

EXPERIENCE

Human Development



Diane E. PAPALIA
Gabriela MARTORELL

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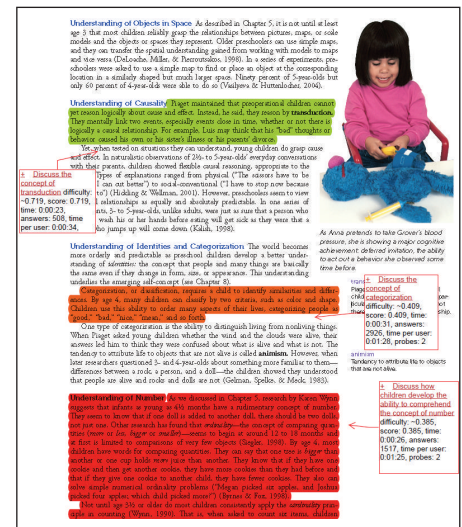
Students helped inform the revision strategy:

STEP 1. Over three years, data points showing concepts that caused students the most difficulty were anonymously collected from McGraw-Hill Connect® Lifespan Development's LearnSmart® product.

STEP 2. The data from *LearnSmart* was provided to the authors in the form of a *Heat Map*, which graphically illustrated “hot spots” in the text that impacted student learning (see image, right).

STEP 3. The authors used the *Heat Map* data to refine the content and reinforce student comprehension in the new edition. Additional quiz questions and assignable activities were created for use in Connect Lifespan Development to further support student success.

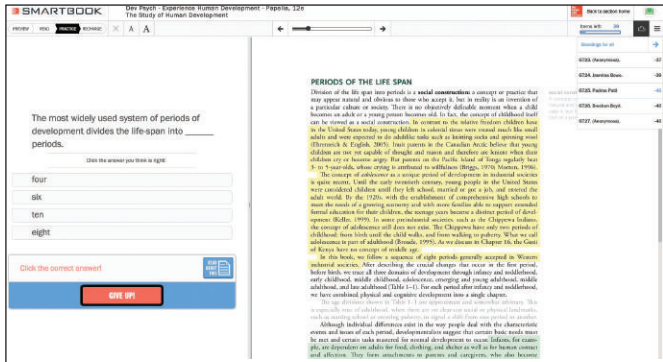
RESULT: Because the *Heat Map* gave the authors empirically-based feedback at the paragraph and even sentence level, they developed the new edition using precise student data that pinpointed concepts that caused students the most difficulty.



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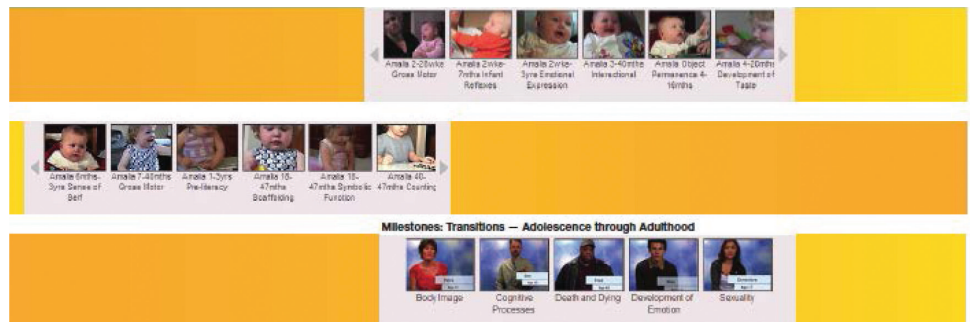


