

# Brief Contents

## PART ONE

### **Educational Psychology: Some Background 1**

**CHAPTER 1** Educational Psychology's Purposes and Methods 3

**CHAPTER 2** The Tasks, Standards, and Objectives of Teaching 28

## PART TWO

### **Student Characteristics 47**

**CHAPTER 3** Cognitive Abilities 49

**CHAPTER 4** The Development of Cognition, Language, and Personality 96

**CHAPTER 5** Human Diversity and the Schools: Culture, Gender, and Exceptionality 150

## PART THREE

### **Learning and Motivation: Theories and Applications 205**

**CHAPTER 6** Behavioral and Social Views of Learning 207

**CHAPTER 7** Cognitive Learning: Processes and Strategies to Make Meaning 251

**CHAPTER 8** Motivation and Learning 312

## PART FOUR

### **Teaching Methods and Practices 363**

**CHAPTER 9** Lecturing and Explaining 365

**CHAPTER 10** Teaching Small Groups: The Discussion Method and Cooperative Learning 397

**CHAPTER 11** Individual Instruction 427

**CHAPTER 12** Classroom Teaching: The Orchestration of Methods 452

## PART FIVE

### **Assessment 507**

**CHAPTER 13** Basic Concepts in Assessment and the Interpretation of Standardized Testing 509

**CHAPTER 14** The Teacher's Assessment and Grading of Student Learning 550

# Contents

*Preface* xix

## PART ONE

### **Educational Psychology: Some Background 1**

#### **CHAPTER 1**

##### **Educational Psychology's Purposes and Methods 3**

The Purpose of Educational Psychology: How Does Ms. Eugster Do It? 4

Educational Psychology and the Tasks of Teaching 8

Passion and Educational Psychology 8

Educational Psychology in Action 8

Are the Results of Research in Educational Psychology Obvious? 9

The Concepts and Principles of Educational Psychology 10

Concepts and Variables 11 Principles 13

Using Concepts and Principles in Explanation, Prediction, and Control 14

An Example of Explanation 14 An Example of Prediction 14 An Example of Control 15 The Interaction of Explanation, Prediction, and Control 15 In Short 16

Methods for Studying Relationships 16

Correlational and Experimental Methods 16 Qualitative Research: Interpretive Methods 22 Replication and Meta-Analysis 23

Using Research to Guide Practice 23

#### **CHAPTER 2**

##### **The Tasks, Standards, and Objectives of Teaching 28**

What Are the Major Tasks of Teaching? 29

Why Do We Need Standards and Objectives? 31

How Standards-Based Reform Has Affected Objectives 32

## The Content of Instruction 34

Decision Making at the National, State, and Local Levels 34 The Teacher's Role in Determining Content 34 The Students' Role in Determining Content 36

## Thinking about Objectives in Terms of Student Performance 36

General Objectives 37 Specific Objectives 37

### POLICY, RESEARCH, AND PRACTICE

Is It Preferable to Use Specific or General Objectives in Order to Facilitate Learning? 38

## Multiple Perspectives 1

### APPLICATION

Formulating Your Own Objectives 41

Classifying Objectives 41

Identifying Three Domains 41 Focus on the Cognitive Domain 42

### POLICY, RESEARCH, AND PRACTICE

The Knowledge versus Intellectual Skills Debate 43

The Performance-Content Matrix 44

### PART TWO

## Student Characteristics 47

### CHAPTER 3

#### Cognitive Abilities 49

The Definition of Cognitive Ability 51

The Measurement of Cognitive Ability 51

Cognitive-Ability Tests and the Normal Distribution 53 The Stability and Reliability of Cognitive-Ability Test Scores 54

The Organization of Cognitive Ability 55

### POLICY, RESEARCH, AND PRACTICE

Why the Classroom Teacher Needs to Know about the Organization of Cognitive Ability 57

Cognitive Ability and Success 58

In School 58 On the Job 59

Heredity and Environment in Cognitive Ability 61

Do Genetic or Environmental Differences Affect IQ Differences More? 63

Heritability Is Not Genetic Determination **64** Heritability Is Not Unchangeability **65**  
The Changeability of IQ **66**

## **POLICY, RESEARCH, AND PRACTICE**

**Can Schools Get Along without Intelligence Tests? 69**

Two Recent Conceptions of Intelligence **71**

Practical Intelligence, or Common Sense **71** Multiple Intelligences **75**

## **APPLICATION**

**Consider How Your Own Multiple Intelligences Operate Together 77**

Group Differences in Cognitive Ability **80**

Socioeconomic Status Differences **80** Urban-Rural Differences **81** Ethnic Differences **82** The Nature-Nurture Issue and Conservatism-Liberalism **83**  
Explanations of Group Differences **84**

