

CONTENTS

| | |
|--|-----|
| Preface | iii |
| PART ONE THE DOMAIN OF EDUCATIONAL PSYCHOLOGY | |
| Chapter 1. The Nature, Scope, and Value of Educational Psychology | 3 |
| <i>Educational Psychology as an Area of Specialization within Educational Theory</i> | 6 |
| <i>Educational Psychology as an Applied Science</i> | 12 |
| <i>Educational Psychology in a Basic Research and Development Context</i> | 16 |
| <i>The Value of Educational Psychology to the Professional Educator</i> | 19 |
| Chapter 2. Classification of Variables in School Learning | 25 |
| <i>Classification of Behavioral Outcomes</i> | 25 |
| <i>Classification of Educational Environment Variables</i> | 37 |
| PART TWO MEANINGFUL LEARNING AND RETENTION | |
| Chapter 3. Meaning and Meaningful Learning | 50 |
| <i>The Meaningful Learning Paradigm</i> | 50 |
| <i>Kinds of Meaningful Learning</i> | 59 |
| <i>Reconciliation of the Present Chapter and Bloom's Taxonomy</i> | 72 |
| | ix |

| | |
|---|-----|
| Chapter 4. Meaningful Learning in Major School Subjects | 76 |
| <i>Learning to Read</i> | 76 |
| <i>Second-Language Learning</i> | 81 |
| <i>The Learning of Arithmetic and Algebra</i> | 85 |
| <i>The Adequacy of Reception Learning in School Subjects</i> | 96 |
| Chapter 5. Retention and Forgetting | 104 |
| <i>The Assimilation Hypothesis</i> | 105 |
| <i>Application of the Theory</i> | 115 |
| <i>Educational Consequences of Forgetting</i> | 127 |
| PART THREE COGNITIVE VARIABLES IN LEARNING | |
| Chapter 6. Transfer of Learning | 136 |
| <i>The Historical Background of Transfer Study</i> | 139 |
| <i>Sequential Transfer within School Subjects</i> | 142 |
| <i>Lateral Transfer</i> | 151 |
| <i>Vertical Transfer</i> | 157 |
| <i>Pedagogic Facilitation of Sequential Transfer</i> | 165 |
| Chapter 7. Cognitive Development and Readiness | 174 |
| <i>Stages of Cognitive Development</i> | 180 |
| <i>Recent "Stage" Research as a Scientific Guide to the Placement of Curriculum Content</i> | 192 |
| <i>Pedagogical Implications of the Readiness Concept</i> | 201 |
| Chapter 8. Intellectual Ability | 213 |
| <i>The Nature and Intent of IQ Tests</i> | 213 |
| <i>Some Perennial Questions Concerning Intelligence Test Scores</i> | 219 |
| <i>Special Intellectual Abilities</i> | 237 |
| <i>The Use of IQ Tests</i> | 243 |
| Chapter 9. Individual Differences in Intellectual Functioning | 250 |
| <i>Dealing with Individual Differences</i> | 250 |
| <i>Steps toward Individualizing Instruction</i> | 252 |
| <i>Dealing with Special Ability Groups</i> | 259 |
| Chapter 10. Practice | 274 |
| <i>The Importance of Practice</i> | 274 |
| <i>Relevant Variables and Theoretical Considerations</i> | 276 |
| <i>Some Theoretical Ideas Related to Practice</i> | 279 |
| <i>Relationships between Practice Variables and Learning Outcomes</i> | 283 |
| <i>Method of Practice</i> | 289 |

