf 180
Autism Spectrum Disorders and Asperger Syndrome 181
Interventions 181
Response to Intervention 182
Students Who Are Gifted and Talented 182
Who Are These Students? 184
What Is the Origin of These Gifts? 184
What Problems Do Students Who Are Gifted Face? 185
Identifying Students Who Are Gifted and Talented 185
Recognizing Gifts and Talents 185
Teaching Students with Gifts and Talents 187
Acceleration 187
Methods and Strategies 188
Summary 189
Key Terms 192
Teachers' Casebook—Including Every Student: What Would They Do? 193

5 Language Development, Language Diversity, and Immigrant Education 196

Teachers' Casebook—Cultures Clash in the Classroom: What Would You Do? 196
Overview and Objectives 197
The Development of Language 198
What Develops? Language and Cultural Differences 198
The Puzzle of Language 198
When and How Does Language Develop? 198
Sounds and Pronunciation 198
Vocabulary and Meaning 199
Grammar and Syntax 200
Pragmatics: Using Language in Social Situations 200
Metalinguistic Awareness 201
Emergent Literacy 201
Inside-Out and Outside-In Skills 202
Building a Foundation 203
When There Are Persistent Problems 203
Emergent Literacy and Language Diversity 203
Languages and Emergent Literacy 204
Guidelines: Supporting Language and Promoting Literacy 204
Bilingual Emergent Literacy 205
Diversity in Language Development 205
Dual-Language Development 205
Second-Language Learning 206
Benefits of Bilingualism 206
Language Loss 207
Signed Languages 208
What Is Involved in Being Bilingual? 209
Contextualized and Academic Language 210
Guidelines: Promoting Language Learning 211
Dialect Differences in the Classroom 212
Dialects 212
Dialects and Pronunciation 212
Dialects and Teaching 213
Genderlects 213
Teaching Immigrant Students 213
Immigrants and Refugees 214
Classrooms Today 215
Four Student Profiles 215
Generation 1.5: Students in Two Worlds 216
Teaching Students Who Are English Language Learners 217
Two Approaches to English Language Learning 218
Research on Bilingual Education 218
Bilingualism for All: Two-Way Immersion 218
Point/Counterpoint: What Is the Best Way to Teach Students Who Are ELLs? 219
Sheltered Instruction 221
Affective and Emotional/Social Considerations 223
Guidelines: Providing Emotional Support and Increasing Self-Esteem for Students Who Are ELLs 224
Working with Families: Using the Tools of the Culture 225
Funds of Knowledge and Welcome Centers 225
Student-Led Conferences 225
Guidelines: Family and Community Partnerships 226
Special Challenges: Students Who Are English Language Learners with Disabilities and Special Gifts 226
Students Who Are English Language Learners with Disabilities 227
Reaching Every Student: Recognizing Giftedness in Bilingual Students 227
Summary 229
Key Terms 231
Teachers' Casebook—Cultures Clash in the Classroom: What Would They Do? 232

6 Culture and Diversity 234

Teachers' Casebook—White Girls Club: What Would You Do? 234
Overview and Objectives 235
Today's Diverse Classrooms 236
American Cultural Diversity 236
Meet Four More Students 237
Cautions: Interpreting Cultural Differences 239
Cultural Conflicts and Compatibilities 240
Dangers in Stereotyping 240
Economic and Social Class Differences 240
Social Class and Socioeconomic Status 241
Extreme Poverty: Homeless and Highly Mobile Students 241
Poverty and School Achievement 241
Health, Environment, and Stress 244
Low Expectations—Low Academic Self-Concept 244
Peer Influences and Resistance Cultures 244
Home Environment and Resources 245
Summer Setbacks 245
Tracking: Poor Teaching 245
Point/Counterpoint: Is Tracking an Effective Strategy? 246
Guidelines: Teaching Students Who Live in Poverty 247
Ethnicity and Race in Teaching and Learning 247
Terms: Ethnicity and Race 247
Ethnic and Racial Differences in School Achievement 248
The Legacy of Discrimination 250
What Is Prejudice? 251
The Development of Prejudice 251
Continuing Discrimination 252
Stereotype Threat 253
Who Is Affected by Stereotype Threat? 253
Short-Term Effects: Test Performance 254