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Human Development

THIRTEENTH EDITION

Diane E. PAPALIA
Gabriela MARTORELL



EXPERIENCE HUMAN DEVELOPMENT: THIRTEENTH EDITION

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Gabriela Alicia Martorell was born in Seattle, Washington, but moved as a toddler to Guatemala. At eight, she moved back to the United States and lived in Northern California until leaving for her undergraduate training at University of California, Davis. After obtaining her BS in Psychology, she earned her PhD in Developmental and Evolutionary Psychology at University of California, Santa Barbara. Since that time, she has served a number of learning institutions including Portland State University, Norfolk State University, and her current full-time position at Virginia Wesleyan College. Gabi has taught graduate and undergraduate courses in introductory psychology, research methods, life-span human development, infant development, child development, adolescent development, adulthood and aging, cultural issues in psychology, evolutionary psychology, developmental psychopathology, and community-based learning courses in Early Childhood Education and Adult Development and Aging. She is committed to teaching, mentoring, and advising. She is currently conducting research on attachment processes in immigrant Latino/a adolescents that was funded by the Virginia Foundation for Independent Colleges, and is Co-Investigator for a National Science Foundation grant focused on student retention and success in science, technology, engineering, and math. She lives in Virginia with her husband Michael, daughters Amalia and Clara, and two dogs.

To Charles Robert Zappa,
with love.

To Susy and Rey,
my parents, especially for putting up with me
during my teenage years.

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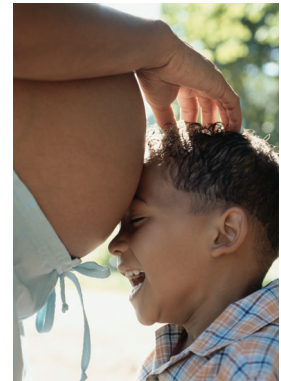
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EXPERIENCE THE Human Side

Experience Human Development helps students experience the human side of development by exposing them to culture and diversity, immersing them in practical application, and helping them study smarter through personalized learning and reporting.

Experience Human Development takes a practical approach to research and recognizes that just as people develop in their own way, your students also learn in their own ways. With our adaptive, personalized learning program, LearnSmart, students are guided toward success on their terms. With integrated resources like Milestones of Child Development, Milestones: Transitions, and short author tutorials on some of the most challenging learning objectives, *Experience Human Development* makes a difference for your students.

Better Data, Smarter Revision, Improved Results

Here's how it used to be: The revision process for a new edition typically began with asking several dozen instructors what they would change and what they would keep. Also, experts in the field were asked to provide comments that point out new material to add and dated material to remove. Using all these reviews, authors would revise the material. But now, a new tool has revolutionized that paradigm. LearnSmart, a tool powered by McGraw-Hill Connect Lifespan Development, is the adaptive learning system that provides students with an individualized assessment of their own progress. McGraw-Hill authors have access to real student data from this tool to create their revisions.

• Student Data

This student data is anonymously collected from the many students who use LearnSmart. Because virtually every text paragraph is tied to several questions that students answer while using LearnSmart, empirical data showing the specific concepts with which students have the most difficulty is easily pinpointed.

of Development

This student data from LearnSmart is in the form of a *heat map*, which graphically illustrates “hot spots” in the text that cause students the most difficulty. Using these hot spots, McGraw-Hill authors can refine the wording and content in the new edition to make these areas clearer than before.

• LearnSmart

Powered by McGraw-Hill Connect® Lifespan Development, LearnSmart is our response to today's student. LearnSmart is designed to maximize productivity and efficiency in learning, helping students “know what they know” while helping them learn what they don't know. In fact, instructors using LearnSmart are reporting that their students' performance is improving by a letter grade or more. Through this unique tool, instructors have the ability to identify struggling students quickly and easily, *before* the first exam.

Regardless of individual study habits, preparation, and approaches to the course, students will find that *Experience Human Development* connects with them on a personal, individual basis and provides a road map for real success in the course.

• SmartBook

Fueled by LearnSmart, SmartBook™ creates a personalized reading experience by highlighting the most impactful concepts a student needs to learn at that moment in time. This ensures that every minute spent with SmartBook is returned to the student as the most value-added minute possible. The reading experience continuously adapts by highlighting content based on what the student knows and doesn't know. Real-time reports quickly identify the concepts that require more attention from individual students—or the entire class. SmartBook detects the content a student is most likely to forget and brings it back to improve long-term knowledge retention.

