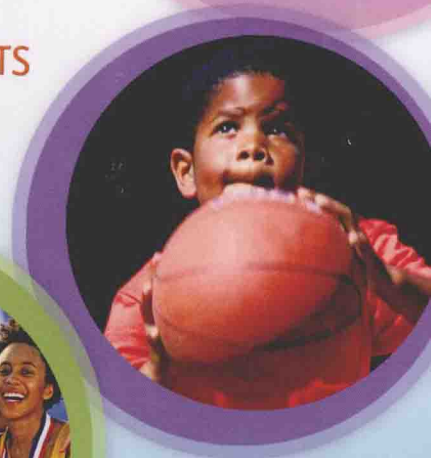




Understanding Motor Development

INFANTS • CHILDREN • ADOLESCENTS • ADULTS

SEVENTH EDITION



DAVID L. GALLAHUE
JOHN C. OZMUN
JACQUELINE D. GOODWAY

Seventh Edition

UNDERSTANDING MOTOR DEVELOPMENT

Infants, Children, Adolescents, Adults



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UNDERSTANDING MOTOR DEVELOPMENT: INFANTS, CHILDREN, ADOLESCENTS, ADULTS, SEVENTH EDITION

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To the Sunshine of My Life:

Ellie, David Lee and Julie (Adam, Alec & Ian),
Jennifer and Dan (Paul, Anna & Bethany); and to Ruy Jordana Krebs, PhD, my
esteemed Brazilian colleague, who lived a life in the search for truth concerning the
motor development and movement education of children and youth

DAVID L. GALLAHUE

To the Treasures of My Heart:

Ruth, Chet, Gus, Johnny, and Ray

JOHN C. OZMUN

To my daughter Blaize who keeps the inner child in me
alive and to my parents who gave me the wings to fly

JACKIE D. GOODWAY

PREFACE

AUDIENCE

Understanding Motor Development is written for students taking a first course in motor development. It is presented in an easy-to-understand and easy-to-use manner to be of significant value to educators from a variety of disciplines, including kinesiology, physical and occupational therapy, special education, early childhood education, and elementary and secondary education. This text provides both descriptive and explanatory profiles of the individual from conception through adulthood.

APPROACH

Development is a process that begins at conception and continues throughout life. This text discusses motor development from conception through adulthood. By incorporating dynamic systems theory and phase stage theory, the Triangulated Hourglass Model provides the reader with a metaphor for conceptualizing both the explanatory and descriptive aspects of both the processes and products of motor development.

CONTENT

Organization

Unit I: Background, provides the reader with essential introductory information on the study of motor development. Chapter 1, "Understanding Motor Development: An Overview," examines the history, methods of study, research problems, and terminology used in the study of motor development. Chapter 2, "Models of Human Development," offers a discussion of developmental models of child development. Particular attention is given to dynamic systems theory as well as the works of Jean Piaget, Erik Erikson, and Urie Bronfenbrenner and the implications of each for motor development. In chapter 3, "Motor Development: A Theoretical Model," a theoretical framework for studying the process of motor development is presented. The phases and stages of this life span model, as well as the subsystems of the task, the individual, and the environment, are presented as a triangulated hourglass metaphor, or heuristic device, and serve as the organizational framework for the remainder of the text. In chapter 4, "Selected Factors Affecting Motor Development," there is an important discussion of critical factors within the individual, environment, and movement tasks that influence the process of development throughout life.

Unit II: Infancy, deals with a variety of important developmental topics of infancy. Chapter 5, “Prenatal Factors Affecting Development,” is devoted to discussion of those factors prior to birth that may affect later motor development. “Prenatal and Infant Growth” is the topic of chapter 6. This chapter provides the reader with a descriptive profile of early growth processes. Chapter 7 examines “Infant Reflexes and Rhythmical Stereotypies” in the neonate and young infant. Particular attention is given to the integration of both into the expanding movement repertoire of the young child. Chapter 8, “Rudimentary Movement Abilities,” discusses the rapidly expanding movement repertoire of infants. The major stability, locomotor, and manipulative tasks of this period are outlined and summarized. An extensive discussion of “Infant Perception” in chapter 9 concludes the section on infancy. This chapter relates perceptual development to the motor behavior of infants.

