Brief Contents

Communities 3

Cerebral Palsy 87

Disabilities 113

Physical Disabilities 31

Accommodations for Curricular Access 111

Task and Situation Analysis 151

PART I

PART II

7 Assistive Technology 179
8 Augmentative and Alternative Communication 227
PART III
Specialized Curricula 275
9 Feeding and Swallowing 277
10 Adaptations for Personal Independence 309
11 Adaptations in Physical Education, Leisure Education, and Recreation 337
12 Transition and Self-Determination 367
PART IV
Core Curriculum Adaptations and Instructional Strategies 399
13 Adaptations and Instruction in Literacy and Language Arts 401
14 Adaptations and Instruction in Writing 441
15 Adaptations and Instruction in Science and Social Studies 471
16 Adaptations and Instruction in Mathematics 501

Impact and Implications of Physical, Health, and Multiple Disabilities 1

Curricular Options for Individuals with Physical or Multiple

1 Definitions, Supports, Issues, and Services in Schools and

Health Impairments and Infectious Diseases 59

Contents

Impact and Implications of Physical, Health,	Questions for Discussion 26
and Multiple Disabilities 1	Focus on the Net 27
	References 28
1 Definitions, Supports, Issues, and Services in Schools and Communities 3 Historical Perspectives 4 Past and Present Perspectives 4 The Disability Rights Movement 5	2 Physical Disabilities 31 Neuromotor Impairments 32 Neural Tube Defects 32
Coming to Terms with Terminology 6 Impairment, Disability, Handicap 6 DisABILITY 7 Federal Categories and Definitions 8 Legal Supports and Mandates 9 PL 93-112: The Rehabilitation Act of 1973 10 PL 94-142: The Education for All Handicapped	Descriptions and Characteristics 32 Associated Medical Conditions 33 Medical and Therapeutic Treatments 34 Impact on Physical, Cognitive, and Psychosocial Development 34 Implications for Education and Personal Autonomy 35
Children Act of 1975 10 PL 100-407: Technology-Related Assistance for Individuals with Disabilities Act of 1988 10 PL 101-336: Americans with Disabilities Act of 1990 10 PL 101-392: Carl D. Perkins Vocational and Applied Technology Education Act of 1990 11 PL 101-476: The Individuals with Disabilities Education Act (IDEA) of 1990 11 PL 105-17: The IDEA Amendments of 1997 11	Implications for Career and Adult Outcomes 37 Traumatic Brain Injury 38 Descriptions and Characteristics 38 Associated Medical Conditions 39 Medical and Therapeutic Treatments 39 Impact on Physical, Cognitive, and Psychosocial Development 40 Implications for Education and Personal Autonomy 45 Implications for Career and Adult Outcomes 46
Critical Issues for Individuals with Physical, Health, or Multiple Disabilities 12 Alike and Different 12 Visible and Invisible 12 Acute and Chronic 13 Appropriate Accommodation 13 Service Intensity and Personal Independence Issues 15 Educational Goals and Expected Outcomes 16	Degenerative Diseases 46 Muscular Dystrophy 46 Definitions and Descriptions 46 Associated Medical Conditions 48 Medical and Therapeutic Treatments 48 Impact on Physical, Cognitive, and Psychosocial Development 49 Implications for Education and Personal Autonomy 50
Teaching and Learning Environments 16 Education Service Delivery Systems 16 Challenges to Effective Service Delivery 18 To be Common 15 1 1 1 20	Implications for Career and Adult Outcomes 51 Orthopedic and Musculoskeletal Conditions 51 Limb Deficiencies 51
Teacher Competencies and Evolving Roles 20 Knowledge and Skills 20 Professional Roles 21	Definitions and Descriptions 51 Associated Medical Conditions 52 Medical and Therapeutic Treatments 52

Summary and Conclusion 26

nel or gaime :