Understanding of Objects in Space As described in Chapter 5, it is not until at least age 3 that most children reliably grasp the relationships between pictures, maps, or scale models and the objects or spaces they represent. Older preschoolers can use simple maps, and they can transfer the spatial understanding gained from working with models to maps and vice versa (DeLoache, Miller, & Huttenlocher, 1998). In a series of experiments, preschoolers were asked to use a simple map to find or place an object at the corresponding location in a similarly shaped but much larger space. Ninety percent of 5-year-olds but only 60 percent of 4-year-olds were able to do so (Vasilyeva & Huttenlocher, 2004).

Understanding of Causality Piaget maintained that preoperational children cannot yet reason logically about cause and effect. Instead, he said, they reason by **transduction**. They mentally link two events, especially events close in time, whether or not there is logically a causal relationship. For example, Luis may think that his “bad” thoughts or behavior caused his own or his sister’s illness or his parents’ divorce.

Yet, when tested on situations they can understand, young children do grasp cause and effect. In naturalistic observations of 2½- to 5-year-olds’ everyday conversations with their parents, children showed flexible causal reasoning, appropriate to the types of explanations ranged from physical (“The scissors have to be 1 can cut better”) to social-conventional (“I have to stop now because to”) (Hidding & Wellman, 2001). However, preschoolers seem to view toys, 3- to 5-year-olds, unlike adults, were just as sure that a person who wash his or her hands before eating will get sick as they were that a who jumps up will come down (Kailash, 1998).

Understanding of Identities and Categorization The world becomes more orderly and predictable as preschool children develop a better understanding of *identities*: the concept that people and many things are basically the same even if they change in form, size, or appearance. This understanding underlies the emerging self-concept (see Chapter 8).

Categorization, or classification, requires a child to identify similarities and differences. By age 4, many children can classify by two criteria, such as color and shape. Children use this ability to order many aspects of their lives, categorizing people as “good,” “bad,” “nice,” “mean,” and so forth.

One type of categorization is the ability to distinguish living from nonliving things. When Piaget asked young children whether the wind and the clouds were alive, their answers led him to think they were confused about what is alive and what is not. The tendency to attribute life to objects that are not alive is called **animism**. However, when later researchers questioned 3- and 4-year-olds about something more familiar to them—differences between a rock, a person, and a doll—the children showed they understood that people are alive and rocks and dolls are not (Gelman, Spelke, & Meek, 1983).

Understanding of Number As we discussed in Chapter 5, research by Karen Wynn suggests that infants as young as 4½ months have a rudimentary concept of number. They seem to know that if one doll is added to another doll, there should be two dolls, not just one. Other research has found that *ordinality*—the concept of comparing quantities (*more or less, bigger or smaller*)—seems to begin at around 12 to 18 months and at first is limited to comparisons of very few objects (Siegal, 1998). By age 4, most children have words for comparing quantities. They can say that one tree is *bigger* than another or one cup holds *more* juice than another. They know that if they have one cookie and then get another cookie, they have more cookies than they had before and that if they give one cookie to another child, they have fewer cookies. They also can solve simple numerical ordinality problems (“Megan picked six apples, and Joshua picked four apples; which child picked more?”) (Byrnes & Fox, 1998).

Not until age 3½ or older do most children consistently apply the *conservation principle* in counting (Wynn, 1990). That is, when asked to count six items, children

trans child picture that

As Anna pretends to take Grover’s blood pressure, she is showing a major cognitive achievement: deferred imitation, the ability to act out a behavior she observed some time before.

animism
Tendency to attribute life to objects that are not alive.