| | |
|---|-----|
| Chapter 11. Use of Instructional Materials in Optimal Planning | 304 |
| <i>The Size, Difficulty, and Pacing of Tasks</i> | 305 |
| <i>Organization of Material</i> | 315 |
| <i>Effective Communication</i> | 321 |
| <i>Instructional Aids</i> | 324 |
| | |
| PART FOUR AFFECTIVE AND SOCIAL VARIABLES IN LEARNING | |
| Chapter 12. Motivational Factors in Learning | 351 |
| <i>Theories of Motivation</i> | 352 |
| <i>Motivation in School Settings</i> | 357 |
| <i>How Motivational Variables Influence Learning and Retention</i> | 364 |
| <i>Reward and Punishment in School Settings</i> | 375 |
| <i>Controlling Motivation in the Classroom</i> | 383 |
| Chapter 13. Personality Factors in Learning | 388 |
| <i>The Study of Personality</i> | 388 |
| <i>Satellization versus Nonsatellization</i> | 390 |
| <i>Anxiety and School Learning</i> | 395 |
| <i>Other Relevant Dimensions of Personality</i> | 402 |
| <i>Implications for the School</i> | 406 |
| Chapter 14. Group and Social Factors in Learning | 414 |
| <i>Interaction of Learners in the School Setting</i> | 415 |
| <i>Competition and Cooperation</i> | 419 |
| <i>The Adolescent Learner and the Peer Group</i> | 423 |
| <i>Dealing with Adolescents: Some Prescriptions for Educators</i> | 428 |
| <i>Social Sex Role in the School</i> | 430 |
| <i>Social Class Stratification and Education</i> | 432 |
| <i>Racial Factors in Education</i> | 436 |
| <i>Motivating the Culturally Deprived Child</i> | 445 |
| Chapter 15. Teacher Characteristics | 450 |
| <i>Characteristics of Effective Teachers</i> | 450 |
| <i>The Roles of Teachers</i> | 453 |
| <i>Cognitive Abilities</i> | 454 |
| <i>Personality Characteristics</i> | 456 |
| <i>Teaching Style</i> | 461 |
| <i>School Discipline</i> | 466 |
| | |
| PART FIVE DISCOVERY LEARNING | |
| Chapter 16. Learning by Discovery | 478 |
| <i>An Overview of Discovery Learning</i> | 479 |
| <i>Psychological and Educational Limitations of Learning by Discovery</i> | 485 |

| | |
|--|-----|
| <i>Research Evidence</i> | 494 |
| <i>Some Considerations in Organizing Classroom Discovery Experiences</i> | 499 |
| Chapter 17. Problem Solving and Creativity | 504 |
| <i>Problem Solving</i> | 504 |
| <i>The Problem-Solving Paradigm</i> | 505 |
| <i>Some Common Distinctions in Problem-Solving Processes</i> | 508 |
| <i>Problem Solving in Other School Subject Areas</i> | 511 |
| <i>“Real Life” Problems: A Case Study</i> | 514 |
| <i>Factors Influencing Problem Solving</i> | 520 |
| <i>Improving Problem Solving in School Settings</i> | 523 |
| <i>Creativity</i> | 532 |
| <i>Characteristics of Creative Individuals</i> | 540 |
| <i>Fostering Creativity in the Classroom</i> | 543 |
| | |
| PART SIX THE TEACHER’S ROLE IN HYPOTHESIS REFINEMENT AND EVALUATION | |
| Chapter 18. Hypothesis Generation and Refinement in the Classroom | 549 |
| <i>From Theory to Practice</i> | 549 |
| <i>Case Study: An Experimental Try-out of Three New Approaches</i> | 553 |
| Chapter 19. Principles of Evaluation and Measurement | 570 |
| <i>The Meaning of Measurement and Evaluation</i> | 570 |
| <i>The Purposes of Measurement and Evaluation</i> | 573 |
| <i>Limitations and Abuses of Evaluation and Measurement</i> | 576 |
| <i>Requirements of an Effective Test</i> | 578 |
| <i>The Objective Test</i> | 587 |
| <i>Interpretation of Achievement Test Scores</i> | 589 |
| <i>Other Methods of Evaluation and Measurement</i> | 590 |
| <i>Improving Classroom Evaluation and Reporting</i> | 594 |
| Glossary | 603 |
| References | 611 |
| Author Index | 677 |
| Subject Index | 685 |