Improving Cognitive Ability **87**

The Home Environment and Cognitive Abilities **87** School Influences on Cognitive Abilities **90**

## **CHAPTER 4**

**The Development of Cognition, Language, and Personality 96**

The Development of Cognition **97**

Piaget's Stages **97** The Developmental Process **105** Dissenters from and Alternatives to Piagetian Theory **106** Bruner's Theory of Cognitive Growth **109**  
Vygotsky's View of Cognitive Development **111**

## **POLICY, RESEARCH, AND PRACTICE**

**Teaching from a Context of Diversity 113**

## **APPLICATION**

**Instructional Implications of Piaget, Bruner, and Vygotsky 115**

The Development of Language **118**

Stages of Development **118** Adults' Influence on Language Development and Literacy **121** Language Issues and Schooling **122**

The Development of Personality **127**

Erikson's Theory of Personality Development **127** The Development of Moral Reasoning **131** The Organization of Personality: A Profusion of Traits **136**

## **APPLICATION**

**Making Use of Thinking Guides in Problem Solving 142**

## CHAPTER 5

### Human Diversity and the Schools: Culture, Gender, and Exceptionality 150

#### Cultural Differences 151

Defining Culture and What Constitutes Cultural Differences 151 Enculturation by Socializing Agents 152 Historical Background 154 Developing a Cross-Cultural Perspective 155

#### POLICY, RESEARCH, AND PRACTICE

#### Culture and Readiness to Learn in School 159

Developing a Multicultural-Education Classroom 165

#### Gender Differences 168

Personality Differences 170 Differences in Academically Relevant Capabilities 170 Socialization of Gender Expectations and Behaviors 171

#### Exceptionality 173

General Definitions 173 Categories of Students Who Are Eligible for Special Education 174 Students with Physical and Sensory Disabilities, Impairments, and Challenges 177 Students with Cognitive Disabilities or Brain Dysfunctions 184 Students with Serious Emotional and Behavioral Disorders 188

#### POLICY, RESEARCH, AND PRACTICE

#### Is It Preferable to Have Children with Emotional Disorders in the Regular-Education Classroom? 192

#### APPLICATION

#### Some Classroom Adjustments for ADD/ADHD 194

Students with Multiple Disabilities or Other Developmental Problems 196 Students Who Are Gifted and Talented: Another Category of Exceptionality 198

### Multiple Perspectives 2

#### General Concerns and Recommendations for Teachers 202

#### PART THREE

### Learning and Motivation: Theories and Applications 205

## CHAPTER 6

### Behavioral and Social Views of Learning 207

#### Learning 208

A Definition of Learning 208 Three Behavioral Learning Theories 209 Foci of This Chapter: Operant Conditioning and Social Learning 214

## Operant Conditioning 214

Positive and Negative Reinforcers 215 Primary and Secondary Reinforcers 216  
Schedules of Reinforcement 217 Contingency Management 221 The Elimination  
of Responses 226

## APPLICATION

### Unintentional Reinforcement 227

Ethical Issues and Limits of the Theory 231

### Social Learning Theory 234

How Learning Occurs through Observation 234 A Social-Learning Analysis of  
Observational Learning 237

## POLICY, RESEARCH, AND PRACTICE

Are Systematic Training Programs an Effective Way to  
Change the Imitation of Aggressive Behaviors Modeled  
by the Media? 240

A Note on Cognition 241 The Teacher and Modeling 242 Self-Regulation of  
Behavior and Its Processes 243 Mentoring 246

## POLICY, RESEARCH, AND PRACTICE

Are Systematic Training Programs an Effective Way  
for Students to Regulate Their Own Behaviors? 247

## CHAPTER 7

### Cognitive Learning: Processes and Strategies to Make Meaning 251

#### Underlying Assumptions of Cognitive Learning 253

Contrasting Views of Learning: The Behavioral versus the Cognitive 253 Shared  
Characteristics and Beliefs among Cognitive Theories of Learning 255 The Role  
of Strategies in Cognitive Learning 256

#### Cognitive Models, Perspectives, and Strategies 258

An Information-Processing Model of Learning and Memory 258 Strategies for  
Processing Information and Enhancing Memory 264 Metacognition 270  
Cognitively Active Learning 273 Constructivist Perspectives on Learning 276  
Problem-Solving Approach to Learning 278

## POLICY, RESEARCH, AND PRACTICE

How Do Teachers Develop Expertise? 281

Situated Cognition 284 Strategies for Promoting Cognitive Learning and Higher-  
Order Thinking 288

