

Contents

PART I Introduction to Developmental Psychology 3

Chapter 1 Introduction to Developmental Psychology and Its Research Strategies 3

Introduction to Developmental Psychology 4

What Is Development? 4

Research Strategies: Basic Methods and Designs 10

Research Methods in Child and Adolescent Development 10

Detecting Relationships: Correlational, Experimental, and Cross-Cultural Designs 19

Focus on Research A Cross-Cultural Comparison of Gender Roles 26

Research Strategies and Studying Development 26

Research Designs for Studying Development 27

Ethical Considerations in Developmental Research 34

Applying Research to Your Life Becoming a Wise Consumer of Developmental Research 36

Themes in the Study of Human Development 37

The Nature/Nurture Theme 37

The Active/Passive Theme 38

The Continuity/Discontinuity Issue 38

The Holistic Nature of Development Theme 39

Summary 41

Chapter 1 Practice Quiz 42

Key Terms 43

Media Resources 43

PART II Biological Foundations of Development 45

Chapter 2 Hereditary Influences on Development 45

Principles of Hereditary Transmission 46

The Genetic Material 46

Growth of the Zygote and Production of Body Cells 46

The Germ (or Sex) Cells 47

Multiple Births 48

Male or Female? 48

Focus on Research Crossing-Over and Chromosome Segregation During Meiosis 49

What Do Genes Do? 50

How Are Genes Expressed? 51

Applying Research to Your Life Examples of Dominant and Recessive Traits in Human Heredity 53

Hereditary Disorders 55

Chromosomal Abnormalities 56

Genetic Abnormalities 58

Predicting, Detecting, and Treating Hereditary Disorders 59

Detecting Hereditary Disorders 60

Treating Hereditary Disorders 61

Applying Research to Your Life Ethical Issues Surrounding Treatments for Hereditary Disorders 63

Hereditary Influences on Behavior 64

Behavioral Genetics 64

Theories of Heredity and Environment Interactions in Development 73

Contributions and Criticisms of the Behavioral Genetics Approach 77

The Ethological and Evolutionary Viewpoints 78

Assumptions of Classical Ethology 79

Ethology and Human Development 79

Modern Evolutionary Theory 80

Contributions and Criticisms of Ethological and Evolutionary Viewpoints 81

Applying Developmental Themes to Hereditary Influences on Development 82

Summary 83

Chapter 2 Practice Quiz 85

Key Terms 85

Media Resources 86

Chapter 3 Prenatal Development and Birth 89

From Conception to Birth 90

The Period of the Zygote 90

The Period of the Embryo 92

The Period of the Fetus 93

Potential Problems in Prenatal Development 97

Teratogens 97

Characteristics of the Pregnant Woman 109

Prevention of Birth Defects 113

Birth and the Perinatal Environment 114

The Birth Process 114

The Baby's Experience 115

Labor and Delivery Medications 117

The Social Environment Surrounding Birth 117

Applying Research to Your Life Cultural and Historical Variations in Birthing Practices 118

Potential Problems at Birth 121

Anoxia 121

Prematurity and Low Birth Weight 122

Reproductive Risk and Capacity for Recovery 125

Applying Developmental Themes to Prenatal Development and Birth 126

Summary 127

Chapter 4 Practice Quiz 128

Key Terms 129

Media Resources 129

Chapter 4	Infancy 131
	The Newborn's Readiness for Life 132
	Newborn Reflexes 132
	Infant States 134
	Developmental Changes in Infant States 135
	Applying Research to Your Life Sudden Infant Death Syndrome 136
	Research Methods Used to Study the Infant's Sensory and Perceptual Experiences 138
	The Preference Method 138
	The Habituation Method 138
	The Method of Evoked Potentials 139
	The High-Amplitude Sucking Method 139
	Infant Sensory Capabilities 140
	Hearing 140
	Focus on Research Causes and Consequences of Hearing Loss 142
	Taste and Smell 143
	Touch, Temperature, and Pain 143
	Vision 144
	Visual Perception in Infancy 146
	Perception of Patterns and Forms 146
	Perception of Three-Dimensional Space 148
	Intermodal Perception 151
	Are the Senses Integrated at Birth? 151
	Development of Intermodal Perception 152
	Explaining Intermodal Perception 153
	Cultural Influences on Infant Perception 154
	Basic Learning Processes in Infancy 155
	Habituation: Early Evidence of Information Processing and Memory 155
	Classical Conditioning 156
	Operant Conditioning 157
	Newborn Imitation or Observational Learning 159
	Focus on Research An Example of Observational Learning 161
	Applying Developmental Themes to Infant Development, Perception, and Learning 163
	Summary 164
	Chapter 4 Practice Quiz 166
	Key Terms 167
	Media Resources 167
Chapter 5	Physical Development: The Brain, Body, Motor Skills, and Sexual Development 169
	An Overview of Maturation and Growth 170
	Changes in Height and Weight 170
	Changes in Body Proportions 171
	Skeletal Development 171
	Muscular Development 172
	Variations in Physical Development 172
	Development of the Brain 173
	Neural Development and Plasticity 173
	Brain Differentiation and Growth 175
	Motor Development 179