Long-Term Effects: Disidentification 255
Combating Stereotype Threat 255
Gender in Teaching and Learning 256
Sex and Gender 256
Sexual Orientation 256
Gender Roles 258
Gender Bias in Curriculum Materials 259
Gender Bias in Teaching 259
Guidelines: Avoiding Gender Bias in Teaching 260
Multicultural Education: Creating Culturally Compatible Classrooms 261
Culturally Relevant Pedagogy 261
Fostering Resilience 263
Resilient Students 263
Resilient Classrooms 263
Self-Agency Strand 264
Relationship Strand 265
Guidelines: Family and Community Partnerships 265
Diversity in Learning 266
Social Organization 266
Cultural Values and Learning Preferences 266
Cautions (Again) About Learning Styles Research 267
Sociolinguistics 267
Sources of Misunderstandings 267
Lessons for Teachers: Teaching Every Student 268
Know Your Students 268
Respect Your Students 268
Teach Your Students 268
Guidelines: Culturally Relevant Teaching 269
Summary 270
Key Terms 272
Teachers' Casebook—White Girls Club: What Would They Do? 273

PART II: LEARNING AND MOTIVATION

7 Behavioral Views of Learning 276

Teachers' Casebook—Sick of Class: What Would You Do? 276
Overview and Objectives 276
Understanding Learning 278
Neuroscience of Behavioral Learning 278
Learning Is Not Always What It Seems 279
Early Explanations of Learning: Contiguity and Classical Conditioning 280
Guidelines: Applying Classical Conditioning 281
Operant Conditioning: Trying New Responses 282
Types of Consequences 282
Reinforcement 283
Punishment 284
Reinforcement Schedules 284
Extinction 286
Antecedents and Behavior Change 286
Effective Instruction Delivery 287
Cueing 287
Prompting 287
Putting It All Together to Apply Operant Conditioning: Applied Behavior Analysis 288
Methods for Encouraging Behaviors 289
Reinforcing with Teacher Attention 289
Selecting Reinforcers: The Premack Principle 289
Guidelines: Applying Operant Conditioning: Using Praise Appropriately 290
Shaping 291
Guidelines: Applying Operant Conditioning: Encouraging Positive Behaviors 292
Positive Practice 292
Contingency Contracts, Token Reinforcement, and Group Consequences 292
Contingency Contracts 293
Token Reinforcement Systems 294
Group Consequences 294
Handling Undesirable Behavior 295
Negative Reinforcement 296
Reprimands 296
Response Cost 296
Social Isolation 297
Some Cautions About Punishment 297
Reaching Every Student: Severe Behavior Problems 297
Guidelines: Applying Operant Conditioning: Using Punishment 298
Contemporary Applications: Functional Behavioral Assessment, Positive Behavior Supports, and Self-Management 299
Discovering the "Why": Functional Behavioral Assessments 300
Positive Behavior Supports 301
Self-Management 302
Goal Setting 302
Monitoring and Evaluating Progress 303
Self-Reinforcement 303
Guidelines: Family and Community Partnerships—Applying Operant Conditioning: Student Self-Management 304
Challenges, Cautions, and Criticisms 304
Beyond Behaviorism: Bandura's Challenge and Observational Learning 304
Enactive and Observational Learning 304
Learning and Performance 305
Criticisms of Behavioral Methods 305
Point/Counterpoint: Should Students Be Rewarded for Learning? 306
Ethical Issues 307
Goals 307
Strategies 307
Behavioral Approaches: Lessons for Teachers 308

Summary 308
Key Terms 310
Teachers' Casebook—Sick of Class: What Would They Do? 311