Discuss the concept of categorization difficulty: ~0.409, score: 0.409, time: 0:00:31, answers: 2926, time per user: 0:01:28, probes: 2

Discuss how children develop the ability to comprehend the concept of number difficulty: ~0.385, score: 0.385, time: 0:00:26, answers: 1517, time per user: 0:01:25, probes: 2

SMARTBOOK

Dev Psych - Experience Human Development - Papalia, 12e
The Study of Human Development

PREVIEW

READ

PRACTICE

RECHARGE

A

A

←

→

Back to section home

Items left: 39

Standings for all

→

6723. (Anonymous): -37

6724. Jasmine Bowe. -39

6725. Padma Patil -40

6726. Brecken Boyd. -40

6727. (Anonymous). -40

The most widely used system of periods of development divides the life-span into _____ periods.

Click the answer you think is right!

four

six

ten

eight

Click the correct answer!

READ ABOUT THIS

GIVE UP!

PERIODS OF THE LIFE SPAN

Division of the life span into periods is a **social construction**: a concept or practice that may appear natural and obvious to those who accept it, but in reality is an invention of a particular culture or society. There is no objectively definable moment when a child becomes an adult or a young person becomes old. In fact, the concept of childhood itself can be viewed as a social construction. In contrast to the relative freedom children have in the United States today, young children in colonial times were treated much like small adults and were expected to do adultlike tasks such as knitting socks and spinning wool (Ehrenreich & English, 2005). Inuit parents in the Canadian Arctic believe that young children are not yet capable of thought and reason and therefore are lenient when their children cry or become angry. But parents on the Pacific Island of Tonga regularly beat 3- to 5-year-olds, whose crying is attributed to willfulness (Briggs, 1970; Morton, 1996).

The concept of **adolescence** as a unique period of development in industrial societies is quite recent. Until the early twentieth century, young people in the United States were considered children until they left school, married or got a job, and entered the adult world. By the 1920s, with the establishment of comprehensive high schools to meet the needs of a growing economy and with more families able to support extended formal education for their children, the teenage years became a distinct period of development (Keller, 1999). In some preindustrial societies, such as the Chippewa Indians, the concept of adolescence still does not exist. The Chippewa have only two periods of childhood: from birth until the child walks, and from walking to puberty. What we call adolescence is part of adulthood (Broude, 1995). As we discuss in Chapter 16, the Gusi of Kenya have no concept of middle age.

In this book, we follow a sequence of eight periods generally accepted in Western industrial societies. After describing the crucial changes that occur in the first period, before birth, we trace all three domains of development through infancy and toddlerhood, early childhood, middle childhood, adolescence, emerging and young adulthood, middle adulthood, and late adulthood (Table 1–1). For each period after infancy and toddlerhood, we have combined physical and cognitive development into a single chapter.

The age divisions shown in Table 1–1 are approximate and somewhat arbitrary. This is especially true of adulthood, when there are no clear-cut social or physical landmarks, such as starting school or entering puberty, to signal a shift from one period to another.

Although individual differences exist in the way people deal with the characteristic events and issues of each period, developmentalists suggest that certain basic needs must be met and certain tasks mastered for normal development to occur. Infants, for example, are dependent on adults for food, clothing, and shelter as well as for human contact and affection. They form attachments to parents and caregivers, who also become

• StudySmart

Experience Human Development, Thirteenth Edition was designed to help students study smarter. “StudySmart” icons appear throughout each chapter alerting students to potential “hot spots,” or challenging concepts. These concepts were identified through data collected anonymously from thousands of students using LearnSmart, and when paired with SmartBook, provide students a powerful learning experience. StudySmart icons also direct instructors to digital activities in Connect Lifespan Development that can be assigned for reinforcement and engagement.

study smart

Operant Conditioning

In addition, students will find other “StudySmart” icons in the margin focusing on a specific challenging concept such as “Operant Conditioning.” These guide students to assignable and assessable digital activities that are part of Connect Lifespan Development. This means instructors and students can determine how well they understand that concept prior to taking the high-stakes test.

Real People, Real World, Real Life

Many of the Connect StudySmart icons guide students to McGraw-Hill’s Milestones, another opportunity to enhance learning.