Basic Trends in Locomotor Development 179
Fine Motor Development 183
Psychological Implications of Early Motor Development 184
Beyond Infancy: Motor Development in Childhood and Adolescence 185
*Focus on Research Sports Participation and Self-Esteem Among
Adolescent Females* 186

Puberty: The Physical Transition from Child to Adult 187

The Adolescent Growth Spurt 187
Sexual Maturation 187

Causes and Correlates of Physical Development 190

Biological Mechanisms 190
Environmental Influences 191

Applying Developmental Themes to Physical Development 195

Summary 196
Chapter 5 Practice Quiz 198
Key Terms 198
Media Resources 199

PART III Cognitive Development 201

**Chapter 6 Cognitive Development: Piaget's Theory and
Vygotsky's Sociocultural Viewpoint 201**

Piaget's Theory of Cognitive Development 202

What Is Intelligence? 202
How We Gain Knowledge: Cognitive Schemes and Cognitive Processes 203

Piaget's Stages of Cognitive Development 205

The Sensorimotor Stage (Birth to 2 Years) 205
The Preoperational Stage (2 to 7 Years) and the Emergence of Symbolic
Thought 212
Applying Research to Your Life Cognitive Development and Children's Humor 217
The Concrete-Operational Stage (7 to 11 Years) 221
The Formal-Operational Stage (11 to 12 Years and Beyond) 223
Focus on Research Children's Responses to a Hypothetical Proposition 223

An Evaluation of Piaget's Theory 227

Piaget's Contributions 227
Focus on Research Evaluating Piaget Through a Cross-Cultural Lens 228
Challenges to Piaget 228

Vygotsky's Sociocultural Perspective 231

The Role of Culture in Intellectual Development 231
The Social Origins of Early Cognitive Competencies and the Zone
of Proximal Development 232
Implications for Education 238
The Role of Language in Cognitive Development 239
Vygotsky in Perspective: Summary and Evaluation 240

Applying Developmental Themes to Piaget's and Vygotsky's Theories 243

Summary 244
Chapter 6 Practice Quiz 246
Key Terms 247
Media Resources 247

Chapter 7 Cognitive Development: Information-Processing Perspectives 249

The Multistore Model 250

Development of the Multistore Model 252

Developmental Differences in “Hardware”: Information-Processing Capacity 252

Developmental Differences in “Software”: Strategies and What Children Know About “Thinking” 254

Development of Attention 261

Development of Memory: Retaining and Retrieving Information 265

The Development of Event and Autobiographical Memory 265

Applying Research to Your Life What Happened to Our Early Childhood Memories? 266

The Development of Memory Strategies 268

Development of Other Cognitive Skills 274

Analogical Reasoning 274

Arithmetic Skills 277

Evaluating the Information-Processing Perspective 282

Applying Developmental Themes to Information-Processing Perspectives 283

Summary 284

Chapter 7 Practice Quiz 285

Key Terms 286

Media Resources 286

Chapter 8 Intelligence: Measuring Mental Performance 289

What Is Intelligence? 290

Psychometric Views of Intelligence 290

A Modern Information-Processing Viewpoint 294

Gardner’s Theory of Multiple Intelligences 296

How Is Intelligence Measured? 298

The Stanford-Binet Intelligence Scale 298

The Wechsler Scales 299

Group Tests of Mental Performance 300

Newer Approaches to Intelligence Testing 300

Assessing Infant Intelligence 301

Stability of IQ in Childhood and Adolescence 302

What Do Intelligence Tests Predict? 303

IQ as a Predictor of Scholastic Achievement 303

IQ as a Predictor of Vocational Outcomes 304

IQ as a Predictor of Health, Adjustment, and Life Satisfaction 305

Factors That Influence IQ Scores 306

The Evidence for Heredity 306

The Evidence for Environment 308

The Evidence for the Transaction of Heredity and Environment 309

Social and Cultural Influences on Intellectual Performance 309

Social-Class and Ethnic Differences in IQ 309

Focus on Research Do Socioeconomic Differences Explain Ethnic Differences in IQ? 314