8 Cognitive Views of Learning 314

Teachers' Casebook—Remembering the Basics: What Would You Do? 314
Overview and Objectives 315
Elements of the Cognitive Perspective 316
Comparing Cognitive and Behavioral Views 316
Views of Learning 316
Goals 316
The Brain and Cognitive Learning 316
The Importance of Knowledge in Cognition 317
General and Specific Knowledge 317
Cognitive Views of Memory 318
Sensory Memory 320
Capacity, Duration, and Contents of Sensory Memory 320
Perception 320
The Role of Attention 321
Attention and Multitasking 321
Attention and Teaching 322
Guidelines: Gaining and Maintaining Attention 323
Working Memory 323
The Central Executive 324
The Phonological Loop 324
The Visuospatial Sketchpad 325
The Episodic Buffer 325
The Duration and Contents of Working Memory 326
Cognitive Load and Retaining Information 326
Three Kinds of Cognitive Load 326
Retaining Information in Working Memory 326
Levels of Processing Theory 327
Forgetting 328
Individual Differences in Working Memory 328
Developmental Differences 328
Individual Differences 329
Long-Term Memory 330
Capacity, Duration, and Contents of Long-Term Memory 330
Contents: Declarative, Procedural, and Self-Regulatory Knowledge 330
Explicit Memories: Semantic and Episodic 332
Propositions and Propositional Networks 332
Images 332
Two Are Better than One: Words and Images 332
Concepts 333
Prototypes, Exemplars, and Theory-Based Categories 333
Schemas 334
Episodic Memory 335
Implicit Memories 335
Retrieving Information in Long-Term Memory 336
Spreading Activation 337
Reconstruction 337
Forgetting and Long-Term Memory 337
Individual Differences in Long-Term Memory 337
Teaching for Deep, Long-Lasting Knowledge: Basic Principles and Applications 338
Constructing Declarative Knowledge: Making Meaningful Connections 338
Elaboration, Organization, Imagery, and Context 338
Guidelines: Family and Community Partnerships—Organizing Learning 339
Imagery 339
Reaching Every Student: Make it Meaningful 341
Mnemonics 342
Rote Memorization 342
Development of Procedural Knowledge 343
Point/Counterpoint: What's Wrong with Memorizing? 344
Automated Basic Skills 345
Domain-Specific Strategies 345
Guidelines: Helping Students Understand and Remember 346
Summary 346
Key Terms 348
Teachers' Casebook—Remembering the Basics: What Would They Do? 350

9 Complex Cognitive Processes 352

Teachers' Casebook—Uncritical Thinking: What Would You Do? 352
Overview and Objectives 353
Metacognition 354
Metacognitive Knowledge and Regulation 354
Individual Differences in Metacognition 355
Lessons for Teachers: Developing Metacognition 355
Metacognitive Development for Younger Students 355
Metacognitive Development for Secondary and College Students (Like You) 357
Learning Strategies 357
Being Strategic About Learning 357
Deciding What Is Important 358
Summaries 358
Underlining and Highlighting 359
Taking Notes 359
Visual Tools for Organizing 360
Reading Strategies 362
Applying Learning Strategies 363
Appropriate Tasks 363
Valuing Learning 363
Effort and Efficacy 363

Reaching Every Student: Learning Strategies for Struggling Students 363
Guidelines: Becoming an Expert Student 364
Problem Solving 365
Identifying: Problem Finding 366
Defining Goals and Representing the Problem 367
Focusing Attention on What Is Relevant 367
Understanding the Words 367
Understanding the Whole Problem 368
Translation and Schema Training: Direct Instruction in Schemas 368
Translation and Schema Training: Worked Examples 369
The Results of Problem Representation 370
Searching for Possible Solution Strategies 371
Algorithms 371
Heuristics 371
Anticipating, Acting, and Looking Back 372
Factors That Hinder Problem Solving 372
Some Problems with Heuristics 373
Guidelines: Applying Problem Solving 374
Expert Knowledge and Problem Solving 374
Knowing What Is Important 374
Memory for Patterns and Organization 375
Procedural Knowledge 375
Planning and Monitoring 375
Creativity: What It Is and Why It Matters 376
Assessing Creativity 376
OK, But So What: Why Does Creativity Matter? 376
What Are the Sources of Creativity? 377
Creativity and Cognition 378
Creativity and Diversity 378
Creativity in the Classroom 378
The Big C: Revolutionary Innovation 379
Guidelines: Applying and Encouraging Creativity 380
Critical Thinking and Argumentation 381
One Model of Critical Thinking: Paul and Elder 381
Applying Critical Thinking in Specific Subjects 382
Argumentation 383
Point/Counterpoint: Should Schools Teach Critical Thinking and Problem Solving? 384
Teaching for Transfer 385
The Many Views of Transfer 385
Teaching for Positive Transfer 386
What Is Worth Learning? 386
How Can Teachers Help? 387
Stages of Transfer for Strategies 387
Guidelines: Family and Community Partnerships—Promoting Transfer 388
Summary 388
Key Terms 390
Teachers' Casebook—Uncritical Thinking: What Would They Do? 391