## POLICY, RESEARCH, AND PRACTICE

Overcoming Student Misconceptions in Science 297

**Transfer of Learning 299**

A Glance at Traditional Views 300 Contemporary Views of Transfer 301  
Teaching for Transfer 303

**APPLICATION**

**Enhancing Our Own and Our Students' Mindfulness 305**

Instructional Ideas and Strategies for Promoting Transfer 306

**A Look Ahead to Chapter 8 307**

**CHAPTER 8**

**Motivation and Learning 312**

**The Crucial Role of Motivation in Behavior and Learning 313**

Motivation Determines What Makes a Reinforcer 314 Motivation Accounts for Goal Orientation 314 Motivation Determines the Time Spent in Different Activities 315  
Motivation and Achievement 316

**Conceptions of Motivation and Their Implications 317**

Four Conceptions 317 Implications for Education 318

**Achievement Motivation: A Cognitive Composite 319**

**APPLICATION**

**Conduct Your Own Survey of Young Children's Changing  
Motivation 320**

Relationship between Need for Achievement and Performance 320 Classifying  
Achievement Attributions 321

**POLICY, RESEARCH, AND PRACTICE**

**Internal and External Attributions and Emotion 324**

The Relationship of Self-Worth and Need for Achievement to Classroom  
Structure 328 How Other Motives Interact with the Need for Achievement 331

**Intrinsic and Extrinsic Motivation 333**

**Operant Conditioning and Motivation 336**

Stimulus Control and the Role of Reinforcers and Incentives 337 Frustration and  
Motivation 338

**Changing Motivational Patterns 339**

Cognitive Approaches 340

**POLICY, RESEARCH, AND PRACTICE**

**Are Attribution Training Programs an Effective Way  
to Change a Student's Perceptions about Why He or She  
Succeeds or Fails? 341**

Environmental Approaches 343

## Self-Efficacy and Achievement Motivation **348**

Developing Self-Efficacy **349** The Self-Efficacy of Teachers and Schools **351**

## Motivational Techniques in Classroom Teaching: Guidelines for Teachers **352**

### PART FOUR

## Teaching Methods and Practices **363**

### CHAPTER 9

## Lecturing and Explaining **365**

The Lecture-Method Paradox: Strong Condemnation, Wide Use **366**

Defense of the Lecture Method **367** Research Evidence on Effectiveness **369**

### POLICY, RESEARCH, AND PRACTICE

## What Are the Proper Uses of Lecturing? **370**

Important Considerations for Using the Lecture Method **371**

Preparing a Lecture **371** Low- versus High-Inference Variables **373**

Cognitive Load: A General Rationale **374**

### APPLICATION

Reducing Cognitive Load in Your Own Learning **375**

The Introduction to the Lecture **375**

Appealing to Students' Interests **375** Providing Motivational Cues **376**

Exposing Essential Content **376** Helping Students Organize Content **377**

The Body of the Lecture **378**

Covering Content **378** Providing Clear Organization **378** Organizational or Outlining Forms **379** Explanations **383** Clarifying the Organization **385**

Clarifying the Content **387** Maintaining Attention **389**

## Multiple Perspectives **3**

### POLICY, RESEARCH, AND PRACTICE

## The Role of Humor and Enthusiasm in Lecturing **392**

The Conclusion of the Lecture **394**

Functions of the Conclusion **394** The Summary **395**

Interlecture Structuring **395**

### CHAPTER 10

## Teaching Small Groups: The Discussion Method and Cooperative Learning **397**

Rationales: Social Learning and Distributed Cognition **398**

Social Learning Theory **398** Distributed Cognition **398**



## The Discussion Method 399

Objectives of Discussion-Group Teaching 399 Considerations in Using Discussion 400 Before the Discussion Group Meets 402 During the Meeting 405

### APPLICATION

Experimenting with Using Questions versus Nonquestion Alternatives 407

### POLICY, RESEARCH, AND PRACTICE

How Do a Teacher's Actions Stifle or Stimulate Student Discussion? 409

After the Meeting 412 Intellectual Pitfalls 413 Social-Emotional Pitfalls 415

## Cooperative Learning 419

Some Cooperative Learning Schemes 419 The Role of Computers in Cooperative Learning 422 The Effectiveness of Cooperative Learning 422

