

# CONTENTS

Preface xi Letter to Instructors xvii Acknowledgments xxi

## PART I Theory and Foundational Concepts 1

<b>1</b>	<b>Perspectives in Motor Behavior . . . . .</b>	<b>3</b>
	Defining Terms in Motor Behavior 4	
	Motor Control 4	
	Motor Learning 8	
	Motor Development 21	
	Summary 25	
	Learning Aids 26	
<b>2</b>	<b>Understanding Movement Control . . . . .</b>	<b>29</b>
	Reaction Time 30	
	Attention 34	
	Arousal 39	
	Sensory Contributions 40	
	Memory 42	
	Summary 44	
	Learning Aids 45	
<b>3</b>	<b>Theoretical Constructs in Motor Behavior . . . . .</b>	<b>49</b>
	Information-Processing Theory 50	
	Ecological Approach 56	
	Dynamic Systems Approach 58	
	Summary 63	
	Learning Aids 63	
<b>4</b>	<b>Stages of Skill Acquisition . . . . .</b>	<b>67</b>
	Mountain of Motor Development 68	
	Motor Learning Stages 70	
	Link to Dynamic Systems Approach 81	
	Practical Use of the Learning Models 82	
	Summary 82	
	Learning Aids 83	
<b>5</b>	<b>Assessing Motor Learning . . . . .</b>	<b>87</b>
	Indicators of Motor Skill Learning 88	
	Performance and Learning Tests 97	
	Games Classification for Promoting Transfer 103	
	Promoting Positive Transfer for Any Motor Skill 107	
	Summary 108	
	Learning Aids 109	

PART | Life Span Physical Activity and Movement 113

<b>6</b>	<b>Infant Motor Development . . . . .</b>	<b>115</b>
	Prenatal Development 116	
	Sensory Capabilities 118	
	Early Movements 120	
	Infants At Risk 130	
	Assessment 135	
	Summary 136	
	Learning Aids 137	
<b>7</b>	<b>Fundamental Skills in Childhood . . . . .</b>	<b>139</b>
	Fundamental Movement Skills 140	
	Fundamental Locomotor and Manipulative Skills 145	
	Summary 175	
	Learning Aids 176	
<b>8</b>	<b>Movement in Adulthood . . . . .</b>	<b>177</b>
	Aging 178	
	Physical Activity 179	
	Peak Athletic Performance 182	
	Movement Patterns 185	
	Summary 191	
	Learning Aids 192	
<b>PART III Functional and Structural Constraints 195</b>		
<b>9</b>	<b>Physical Development . . . . .</b>	<b>197</b>
	Nature and Nurture 198	
	Physical Growth and Maturation 202	
	Body System Constraints 208	
	Summary 214	
	Learning Aids 215	
<b>10</b>	<b>Physical Aging . . . . .</b>	<b>217</b>
	Skeletal System 218	
	Muscular System 221	
	Aerobic Capacity 222	
	Cardiovascular System 224	
	Nervous System 227	
	Endocrine System 229	
	Body Composition 229	
	Sensory Systems 230	
	Summary 233	
	Learning Aids 234	
<b>11</b>	<b>Cognitive Development . . . . .</b>	<b>237</b>
	Intellectual Development 238	
	Types of Knowledge 240	
	Attention 244	
	Memory 246	
	Sport Expertise 250	
	Summary 252	
	Learning Aids 252	

<b>12</b>	<b>Psychosocial and Social–Affective Development . . . . .</b>	<b>255</b>
	Psychosocial Constraints 256	
	Social–Affective Constraints 266	
	Self-Regulation 269	
	Summary 273	
	Learning Aids 274	
<b>13</b>	<b>Psychosocial and Cognitive Factors in Adulthood . . . . .</b>	<b>277</b>
	Psychosocial Factors 278	
	Cognitive Function 290	
	Summary 296	
	Learning Aids 297	
	<b>PART IV Designing Developmentally Appropriate Programs 299</b>	
<b>14</b>	<b>Physical, Affective, and Instructional Factors . . . . .</b>	<b>301</b>
	Gold Standards Versus Variability 302	
	Physical Factors 305	
	Affective Factors 307	
	Instructional Factors 309	
	Summary 321	
	Learning Aids 321	
<b>15</b>	<b>Prepractice Considerations . . . . .</b>	<b>323</b>
	Goal Setting 324	
	Demonstrations 326	
	Verbal Instruction 336	
	Directing Attention and Providing Guidance 339	
	Summary 340	
	Learning Aids 341	
<b>16</b>	<b>Practice . . . . .</b>	<b>343</b>
	Amount of Practice 344	
	Variable Practice 345	
	Contextual Interference Effect 350	
	Practice Specificity 356	
	Part and Whole Practice 358	
	Mental Practice and Imagery 362	
	Distribution of Practice 363	
	Summary 365	
	Learning Aids 365	
<b>17</b>	<b>Feedback . . . . .</b>	<b>367</b>
	Functions of Feedback 368	
	Types and Modalities of Feedback 370	
	Providing Effective Feedback 378	
	Summary 386	
	Learning Aids 387	
<b>18</b>	<b>Devising a Plan . . . . .</b>	<b>391</b>
	Ecological Task Analysis 392	
	Case Studies 394	
	Summary 396	
	Learning Aids 396	