10 The Learning Sciences and Constructivism 394

Teachers' Casebook—Learning to Cooperate: What Would You Do? 394
Overview and Objectives 395
The Learning Sciences 396
What Are the Learning Sciences? 396
Basic Assumptions of the Learning Sciences 396
Embodied Cognition 397
Cognitive and Social Constructivism 398
Constructivist Views of Learning 399
Psychological/Individual/Cognitive Constructivism 399
Vygotsky's Social Constructivism 400
Constructionism 401
How Is Knowledge Constructed? 401
Knowledge: Situated or General? 402
Common Elements of Constructivist Student-Centered Teaching 403
Complex Learning Environments and Authentic Tasks 403
Social Negotiation 404
Multiple Perspectives and Representations of Content 404
Understanding the Knowledge Construction Process 404
Student Ownership of Learning 404
Applying Constructivist Perspectives 404
Inquiry and Problem-Based Learning 405
Examples of Inquiry 406
Problem-Based Learning 406
Research on Inquiry and Problem-Based Learning 408
Cognitive Apprenticeships and Reciprocal Teaching 408
Point/Counterpoint: Are Inquiry and Problem-Based Learning Effective Teaching Approaches? 409
Cognitive Apprenticeships in Reading: Reciprocal Teaching 411
Applying Reciprocal Teaching 411
Collaboration and Cooperation 411
Collaboration, Group Work, and Cooperative Learning 412
Beyond Groups to Cooperation 412
What Can Go Wrong: Misuses of Group Learning 413
Tasks for Cooperative Learning 413
Highly Structured, Review, and Skill-Building Tasks 414
Ill-Structured, Conceptual, and Problem-Solving Tasks 414
Social Skills and Communication Tasks 414
Preparing Students for Cooperative Learning 414
Setting Up Cooperative Groups 415
Giving and Receiving Explanations 415
Assigning Roles 416
Designs for Cooperation 417
Reciprocal Questioning 417
Jigsaw 418
Constructive/Structured Controversies 418
Reaching Every Student: Using Cooperative Learning Wisely 419
Guidelines: Using Cooperative Learning 420
Dilemmas of Constructivist Practice 420

Service Learning 421
Guidelines: Family and Community Partnerships—Service Learning 422
Learning in a Digital World 423
Technology and Learning 423
Technology-Rich Environments 424
Virtual Learning Environments 424
Personal Learning Environments 425
Immersive Virtual Learning Environments 425
Games 426
Developmentally Appropriate Computer Activities for Young Children 426
Computers and Older Students 427
Computational Thinking and Coding 427
Guidelines: Using Computers 428
Media/Digital Literacy 429
Guidelines: Supporting the Development of Media Literacy 430
Summary 430
Key Terms 432
Teachers' Casebook—Learning to Cooperate: What Would They Do? 433