### POLICY, RESEARCH, AND PRACTICE

Computers and Cooperative Learning 423

## CHAPTER 11

### Individual Instruction 427

#### A Rationale for Individual Instruction 428

Promoting Independent Learning 428 Adapting to Individual Differences 428

#### Ways of Promoting Independent Learning 429

Homework 429 Study Skills and Strategies Training 431 Independent Study 433

#### Ways of Adapting to Individual Differences 435

Ability Grouping 435 Mastery Learning 436 Tutoring 439

### POLICY, RESEARCH, AND PRACTICE

What Are the Benefits of Peer Tutoring? 441

#### Using Computers for Learning in the Classroom 442

Programmed Computer-Assisted Instruction (CAI) 443 Further Uses of Computers in Today's Classrooms 446

### APPLICATION

#### Making the Computer Work for You 448

The Teacher's Role with Computers 449

## CHAPTER 12

### Classroom Teaching: The Orchestration of Methods 452

#### The Pattern of Classroom Teaching 453

Distinguishing Characteristics of Classroom Teaching 454 Reasons for the Prevalence of Classroom Teaching 457

### POLICY, RESEARCH, AND PRACTICE

#### Does Smaller Class Size Improve Achievement? 461

#### The Planning Phase of Classroom Teaching 462

Types of Planning Needs 464 Planning for Classroom Discipline and Management 464

### APPLICATION

#### Becoming Aware of Your Own Unintentional Biases 472

#### The Interactive Stage of Classroom Instruction 477

Direct Instruction 477

### POLICY, RESEARCH, AND PRACTICE

#### Redirecting Questions and Probing 487

### POLICY, RESEARCH, AND PRACTICE

#### How Can Teachers Improve the Academic Learning Time (ALT) of Students? 494

Constructivist Teaching 496 A Synthesis of Direct Instruction and Constructivist Teaching 503

## PART FIVE

## Assessment 507

## CHAPTER 13

### Basic Concepts in Assessment and the Interpretation of Standardized Testing 509

#### Assessment with Tests 510

Systematic Procedures 510 Measuring 512 Behavior 512 Sample 512 Evaluation 513 Standards and Norms 513

#### Norm-Referenced Testing 514

Using a Local Norm Group 514 Using a National Norm Group 514

#### Criterion-Referenced Testing 515

## Reliability 518

### Assessing the Reliability of a Test

Test-Retest Reliability 519 Internal-Consistency Reliability 521 The Standard Error of Measurement 522 Improving Reliability 524

## Validity 524

Content Validity 525 Criterion Validity 525 Construct Validity 526

## Evaluation 528

Formative Evaluation 529 Summative Evaluation 529

## Standardized Tests in the Assessment Process 530

Advantages and Special Uses of Standardized Tests 530 Disadvantages of and Concerns about Standardized Tests 534 Types of Standardized Tests Used in Schools 535

### Is It Fair to Publish Standardized Achievement Test Scores?

Is It Fair to Publish Standardized Achievement Test Scores? 537

## APPLICATION

### Taking a Test to Understand It 540

Administering Standardized Tests 540 Interpreting Standardized Tests 541

### High-Stakes Standardized Testing Can Have Some Very Undesirable Consequences

High-Stakes Standardized Testing Can Have Some Very Undesirable Consequences 543

What Does the Future Hold for Standardized Testing? 546

## CHAPTER 14

### Informal Assessment: The Art and Science of Assessing Student Learning

#### Informal Assessment 551

Sizing-Up Assessments 551 Assessment during Interactive Teaching 552

#### Formal Assessment: Determining What Kinds of Achievement Are Important 554

Domain-Referenced Testing 555 The Table of Specifications 555

#### Types of Formal Tests and Test Items 557

Performance Tests 559

### What Are the Problems and Prospects of Performance Testing?

What Are the Problems and Prospects of Performance Testing? 566

Essay Tests 567 Short-Answer Tests 570

**APPLICATION****Using Guidelines to Write Good Multiple-Choice Questions 574**

Getting the Advantages of Using All Kinds of Questions **577** Using the Computer  
in Classroom Assessment **578**

**From Assessing to Grading: A Difficult Transition 580**

Establishing a Frame of Reference for Grading Judgments **581** Two Common  
Questions about Testing, Grading, and Marking **582**

**POLICY, RESEARCH, AND PRACTICE****How Can Tests and Grades Be Used Sensibly and Humanely  
in the Assessment Process? 584**

Sources of Information for Grading Decisions **586**

**POLICY, RESEARCH, AND PRACTICE****What Factors Actually Go into Teachers' Grading  
Decisions? 591**

Considering the Toughest Grade of All: Nonpromotion **592**

**Using Portfolios in the Assessment Process 593**

Appendix Standard Deviation **601**

Glossary **603**

Author-Reference Index **625**

Subject Index **661**