Unit III: Childhood, provides the reader with a wealth of important information about childhood motor development. Chapter 10, “Childhood Growth and Development,” offers a general overview of cognitive, affective, and motor characteristics during early and later childhood. This sets the stage for the three chapters that follow. Chapters 11 and 12, “Development of Fundamental Movements—Manipulative Skills” and “Development of Fundamental Movements—Locomotor Skills” provide a practical, easy-to-use, stage approach (initial stage, emerging stage, proficient stage) to observing and assessing the fundamental movement patterns of childhood. Mechanically correct line drawings provide a visual description that coincides with a brief verbal description of each stage, along with frequently encountered developmental difficulties. “Physical Development of Children” is the topic of chapter 13. A review of the latest information on children’s health-related fitness and motor fitness is presented along with information on fitness training for children. “Perceptual-Motor Development and Motor Skill Intervention” is the topic of chapter 14. Important information on both

of these topics is reviewed and synthesized with a view toward their complex interaction with the motor behavior of the individual.

Unit IV: Adolescence, examines a number of important topics. Chapter 15, “Adolescent Growth, Puberty, and Reproductive Maturity,” opens this section with a wealth of important and useful information about physical change during this critical developmental period. Chapter 16, “Specialized Movement Skills,” centers on the topics of specialized movement skill development, fostering improvement, and the developmental sequence of specialized movement skills. This is followed by a discussion of the “Fitness Changes During Adolescence” in chapter 17 with a view toward their rapidly changing health-related and performance-related fitness.

Unit V: Adulthood, provides the latest information available on the rapidly developing area of adult motor development. Chapter 18, “Physiological and Psychosocial Development in Adults,” attempts to answer the question: Why do we age? A lively discussion is offered concerning changes in the adult musculoskeletal system, central nervous system, circulatory and respiratory systems, and sensory systems. Chapter 19, “Motor Performance in Adults,” examines reaction time, balance and postural control, falls, gait, activities of daily living, and the elite performer.

FEATURED IN THIS EDITION

Key Terms and Chapter Competencies

Important terms that will be used and competencies that should be attained through careful and reflective reading of each chapter are found at the beginning of each chapter. Take a few minutes to look these over in preparation for reading each of the chapters.

Key Concepts and Chapter Concepts

At the beginning of each chapter we provide a text box with a Key Concept. That concept is the overarching thought that we are trying to convey in the

chapter. Several more Concepts boxes throughout the chapter highlight particular topics of discussion. For us, understanding motor development is not a matter of memorizing isolated facts, but very much a matter of understanding important developmental concepts and being able to apply these concepts as a parent, teacher, coach, or therapist in real-life settings.

Developmental Dilemmas

The study of human development is fascinating. It not only helps us better understand our own personal developmental journey and that of others, it also raises many interesting and perplexing questions. In this edition we explore Developmental Dilemmas within a box in each chapter.

International Perspectives

Although human growth and development is a universal process, perspectives on various aspects differ depending on cultural norms, ethnicity, socioeconomic conditions, and a host of other factors. In this edition we try to bring some of these perspectives to light with a box in each chapter focusing on varying International Perspectives. They should not only be quite interesting to read and consider, but should also generate thought-provoking discussion.

Critical Readings

At the conclusion of each chapter we provide a brief list of Critical Readings for those interested in learning more about the topics covered. We have selected these carefully with the intent of providing the reader with additional information from top authorities in their respective fields.

Questions for Reflection

At the conclusion of each chapter is a list of questions to consider. Take time to look these over and see how well you can answer them. They are intended to serve as a guide to better understanding motor development.