11 Social Cognitive Views of Learning and Motivation 436

Teachers' Casebook—Failure to Self-Regulate: What Would You Do? 436
Overview and Objectives 437
Social Cognitive Theory 438
A Self-Directed Life: Albert Bandura 438
Beyond Behaviorism 438
Triarchic Reciprocal Causality 439
Modeling: Learning by Observing Others 440
Elements of Observational Learning 441
Attention 441
Retention 442
Production 442
Motivation and Reinforcement 442
Observational Learning in Teaching 443
Directing Attention 443
Fine Tuning Already-Learned Behaviors 443
Strengthening or Weakening Inhibitions 443
Teaching New Behaviors 443
Arousing Emotion 443
Guidelines: Using Observational Learning 444
Self-Efficacy and Agency 444
Self-Efficacy, Self-Concept, and Self-Esteem 445
Sources of Self-Efficacy 445
Self-Efficacy in Learning and Teaching 446
Guidelines: Encouraging Self-Efficacy 447
Teachers' Sense of Efficacy 448
Self-Regulated Learning 448
Point/Counterpoint: Are High Levels of Teacher Efficacy Beneficial? 449
What Influences Self-Regulation? 450
Knowledge 450
Motivation 450
Volition 451
Development of Self-Regulation 451
Models of Self-Regulated Learning and Agency 451
An Individual Example of Self-Regulated Learning 453
Two Classrooms 454
Writing 454
Math Problem Solving 454
Technology and Self-Regulation 455
Reaching Every Student: Families and Self-Regulation 455
Another Approach to Self-Regulation: Cognitive Behavior Modification 455
Guidelines: Family and Community Partnerships 456
Emotional Self-Regulation 457
Guidelines: Encouraging Emotional Self-Regulation 458
Teaching Toward Self-Efficacy and Self-Regulated Learning 459
Complex Tasks 460
Control 460
Self-Evaluation 461
Collaboration 461
Bringing It All Together: Theories of Learning 462
Summary 463
Key Terms 465
Teachers' Casebook—Failure to Self-Regulate: What Would They Do? 466

12 Motivation in Learning and Teaching 468

Teachers' Casebook—Motivating Students When Resources Are Thin: What Would You Do? 468
Overview and Objectives 469
What Is Motivation? 470
Meeting Some Students 470
Intrinsic and Extrinsic Motivation 471
Five General Approaches to Motivation 472
Behavioral Approaches to Motivation 472
Humanistic Approaches to Motivation 472
Cognitive Approaches to Motivation 473
Social Cognitive Theories 473
Sociocultural Conceptions of Motivation 473
Needs 474
Maslow's Hierarchy of Needs 474

Self-Determination: Need for Competence, Autonomy, and Relatedness 475
Self-Determination in the Classroom 476
Information and Control 476
Guidelines: Supporting Self-Determination and Autonomy 477
The Need for Relatedness 477
Needs: Lessons for Teachers 478
Goal Orientations 478
Types of Goals and Goal Orientations 478
Four Achievement Goal Orientations in School 479
Wait—Are Performance Goals Always Bad? 480
Beyond Mastery and Performance 481
Goals in Social Context 481
Feedback, Goal Framing, and Goal Acceptance 482
Goals: Lessons for Teachers 482
Beliefs and Self-Perceptions 482
Beliefs About Knowing: Epistemological Beliefs 482
Beliefs About Ability 483
Beliefs About Causes and Control: Attribution Theory 484
Attributions in the Classroom 485
Teacher Actions and Student Attributions 485
Beliefs About Self-Worth 486
Learned Helplessness 486
Self-Worth 486
Guidelines: Encouraging Self-Worth 488
Beliefs and Attributions: Lessons for Teachers 488
Interests, Curiosity, Emotions, and Anxiety 488
Tapping Interests 489
Catching and Holding Interests 489
Point/Counterpoint: Does Making Learning Fun Make for Good Learning? 490
Curiosity: Novelty and Complexity 491
Flow 491
Emotions and Anxiety 491
Neuroscience and Emotion 491
Guidelines: Building on Students' Interests and Curiosity 492
Achievement Emotions 493
Arousal and Anxiety 493
Anxiety in the Classroom 494
How Does Anxiety Interfere with Achievement? 494
Reaching Every Student: Coping with Anxiety 495
Guidelines: Coping with Anxiety 496
Curiosity, Interests, and Emotions: Lessons for Teachers 496
Motivation to Learn in School: On Target 497
Tasks for Learning 498
Task Value 498
Beyond Task Value to Genuine Appreciation 498
Authentic Tasks 498
Supporting Autonomy and Recognizing Accomplishment 499
Supporting Choices 499
Recognizing Accomplishment 499
Grouping, Evaluation, and Time 500
Grouping and Goal Structures 500
Evaluation 500
Time 501
Putting It All Together 501
Diversity in Motivation 503
Lessons for Teachers: Strategies to Encourage Motivation 503
Can I Do It? Building Confidence and Positive Expectations 504
Do I Want to Do It? Seeing the Value of Learning 504
What Do I Need to Do to Succeed? Staying Focused on the Task 505
Do I Belong in This Classroom? 505
Guidelines: Motivation to Learn: Family and Community Partnerships 506
Summary 506
Key Terms 509
Teachers' Casebook—Motivating Students When Resources Are Thin: What Would They Do? 510