McGraw Hill’s Milestones is a powerful tool that allows students to experience life as it unfolds, from infancy through late adulthood. This tool consists of two

xvi

essential components that work together to capture key changes throughout the life span—

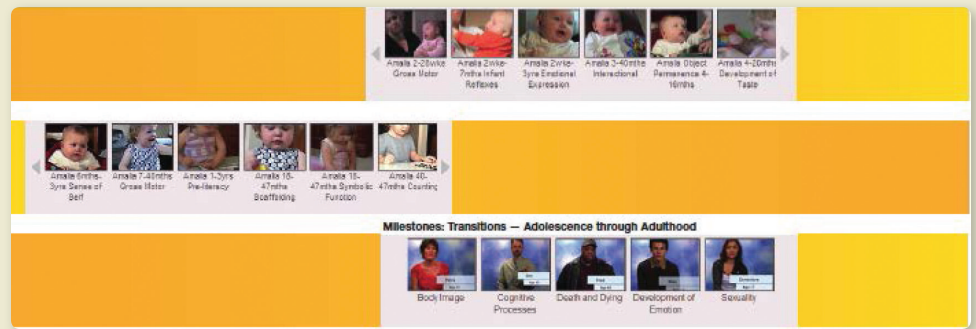
Milestones of Child Development and Milestones: Transitions.

In Milestones of Child

Development, students track the early stages of physical, social, and emotional development. By watching one child over time or comparing various children, Milestones provides a unique, experiential learning environment that can only be achieved by watching real human development as it happens—all in pre-, transitional, and post-milestone segments.

In **Milestones: Transitions**, students meet a series of people—from teenagers to individuals in late adulthood—to hear individual perspectives on changes that occur throughout the life span. Through a series of interviews, students are given the opportunity to think critically while exploring the differences in attitudes on everything from body image to changes in emotion, sexuality, cognitive processes, and death and dying.

We continue to emphasize *Experience Human Development* hallmarks of research, and culture. In addition to updating the research base of each chapter, “Research in Action” features provide an in-depth examination of research topics such as Chapter Six’s material about how postpartum depression affects early development. Stressing the cultural development, the “Window on the World” features explore cultural and socioeconomic issues.



Personalized Grading, On the Go, Made Easier



The first and only analytics tool of its kind, Connect Insight™ is a series of visual data displays—each framed by an intuitive question—that provide at-a-glance information regarding how your class is doing.

- **Intuitive:** You receive an instant, at-a-glance view of student performance matched with student activity.
- **Dynamic:** Connect Insight puts real-time analytics in your hands so you can take action early and keep struggling students from falling behind.
- **Mobile:** Connect Insight travels from office to classroom, available on demand wherever and whenever it's needed.

Whether a class is face-to-face, hybrid, or entirely online, *Experience Human Development* provides the tools needed to reduce the amount of time and energy that instructors must expend to administer their



course. Easy-to-use course management in Connect Lifespan Development allows instructors to spend less time administering and more time teaching.

- **At-Risk Student Reports:** The At-Risk report provides instructors with one-click access to a dashboard that identifies students who are at risk of dropping out of a course due to low engagement levels.
- **Category Analysis Reports:** The Category Analysis report is the place to find out how your students are performing relative to specific learning objectives and goals.
- **Item Analysis Reports:** The Item Analysis report is the best way to get a bird's-eye view of a single assignment. You'll be able to tell if students are improving or if the concepts are something you want to spend additional time on in class.
- **Student Performance Reports:** The Student Performance report helps you search for a specific student in your class and focus on that student's progress across your assignments.
- **Assignment Results and Statistics Reports:** The Assignment Results report shows your entire class's performance across all of your assignments. Assignment Statistics reports will give you quick data on each assignment including the mean score, high score, and low scores, as well as the number of times it was submitted.

This is a chapter-by-chapter list of topics that are new to this edition or have been substantially revised or updated.

