

# 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

Skiping 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
<b>Vygotsky's Sociocultural Perspective</b>	<b>82</b>
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
<b>Implications of Piaget's and Vygotsky's Theories for Teachers</b>	<b>88</b>
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
<b>Summary</b>	<b>92</b>
<b>Key Terms</b>	<b>95</b>
<b>Teachers' Casebook—Symbols and Cymbals: What Would They Do?</b>	<b>96</b>

### 3 The Self, Social, and Moral Development 98

<b>Teachers' Casebook—Mean Girls: What Would You Do?</b>	<b>98</b>
<b>Overview and Objectives</b>	<b>99</b>
<b>Physical Development</b>	<b>100</b>
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
<b>Bronfenbrenner: The Social Context for Development</b>	<b>106</b>
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
<b>Identity and Self-Concept</b>	<b>119</b>
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

III-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	Grouping, Evaluation, and Time 500
Self-Determination in the Classroom 476	Grouping and Goal Structures 500
Information and Control 476	Evaluation 500
Guidelines: Supporting Self-Determination and Autonomy 477	Time 501
The Need for Relatedness 477	Putting It All Together 501
Needs: Lessons for Teachers 478	Diversity in Motivation 503
<b>Goal Orientations 478</b>	Lessons for Teachers: Strategies to Encourage
Types of Goals and Goal Orientations 478	Motivation 503
Four Achievement Goal Orientations in School 479	Can I Do It? Building Confidence and Positive
Wait—Are Performance Goals Always Bad? 480	Expectations 504
Beyond Mastery and Performance 481	Do I Want to Do It? Seeing the Value of Learning 504
Goals in Social Context 481	What Do I Need to Do to Succeed? Staying Focused
Feedback, Goal Framing, and Goal Acceptance 482	on the Task 505
Goals: Lessons for Teachers 482	Do I Belong in This Classroom? 505
<b>Beliefs and Self-Perceptions 482</b>	Guidelines: Motivation to Learn: Family and Community
Beliefs About Knowing: Epistemological Beliefs 482	Partnerships 506
Beliefs About Ability 483	<b>Summary 506</b>
Beliefs About Causes and Control: Attribution Theory 484	<b>Key Terms 509</b>
Attributions in the Classroom 485	<b>Teachers' Casebook—Motivating Students When Resources</b>
Teacher Actions and Student Attributions 485	<b>Are Thin: What Would They Do? 510</b>
Beliefs About Self-Worth 486	
Learned Helplessness 486	
Self-Worth 486	
Guidelines: Encouraging Self-Worth 488	
Beliefs and Attributions: Lessons for Teachers 488	
<b>Interests, Curiosity, Emotions, and Anxiety 488</b>	
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	
<b>Motivation to Learn in School: On Target 497</b>	
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	
	<b>PART III: TEACHING AND ASSESSING</b>
	<b>13 Creating Learning Environments 512</b>
	<b>Teachers' Casebook—Bullies and Victims: What Would</b>
	<b>You Do? 512</b>
	<b>Overview and Objectives 513</b>
	<b>The What and Why of Classroom Management 514</b>
	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
	<b>Creating a Positive Learning Environment 519</b>
	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
<b>Maintaining a Good Environment for Learning</b>	<b>527</b>
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
<b>Dealing with Discipline Problems</b>	<b>532</b>
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
<b>The Need for Communication</b>	<b>541</b>
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
<b>Diversity: Culturally Responsive Management</b>	<b>547</b>
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
<b>Research on Teaching</b>	<b>556</b>
Characteristics of Effective Teachers	556
Clarity and Organization	556
Warmth and Enthusiasm	556
Knowledge for Teaching	557
Recent Research on Teaching	557
<b>The First Step: Planning</b>	<b>559</b>
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
<b>Teaching Approaches</b>	<b>566</b>
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
<b>Differentiated Instruction and Adaptive Teaching</b>	<b>579</b>
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**