PART III: TEACHING AND ASSESSING

13 Creating Learning Environments 512

Teachers' Casebook—Bullies and Victims: What Would You Do? 512
Overview and Objectives 513
The What and Why of Classroom Management 514
The Basic Task: Gain Their Cooperation 516
The Goals of Classroom Management 517
Access to Learning 517
More Time for Learning 517
Management for Self-Management 518
Creating a Positive Learning Environment 519
Some Research Results 519
Routines and Rules Required 520
Routines and Procedures 520
Rules 520
Rules for Elementary School 520
Guidelines: Establishing Class Routines 521
Rules for Secondary School 522
Consequences 522
Who Sets the Rules and Consequences 522
Planning Spaces for Learning 523
Personal Territories 524
Interest Areas 524
Guidelines: Designing Learning Spaces 525
Getting Started: The First Weeks of Class 525

Effective Managers for Elementary Students 525
Effective Managers for Secondary Students 527
Maintaining a Good Environment for Learning 527
Encouraging Engagement 527
Guidelines: Keeping Students Engaged 528
Prevention Is the Best Medicine 528
Withitness 529
Overlapping and Group Focus 529
Movement Management 529
Student Social Skills as Prevention 529
Caring Relationships: Connections with School 530
School Connections 530
Creating Communities of Care for Adolescents 530
Guidelines: Creating Caring Relationships 531
Dealing with Discipline Problems 532
Stopping Problems Quickly 532
Guidelines: Imposing Penalties 533
Bullying and Cyberbullying 534
Victims 534
Why Do Students Bully? 536
Bullying and Teasing 536
Changing Attributions 537
Cyberbullying 537
Special Problems with High School Students 538
Guidelines: Handling Potentially Explosive Situations 539
Point/Counterpoint: Is Zero Tolerance a Good Idea? 540
The Need for Communication 541
Message Sent—Message Received 541
Diagnosis: Whose Problem Is It? 542
Counseling: The Student's Problem 542
Confrontation and Assertive Discipline 543
"I" Messages 543
Assertive Discipline 543
Confrontations and Negotiations 544
Reaching Every Student: Peer Mediation and Restorative Justice 544
Peer Mediation 545
Restorative Justice 545
The 4 RS 545
Research on Management Approaches 546
Integrating Ideas 546
Guidelines: Family and Community Partnerships—Classroom Management 546
Connecting with Families About Classroom Management 547
Diversity: Culturally Responsive Management 547
Summary 548
Key Terms 550
Teachers' Casebook—Bullies and Victims: What Would They Do? 552

14 Teaching Every Student 554

Teachers' Casebook—Reaching and Teaching Every Student: What Would You Do? 554
Overview and Objectives 555
Research on Teaching 556
Characteristics of Effective Teachers 556
Clarity and Organization 556
Warmth and Enthusiasm 556
Knowledge for Teaching 557
Recent Research on Teaching 557
The First Step: Planning 559
Research on Planning 559
Objectives for Learning 560
An Example of Standards: The Common Core 560
An Example of Standards for Teachers: Technology 561
Classrooms: Instructional Objectives 562
Mager: Start with the Specific 562
Gronlund: Start with the General 562
Flexible and Creative Plans—Using Taxonomies 563
The Cognitive Domain 563
The Affective Domain 564
The Psychomotor Domain 564
Guidelines: Using Instructional Objectives 565
Planning from a Constructivist Perspective 565
Teaching Approaches 566
Direct Instruction 566
Rosenshine's Six Teaching Functions 567
Advance Organizers 567
Why Does Direct Instruction Work? 568
Evaluating Direct Instruction 568
Seatwork and Homework 569
Seatwork 569
Guidelines: Effective Direct Instruction 570
Homework 571
Questioning, Discussion, and Dialogue 571
Point/Counterpoint: Is Homework a Valuable Use of Time? 572
Guidelines: Family and Community Partnerships—Homework 573
Kinds of Questions 573
Fitting the Questions to the Students 573
Responding to Student Answers 575
Group Discussion 575
Fitting Teaching to Your Goals 576
Putting It All Together: Understanding by Design 576
Guidelines: Productive Group Discussions 577
Differentiated Instruction and Adaptive Teaching 579
Within-Class and Flexible Grouping 579
The Problems with Ability Grouping 579
Flexible Grouping 579
Guidelines: Using Flexible Grouping 580
Adaptive Teaching 580
Reaching Every Student: Differentiated Instruction in Inclusive Classrooms 581