Impact on Physical, Cognitive, and Psychosocial Development 53 Implications for Education and Personal Autonomy 53 Implications for Career and Adult Outcomes 54 ummary and Conclusion 54	HIV/AIDS 72 Definitions and Descriptions 72 Associated Medical Conditions 73 Medical and Therapeutic Treatments 73 Impact on Physical, Cognitive, and Psychosocial Development 74 Implications for Education and Personal
uestions for Discussion 55	Autonomy 74
ocus on the Net 55	Implications for Career and Adult Outcomes 75
eferences 56	Special Topics in Health Care 76
	Meeting Specialized Health Care Needs 76 Preventing Infectious Disease Transmission and Implementing Universal Precautions 79
3 Health Impairments and Infectious Diseases 59	Summary and Conclusion 81
lealth Impairments 60	Questions for Discussion 81
sthma 61	Focus on the Net 82
Definitions and Descriptions 61	References 82
Associated Medical Conditions 62 Medical and Therapeutic Treatments 62 Impact on Physical, Cognitive, and Psychosocial Development 63 Implications for Education and Personal Autonomy 63 Implications for Career and Adult Outcomes 64 systic Fibrosis 65 Definitions and Descriptions 65 Associated Medical Conditions 66 Medical and Therapeutic Treatments 66 Impact on Physical, Cognitive, and Psychosocial Development 66 Implications for Education and Personal Autonomy 67 Implications for Career and Adult Outcomes 67 ancer 68	4 Cerebral Palsy 87 Cerebral Palsy 88 Definitions and Descriptions 88 Classification of Cerebral Palsy 89 Location—Topography 89 Movement—Motor Pattern 89 Function—Level of Severity 90 Conditions Associated with Cerebral Palsy 90 Sensory Impairments 91 Communication Impairments 91 Orthopedic Deformities 92 Nutrition and Feeding Needs 92 Cognitive Deficits 92
Definitions and Descriptions 68	Learning Disabilities 92
Associated Medical Conditions 68	Seizures 93 Thomasia Managaman of Cambral Dalam 02
Medical and Therapeutic Treatments 68 Impact on Physical, Cognitive, and Psychosocial Development 69	Therapeutic Management of Cerebral Palsy 93 Physical Therapy 93 Occupational Therapy 93
Implications for Education and Personal	Medical Treatment of Cerebral Palsy 97
Autonomy 70 Implications for Career and Adult Outcomes 70	Orthotics 97 Medication and Injections 97
sfectious Diseases 70	Surgery 98
ytomegalovirus 71	Developmental Issues in Cerebral Palsy 98
Definitions and Descriptions 71 Associated Medical Conditions 71 Medical and Therapeutic Treatments 71 Impact on Physical, Cognitive, and Psychosocial	Physical Development 98 Physical Management Strategies 98 Communication Development 102 Social/Emotional Development 103
Development 71	Implications for Education 104
Implications for Education and Personal	Educational Segregation 104
Autonomy 72	Learning Disabilities 104
Implications for Career and Adult Outcomes 72	Personal Autonomy 105 Career and Adult Function 106
Civilonnes / L	Curcu and I and I will toll 100

Summary and Conclusion 106 Questions for Discussion 106 Focus on the Net 107	Task Analysis as a Product 167 Screening Performances 167 Comparing Skills of Different Students 167 Developing Specialized Curricula 167	
References 107	Situation Analysis 169 Teacher Recollections 171 Questionnaire for Similar-Age Peers 172	
PART II Accommodations for Curricular Access 111	Student Strategies 173 Learning and Practicing Self-Care Routines 173 Analyzing Bodies of Information 174 Solving Personal Access Problems 174	
5 Curricular Options for Individuals with Physical or Multiple Disabilities 113	Summary and Conclusion 176	
Physical or Multiple Disabilities 113	Questions for Discussion 176	
Curricular Options and Fundamental Curricular	Focus on the Net 177	
Domains 115 Option 1: General Education Curriculum with Accommodations 115	References 177	
Option 2: General Education Curriculum with		
Accommodations and Modifications 120	Assistive Technology 179	
Option 3: Life Skills Curriculum 126 Option 4: Curriculum with Modified	Definitions and Legal Basis for Assistive Technology 180	
Means of Communication and Task Performance 129	Assistive Technology Devices and Services 181	
Fundamental Curricular Domain 1: Self-Determination 136 Fundamental Curricular Domain 2: Transition Education 137	Determining the Need for Assistive Technology 184 Considering the Need for Assistive Technology 184	
Working Collaboratively to Determine Curriculum Needs for Individuals 143	Assistive Technology and Assessment 186 Assessing an Individual's Need for Assistive	
Developing Courses of Study and Crafting a Curricula Map 145	Technology 186 Team Assessment Principles and Practices 186 Extended Assessment or Trial Use 190	
Summary and Conclusion 147	Selecting and Acquiring Assistive Technology 192	
Questions for Discussion 148	Determination of Desired Product Features 193	
Focus on the Net 148 References 149	Product Specifications and Demonstrations 193 Product Searches and Ordering 193 Writing Assistive Technology into the IEP 194	
The second secon	Positioning and Seating 196 Positioning 196	
6 Task and Situation Analysis 151	Seating 198	
Purposes of Task and Situation Analysis 152 Process and Product 152	Assistive Devices for Positioning and Seating 201 Safe Transfers 203	
Task Analysis as an Assessment Tool 152 Order of Tasks 153	Location 203 Mobility 204	
Task Analysis Process 153 Using Typical Sequences as Guides 155 Defining Results of Unsuccessful Trials 157 Differentiating Motor from Cognitive	Manual Wheelchairs 204 Power Wheelchairs 205 Travel Stroller Chairs 207 Mobility Variations 207	
Difficulties 158	Architectural Access Modifications 211	
Identifying Student Response Difficulties and Needs in Lessons 160 Determining Kinds and Amounts of Assistance Needed 161	Environmental and Object Modification 211 Location of Materials and Equipment 211 Work Surface Modifications 213 Object Modifications 214	