Improving Cognitive Performance Through Compensatory Education 316

Long-Term Follow-Ups 316
The Importance of Parental Involvement 317
The Importance of Intervening Early 318

Creativity and Special Talents 319

What Is Creativity? 319

Applying Developmental Themes to Intelligence and Creativity 323

Summary 323

Chapter 8 Practice Quiz 325

Key Terms 326

Media Resources 326

Chapter 9 Development of Language and Communication Skills 329

Five Components of Language 330

Phonology 330

Morphology 330

Semantics 331

Syntax 331

Pragmatics 331

Theories of Language Development 332

The Learning (or Empiricist) Perspective 332

The Nativist Perspective 333

Focus on Research On the “Invention” of Language by Children 336

The Interactionist Perspective 337

The Prelinguistic Period: Before Language 341

Early Reactions to Speech 341

The Importance of Intonational Cues 342

Producing Sounds: The Infant’s Prelinguistic Vocalizations 342

What Do Prelinguistic Infants Know about Language and
Communication? 343

The Holophrase Period: One Word at a Time 344

Early Semantics: Building a Vocabulary 345

Attaching Meaning to Words 346

When a Word Is More Than a Word 350

The Telegraphic Period: From Holophrases to Simple Sentences 350

A Semantic Analysis of Telegraphic Speech 351

The Pragmatics of Early Speech 352

Applying Research to Your Life Learning a Gestural Language 353

Language Learning during the Preschool Period 353

Development of Grammatical Morphemes 355

Mastering Transformational Rules 356

Semantic Development 357

Development of Pragmatics and Communication Skills 358

Language Learning During Middle Childhood and Adolescence 359

Later Syntactic Development 359

Semantics and Metalinguistic Awareness 359

Further Development of Communication Skills 360

**Bilingualism: Challenges and Consequences of Learning
Two Languages 363**

Applying Developmental Themes to Language Acquisition 365

Summary 366

Chapter 9 Practice Quiz 368

Key Terms 369

Media Resources 369

PART IV Social and Personality Development 371

Chapter 10 Emotional Development, Temperament, and Attachment 371

Emotional Development 372

Displaying Emotions: The Development (and Control) of Emotional Expressions 372

Recognizing and Interpreting Emotions 378

Emotions and Early Social Development 380

Focus on Research Assessing Emotional Competence in Young Children 381

Temperament and Development 381

Hereditary and Environmental Influences on Temperament 382

Stability of Temperament 384

Attachment and Development 386

Attachments as Reciprocal Relationships 386

How Do Infants Become Attached? 387

Applying Research to Your Life Combating Stranger Anxiety: Some Helpful Hints for Caregivers, Doctors, and Child-Care Professionals 393

Individual Differences in Attachment Quality 396

Fathers as Caregivers 398

Factors That Influence Attachment Security 400

Attachment and Later Development 404

Applying Developmental Themes to Emotional Development, Temperament, and Attachment 408

Summary 409

Chapter 10 Practice Quiz 410

Key Terms 411

Media Resources 411

Chapter 11 Development of the Self-Concept 413

How the Self-Concept Develops 414

Self-Differentiation in Infancy 414

Self-Recognition in Infancy 415

"Who Am I?" Responses of Preschool Children 418

Conceptions of Self in Middle Childhood and Adolescence 419

Cultural Influences on the Self-Concept 420

Self-Esteem: The Evaluative Component of Self 421

Origins and Development of Self-Esteem 421

Social Contributors to Self-Esteem 425

Development of Achievement Motivation and Academic Self-Concepts 428

Early Origins of Achievement Motivation 429

Achievement Motivation During Middle Childhood and Adolescence 429

Beyond Achievement Motivation: Development of Achievement Attributions 434

Who Am I to Be? Forging an Identity 438

Developmental Trends in Identity Formation 439

How Painful Is Identity Formation? 440

Influences on Identity Formation 440

Identity Formation Among Minority Youth 442

The Other Side of Social Cognition: Knowing About Others 444

Age Trends in Person Perception 444

Applying Research To Your Life Racial Categorization and Racism
in Young Children 446

Theories of Social-Cognitive Development 447

**Applying Developmental Themes to the Development of the Self
and Social Cognition 451**

Summary 451

Chapter 11 Practice Quiz 453

Key Terms 454

Media Resources 454

Chapter 12 Sex Differences and Gender-Role Development 457

Defining Sex and Gender 458

Categorizing Males and Females: Gender-Role Standards 459

Some Facts and Fictions About Sex Differences 460

Actual Psychological Differences Between the Sexes 460

Cultural Myths 463

Do Cultural Myths Contribute to Sex Differences in Ability
(and Vocational Opportunity)? 464