1 The Study of Human Development

- Streamlined introduction to chapter
- Updated research on school lunch program
- Revised section on studying the life span
- Expanded section on human development today
- Updated information about minority children in the United States
- Updated information on poverty and ethnicity
- Updated information on global poverty

2 Theory and Research

- Clarified material on what a theory is
- Expanded material on early philosophical foundations of psychology and nature of active and reactive development
- Revised section on mechanistic and organismic views of psychology
- Expanded material about Freud's ideas
- Added example of how Erikson's stages feed into each other
- Revised information on assimilation, accommodation, and equilibrium
- Revised material on neo-Piagetian approaches
- Clarified example of the exosystem
- Revised ethology section and provided example
- Revised evolutionary psychology section
- Expanded material about qualitative and quantitative research and the scientific method
- Provided new example of experimental design
- Revised section on laboratory, field, and natural experiments
- Revised section on developmental research designs
- Revised ethics material

3 Forming a New Life

- Rewrote introduction to chapter
- Revised and updated material on multiple births
- Clarified information on the human genome
- Revised information on dominant and recessive genes
- Revised information on polygenic inheritance
- Revised section on genotype and phenotype
- Revised material on incomplete dominance
- Revised information on sex-linked inheritance
- Expanded and revised section on heritability
- Added a simile for canalization
- Added example of nonshared environmental influences

4 Birth and Physical Development during the First Three Years

- Updated maternal and infant mortality rates
- Expanded material on stages of labor
- Revised section on electronic fetal monitoring
- Expanded information on fontanelles and neonate skull
- Added information on the functioning of body systems in neonates
- Revised distinction between low-birth-weight and small-for-date infants
- Updated material on interventions for preterm delivery
- Updated statistics on stillbirth in the United States
- Updated statistics on worldwide neonatal mortality rates
- Provided new examples of cephalocaudal and proximodistal development
- Added information on the functions of the different lobes of the brain
- Revised material on neuronal pruning
- Expanded information on plasticity
- Expanded and revised material on ecological systems and dynamic systems theories of motor development

5 Cognitive Development during the First Three Years

- Revised description of operant conditioning
- Expanded material on the use of conditioning techniques in the study of infant memory
- Revised description of intelligent behavior
- Expanded description of developmental tests
- Expanded material on the influence of parental responsiveness
- Revised section on early intervention
- Revised material on imitative abilities
- Expanded description of pictorial competence
- Expanded description of scale error and the dual representation hypothesis
- Expanded and revised description of habituation and dishabituation
- Added example of how visual preference is used in infant habituation research
- Revised material describing how habituation can be used to investigate visual recognition
- Added example on the development of causality
- Revised description of the violation of expectations paradigm and how it can be used to investigate object permanence
- Revised material on conceptual understanding and perceptual awareness
- Expanded definition of implicit memory
- Expanded definition and added example for working memory
- Added material about the early sensitization of infants to their native language
- Expanded definition of phonemes and phonological rules and provided examples of both
- Added example of syntax
- Expanded descriptions of underextension and overextension
- Revised material on overregularization
- Revised and added example to the learning theoretical approach to language acquisition
- Revised section on child-directed speech

6 Psychosocial Development during the First Three Years

- Added example of an emotional response
- Revised definition of social cognition
- Revised introduction to temperament
- Expanded example of a slow-to-warm-up child
- Revised and expanded description of stability of temperament
- Expanded material on behavior inhibition
- Revised information on Erikson's approach and expanded section on trust versus mistrust
- Expanded and revised description of the attachment categories
- Expanded description of internal working mothers and maternal sensitivity and responsiveness
- Expanded description of interactional synchrony and mutual regulation
- Added example of social referencing
- Revised description of the development of conscience
- Expanded description of situational and committed compliance
- Updated statistics on maternal employment and early child care
- Updated statistics on child abuse
- Expanded description of nonorganic failure to thrive
- Expanded description of who abusers are