Environmental Control 217	Vocabulary Arrangement for Receptive
Assistive Technology for Sensory Impairments 220	Communication 258
Assistive Technology and Hearing Loss 220	Types of Displays 259
Assistive Technology and Visual Impairments 221	Displays for Nonelectronic Communication Devices 259
Summary and Conclusion 221	Displays on Dedicated Devices and Computers 26
Questions for Discussion 222	Instructional Strategies 262
Focus on the Net 223	Establishing Want/No 263
References 224	Response Prompt Strategies 264
	Milieu Teaching Procedures 265 Environmental Amangant Stratogy 266
8 Augmentative and Alternative	Environmental Arrangement Strategy 266 Interrupted-Chain Strategy 267
Communication 227	Conversational Skill Training 267
Nonsymbolic Communication 228	Breakdown Strategies 267
Form, Function, and Content of Nonsymbolic	Summary and Conclusion 270
Communication 228	Questions for Discussion 271
Recognizing Nonsymbolic Communication 229	Focus on the Net 271
Moving from Noncommunicative Behaviors to Nonsymbolic Communication 231	References 272
Utilizing Nonsymbolic Expressive	Option 3: Life Skills Chrystalian 126
Communication 232	
Utilizing Nonsymbolic Receptive	PART III
Communication 232 Moving to Symbolic Communication 234	Specialized Curricula 275
Symbolic Communication 234	
Unaided Symbolic Communication 234	Fundamental Corpiculis Dahaming Parkitish
Aided Symbolic Communication 235	Feeding and Swallowing 277
Selecting the Communication System 236	Why Are We Concerned with Feeding
Aided Considerations: Symbol Type 238	and Swallowing? 279
Aided Considerations: Means of Access 240	Typical Feeding and Swallowing Development 2
Direct Selection 240	Characteristics of Typical Oral-Motor
Scanning 242 Encoding 243	Development 281
Aided Considerations: Vocabulary and Retrieval 245	Characteristics of Typical Respiratory
Levels 245	Development 284 Typical Respiratory Coordination with Oral and
Picture-Based Acceleration Techniques 245	Pharyngeal Activities 285
Abbreviation Expansion 246	Feeding and Swallowing in Children with
Predictive Techniques 246	Neuromotor Involvement 287
Output Methods 247 Voice Outputs 247	Atypical Oral-Motor Activity 287
Visual Outputs 247	Atypical Respiratory Function 290 The Comprehensive Englishing Process 200
Hard Copy 248	The Comprehensive Evaluation Process 290 Earling and Swallowing Intervention 202
Content of Augmentative and Alternative	Feeding and Swallowing Intervention 293 Carryover Activities 293
Communication 248	Positioning for Mealtime Feeding 293
Ecological Inventory for Task-Specific Content 248 School Topic Content 250	Selection of Feeding Utensils 298
Non-Task-Related (or Social) Communication 250	Choosing Appropriate Foods and Liquids 298
Verifying Content 251	Preparation of the Oral Mechanism 299 Direct Help for the Jaw, Lips, and Tongue 300
Board Arrangement 253	Cup Drinking 302
Symbol Placement 253	Spoon-Feeding 303
Vocabulary Organization 253	Solid Food 303