Technology and Differentiation 583
Guidelines: Teachers as Mentors 584
Mentoring Students as a Way of Differentiating Teaching 585
Teacher Expectations 585
Two Kinds of Expectation Effects 585
Sources of Expectations 586
Do Teachers' Expectations Really Affect Students' Achievement? 586
Instructional Strategies 587
Teacher–Student Interactions 587
Lessons for Teachers: Communicating Appropriate Expectations 587
Guidelines: Avoiding the Negative Effects of Teacher Expectations 588
Summary 589
Key Terms 591
Teachers' Casebook—Reaching and Teaching Every Student: What Would They Do? 592

15 Classroom Assessment, Grading, and Standardized Testing 594

Teachers' Casebook—Giving Meaningful Grades: What Would You Do? 594
Overview and Objectives 595
Basics of Assessment 596
Measurement and Assessment 596
Formative and Summative Assessment 596
Norm-Referenced Test Interpretations 597
Criterion-Referenced Test Interpretations 598
Assessing the Assessments: Reliability and Validity 599
Reliability of Test Scores 599
Error in Scores 599
Confidence Interval 599
Validity 600
Absence of Bias 600
Classroom Assessment: Testing 601
Using the Tests from Textbooks 602
Objective Testing 602
Using Multiple-Choice Tests 603
Writing Multiple-Choice Questions 603
Essay Testing 603
Constructing Essay Tests 603
Guidelines: Writing Objective Test Items 604
Evaluating Essays 604
The Value of Traditional Testing 605
Criticisms of Traditional Tests 605
Authentic Classroom Assessments 606
Portfolios and Exhibitions 606
Portfolios 607
Exhibitions 607
Guidelines: Creating Portfolios 608
Evaluating Portfolios and Performances 608
Scoring Rubrics 608
Guidelines: Developing a Rubric 609
Reliability, Validity, Generalizability 610
Diversity and Bias in Performance Assessment 611
Informal Assessments 611
Journals 611
Involving Students in Assessments 612
Grading 613
Norm-Referenced versus Criterion-Referenced Grading 613
Effects of Grading on Students 614
The Value of Failing? 615
Retention in Grade 615
Grades and Motivation 615
Point/Counterpoint: Should Children Be Held Back? 616
Beyond Grading: Communicating with Families 617
Guidelines: Using Any Grading System 618
Standardized Testing 619
Types of Scores 619
Measurements of Central Tendency and Standard Deviation 619
The Normal Distribution 620
Percentile Rank Scores 621
Grade-Equivalent Scores 621
Standard Scores 621
Interpreting Standardized Test Reports 623
Discussing Test Results with Families 624
Accountability and High-Stakes Testing 624
Guidelines: Family and Community Partnerships—Conferences and Explaining Test Results 625
Making Decisions 625
What Do Teachers Think? 626
Documented Problems with High-Stakes Testing 626
Using High-Stakes Testing Well 627
Guidelines: Preparing Yourself and Your Students for Testing 628
Reaching Every Student: Helping Students with Disabilities Prepare for High-Stakes Tests 629
Current Directions: Value-Added and PARCC 629
Value-Added Measures 629
PARCC Tests 630
Lessons for Teachers: Quality Assessment 630
Summary 631
Key Terms 633
Teachers' Casebook—Giving Meaningful Grades: What Would They Do? 634
Appendix 637
Glossary 655
References 665
Name Index 701
Subject Index 711