7

Physical and Cognitive Development in Early Childhood

- Expanded and revised section on brain development
- Expanded information on organized sports
- Revised and updated information on left-handedness
- Updated statistics on undernutrition and food security
- Updated and revised worldwide child mortality information and statistics
- Updated information on homelessness
- Revised introduction to the Piagetian approach
- Expanded section on symbolic function, deferred imitation, and pretend play
- Revised material on understanding causality
- Revised research description of egocentrism
- Expanded conservation material
- Revised description of how early social cognition is linked to theory of mind
- Revised and added examples for basic processes, capacities, and systems in memory
- Added example of recall memory
- Added examples of episodic and generic memories
- Revised and added examples for influences on memory retention
- Revised information on scaffolding and the zone of proximal development
- Added example of fast mapping
- Revised descriptions of grammar and syntax
- Added example for pragmatics
- Revised definition of emergent literacy
- Revised and expanded material on compensatory preschool programs
- Expanded material on the child in kindergarten

8

Psychosocial Development in Early Childhood

- Revised example of self-definition
- Revised and expanded developmental changes in self-esteem
- Revised section on emotional understanding
- Added example of initiative
- Revised introduction to gender differences
- Revised and updated critique of evolutionary approach to gender differences
- Added information on father influences on gender development
- Added supporting research on cultural influences

9

Physical and Cognitive Development in Middle Childhood

- Updated statistics on typical height and weight
- Revised and expanded material on brain development
- Revised information on rough-and-tumble play
- Updated overweight and obesity statistics
- Expanded spatial relationships and causality material and added example
- Revised categorization material and added example
- Expanded inductive and deductive reasoning
- Revised conservation material
- Revised link between culture and mathematical reasoning
- Revised link between egocentrism and moral reasoning
- Added example for link between attention, memory, and planning
- Revised description of executive functioning
- Added example of selective attention
- Revised working memory material
- Expanded description of metamemory
- Provided example of a mnemonic strategy and expanded description
- Explained link between working memory and conservation tasks
- Added definition of psychometrics
- Revised material on culture and IQ
- Revised section on Sternberg's triarchic theory
- Added information about scaffolding to dynamic tests of intelligence
- Expanded definition of syntax
- Revised and expanded section on reading and writing
- Expanded description of metacognition
- Added example of self-efficacy
- Revised introduction to special needs
- Expanded definition of inclusion programs
- Revised and expanded description of convergent and divergent thinking

Psychosocial Development in Middle Childhood

- Expanded definition of self-concept
- Revised and expanded section on industry versus inferiority
- Revised description of emotion regulation and included examples
- Revised information on the influence of family conflict
- Expanded definition of coregulation
- Updated statistics on children living in poverty
- Updated statistics on family structure, including living arrangements and father-absent homes
- Revised section on custody, visitation, and co-parenting
- Updated statistics on one-parent families, step families, gay families, and adoptive families
- Expanded section on sociometric popularity
- Revised section on levels of friendship in school-age children
- Expanded example and description of hostile attributional biases
- Added research critiquing arguments for the link between video games and aggression
- Expanded description of resilience and added example

Physical and Cognitive Development in Adolescence

- Expanded definition of adolescence as a social construction
- Revised section on adolescence as a time of opportunity and risk
- Revised section on puberty
- Expanded and revised section on family influences on pubertal timing
- Expanded and revised section on the adolescent brain
- Revised introduction to physical and mental health
- Updated statistics on sleep needs and problems
- Updated statistics on the use of alcohol, marijuana, tobacco, and other drugs
- Included recent trends on the use of prescription drugs
- Revised section on alcohol use and included binge drinking as a key term
- Updated statistics on depression and on suicide rates in adolescence
- Revised definition of formal operations and hypothetical-deductive reasoning
- Revised evaluation of Piaget's approach
- Expanded and added example to language development
- Expanded Kohlberg's theory of moral reasoning
- Revised critique of Kohlberg's theory and added an example
- Revised description to Gilligan's theory of moral development
- Revised material on prosocial moral reasoning and added an example
- Updated statistics on high school graduation rates
- Added examples of self-efficacy
- Revised information on brain differences by gender
- Updated statistics on high school dropout rates