Developmental Trends in Gender Typing 466

Development of the Gender Concept 467

Development of Gender-Role Stereotypes 467

Development of Gender-Typed Behavior 470

Theories of Gender Typing and Gender-Role Development 474

Evolutionary Theory 474

Money and Ehrhardt's Biosocial Theory of Gender Differentiation
and Development 475

Focus on Research Is Biology Destiny? Sex Assignment
Catastrophes 479

A Psychobiosocial Viewpoint 480

Freud's Psychoanalytic Theory 480

Social Learning Theory 481

Kohlberg's Cognitive-Developmental Theory 482

Gender Schema Theory 484

An Integrative Theory 485

Applications: On Changing Gender-Role Attitudes and Behavior 485

**Applying Developmental Themes to Sex Differences and Gender-Role
Development 488**

Summary 488

Chapter 12 Practice Quiz 489

Key Terms 490

Media Resources 491

Chapter 13 Aggression, Altruism, and Moral Development 493

The Development of Aggression 494

Origins of Aggression in Infancy 494

Developmental Trends in Aggression 495

Individual Differences in Aggressive Behavior 497

Cultural and Subcultural Influences on Aggression 501

Coercive Home Environments: Breeding Grounds for Aggression 502

Applying Research To Your Life Methods of Controlling Aggression
in Young Children 503

Altruism: Development of the Prosocial Self 505

Origins of Altruism 505

Developmental Trends in Altruism 506

Sex Differences in Altruism 506

Social-Cognitive and Affective Contributors to Altruism 506

Cultural and Social Influences on Altruism 509

Who Raises Altruistic Children? 510

Moral Development: Affective, Cognitive, and Behavioral Components 511

How Developmentalists Look at Morality 512

The Affective Component of Moral Development 512

The Cognitive Component of Moral Development 513

The Behavioral Component of Moral Development 520

Applying Research to Your Life How Should I Discipline My Children? 525

Applying Developmental Themes to the Development of Aggression, Altruism, and Morality 527

Summary 528

Chapter 13 Practice Quiz 529

Key Terms 530

Media Resources 530

PART V The Context of Development 533

Chapter 14 The Context of Development I: The Family 533

The Ecological Systems Viewpoint 534

Bronfenbrenner's Contexts for Development 534

Understanding the Family 537

The Family as a Social System 537

Families Are Developing Systems 538

Conclusions About Understanding Families 539

Parental Socialization During Childhood and Adolescence 541

Two Major Dimensions of Parenting 541

Four Patterns of Parenting 542

Focus on Research Parenting Styles and Developmental Outcomes 544

Applying Research To Your Life Renegotiating the Parent–Child Relationship
During Adolescence 545

Social Class and Ethnic Variations in Child Rearing 547

Focus on Research Developmental Surprises from Affluent Parents 549

The Influence of Siblings and Sibling Relationships 551

Changes in the Family Systems When a New Baby Arrives 551

Sibling Relationships over the Course of Childhood 552

Positive Contributions of Sibling Relationships 553

Diversity in Family Life 555

Adoptive Families 555

Donor Insemination (DI) Families 556

Gay and Lesbian Families 557

Family Conflict and Divorce 558

Applying Developmental Themes to Family Life, Parenting, and Siblings 561

Summary 562

Chapter 14 Practice Quiz 563

Key Terms 564

Media Resources 564

Chapter 15 The Context of Development II: Peers, Schools, and Technology 567

Peers as Agents of Socialization 568

Who Is a Peer, and What Functions Do Peers Serve? 568

The Development of Peer Sociability 569

Peer Acceptance and Popularity 573

School as a Socialization Agent 575

Schooling and Cognitive Development 575

Applying Research To Your Life Should Preschoolers Attend School? 576

Determinants of Effective Schooling 576

Education and Developmental Transitions 580

The Effects of Television on Child Development 582

Development of Television Literacy 583

Focus on Research Do *The Mighty Morphin Power Rangers* Promote Children's Aggression? 584

Some Potentially Undesirable Effects of Television 584

Television as an Educational Tool 588

Child Development in the Digital Age 590

Computers in the Classroom 591

Beyond the Classroom: Benefits of Internet Exposure 591

Concerns About Computers 593

Final Thoughts on the Context of Development 595

Applying Developmental Themes to the Context of Development 597

Summary 598

Chapter 15 Practice Quiz 599

Key Terms 600

Media Resources 600

Appendix A-1

Glossary G-1

References R-1

Name Index I-1

Subject Index I-15