Figures and Tables

Throughout the text we have included a wide variety of figures and tables. They are intended to synthesize information and to provide a visual reference for better understanding motor development.

Glossary of Terms

Words have meaning and it is important in the field of motor development, as with any other movement science, to be certain we are using terminology that conveys similar meaning. The Glossary provides a brief definition of words highlighted throughout the text. This is done to ensure that we and our readers worldwide are “on the same page” when discussing a topic.

Bibliography

We provide a chapter-by-chapter bibliography at the end of the book. These references have been selected because of their timeliness and because they represent seminal works in the particular area of motor development being discussed.

Annotated Web Resources

Each chapter includes Web Resources, a listing of websites that students can explore to find chapter-related information on the Internet. This feature allows students to expand their knowledge according to their abilities and goals and offers a springboard for independent learning. They are now annotated in this new edition to provide even further information regarding what students will gain by searching those sites.

Appendix A: Professional Position Papers Related to Motor Development Issues

This updated appendix provides a comprehensive list of position papers on a wide variety of topics in motor development.

Appendix B: Professional Organizations Related to Motor Development Issues

This updated appendix provides a reference list of the major organizations and their website

information, which will be a handy guide for students doing research or interested in becoming a member of the organization.

New or Expanded Topics

This new edition has been significantly revised and updated to include the latest research, reference information, and suggested readings in the field. Tables and figures have been updated throughout the text to reflect the latest research. Definitions and key terminology have been enhanced throughout for further clarity. Following is a sampling of topics in each unit that are either new to this edition or greatly expanded since the last edition:

Unit I: Background

- Expanded explanations and discussions of leading theoretical perspectives on the processes and products of motor development across the life span
- Revised and clarified presentation of the *Triangulated Hourglass Model* of motor development, and how it serves as a metaphor for conceptualizing the processes and products of motor development
- Expanded discussion on risk factors affecting motor development
- New International Perspectives on the processes and products of motor development
- New Developmental Dilemmas to stimulate critical thinking and discussion

Unit II: Infancy

- Updated data presented on vital statistics with infants
- Enhanced discussion on intervention strategies
- Enhanced International Perspectives on motor development during infancy
- New Developmental Dilemmas to stimulate critical thinking and discussion.
- Inclusion of current information related to obesity in infancy
- Enhanced International Perspectives on infancy

Unit III: Childhood

- Adjusted age-ranges to reflect developmental rather than chronological timeframes
- Enhanced discussion of gender-related differences with fundamental skills
- Extensive updating of fitness-related materials to reflect current knowledge
- Increased focus on childhood obesity from the psychomotor and affective perspective
- Enhanced International Perspectives on childhood motor development
- New Developmental Dilemmas to stimulate critical thinking and discussion.

Unit IV: Adolescence

- Adjusted age-ranges to reflect developmental rather than chronological timeframes
- Extensive discussion of overweight and obesity issues during the pre-adolescence and adolescence periods
- Enhanced discussion related to the foundation of specialized movement skills
- Enhanced discussion related to the foundation of youth sport participation
- Extensive updating of fitness-related materials to reflect current knowledge
- Increased focus on childhood obesity from the psychomotor and affective perspective
- Enhanced International Perspectives on motor development during adolescence
- New Developmental Dilemmas of adolescence to stimulate critical thinking and discussion

Unit V: Adulthood

- Expanded and updated information on aging and muscular strength characteristics
- Inclusion of current information related to overweight and obesity with aging
- Expanded discussion on the influence of physical activity and mental health
- Enhanced International Perspectives on adult motor development
- New Developmental Dilemmas of adulthood to stimulate critical thinking and discussion

ANCILLARIES

Online Learning Center (www.mhhe.com/gallahue7e)

The website that accompanies the text provides additional opportunities for learning the material and conducting research. Access to the website is free to instructors.

The Instructor's Manual, PowerPoint presentations, and Quizzes are all available to instructors at the Online Learning Center (www.mhhe.com/gallahue7e).

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