Stimulating Respiratory Coordination with Oral and Pharyngeal Activities 305	Individualized Education Program Planning 342
Summary and Conclusion 306 Questions for Discussion 306 Focus on the Net 306 References 307	Adapting Physical Education Activities 343 Planning for Adaptations 344 Instructional Program 346 Instructional Strategies 346 Safety Issues 348 From the Classroom to the Community 348
Adaptations for Personal Independence 309 Assessment and Instruction of Personal Management Skills 310 Hygiene Skills 312 Hand Washing 313 Face and Body Washing 313 Hair Brushing 314 Oral Hygiene 314 Tissue Use 316 Feminine Hygiene 316 Basic Self-Help Skills: Eating and Toileting 317 Tube Feeding, Catheterization, and Colostomy Care 319 Tube Feeding 320 Catheterization 320 Colostomy Care 321 Students Performing Their Own Health Care Procedures 321	Leisure Education and Recreation 348 Leisure Education Program Development 349 Leisure Education Program Areas 350 Creative Domains 350 Special Interests 351 Science and Technology Domains 353 Recreation Domains 356 Travel 359 Sports 360 Wheelchair Racing 360 Racquet and Arm Sports 361 Winter or Summer 361 Summary and Conclusion 362 Questions for Discussion 362 Focus on the Net 363 References 365
Dressing 322 Helping Individuals Learn Dressing Skills 322 Adapted Clothing and Adapted Dressing Devices 323	12 Transition and Self-Determination 367 Surmounting Barriers to Employment 369 Physical Self-Reliance 369 Valid Self-Evaluation 370 Embarced Self-Adaptability and
Home Care and Management 326 Kitchen Tasks 327 Housecleaning 329 Technology and Environmental Control 330	Enhanced Self-Adaptability and Self-Determination 370 Teaching Career and Transition Education from Early Childhood 372
Community-Based Instruction 330 Anticipating Architectural Barriers 330 Shopping 332 Summary and Conclusion 333	Career Awareness 373 Career Exploration 373 Career Preparation 378 Career Placement/Follow-up and Continuing Education 383
Questions for Discussion 333	Making the Transition from School
Focus on the Net 334 References 334	to Employment 384 Students with High Abilities 384 Students with Severe Physical and/or Multiple Disabilities 386
Adaptations in Physical Education, Leisure	Assessment for Transition Planning 386
Lange L. Education, and Recreation 337	Summary and Conclusion 394
Adapted Physical Education 338 Collaboration with Adapted Physical Education Specialists 339	Questions for Discussion 395 Focus on the Net 396
Assessment 340	References 397

PART IV	
Core Curri	culum Adaptations and Instructional
Strategies	

13 Adaptations and Instruction in Literacy and Language Arts 401

Literacy Barriers 401

Restricted Language and Participation 401

Lack of Motor Ability 402

Individual Factors 402

Lack of Experiences 402

Learning Environment and Instruction 402

Addressing Literacy Barriers 403
Addressing Communication Barriers 403
Addressing Physical Efficiency Areas 405
Addressing Individual Considerations 408
Addressing Experiential Deficits 409
Addressing the Learning Environment and
Instructional Barriers 409

Emergent and Beginning Literacy 410

Book and Print Awareness 410

Storybook Reading with Adaptations 412

Repeated Reading and Promoting Choice 413

Phonemic Awareness 414

Letter-Sound Correspondence 415

Software Programs Addressing Beginning Literacy

Skills 416

Conventional Literacy: Approaches and Assessment 416

Assessment of Conventional Reading Skills 417

Conventional Literacy: Phonics 418

Adapting Phonic Instruction: The Nonverbal
Reading
Approach 419
Teaching Multiple-Syllable Words 424

Conventional Literacy: Vocabulary Instruction 424

Promoting Vocabulary Development

with Symbols 424

Conventional Literacy: Fluency 426

Conventional Literacy: Text Comprehension 426

Teaching Comprehension 427

Basic Comprehension Strategy 428

Software and Specialized Curricula for Reading 430

Functional Literacy: Reading 431

Vocabulary Selection: Ecological Assessment 431

Instructional Strategies 432

Summary and Conclusion 435

Questions for Discussion 435

Focus on the Net 435

References 436

14 Adaptations and Instruction in Writing 441

Identifying and Addressing Writing Barriers 441
Literacy Skills: Accessing Writing Tools 443
Handheld Writing Tools and Paper Adaptations 444
Handwriting Skills 446
Electronic Writing Tools: Computers 449
Keyboarding Skills and Computer Tools 456

Literacy Skills: Spelling 457
Assessing Spelling 457
Spelling Instruction 458
Spelling Tools 459
Computer Programs for Spelling

Literacy Skills: Written Expression 459
Assessing Written Expression 459
Early Written Expression 461
Written Expression Instruction 462
Software Support for Written Expression 4

Literacy Skills: Functional Writing 464
Assessment of Functional Writing 464
Functional Writing Strategies 465

Summary and Conclusion 465
Questions for Discussion 466
Focus on the Net 466
References 467

Adaptations and Instruction in Science and Social Studies 471

Lesson Preparation 471

Determining Content 472

Evaluating and Adapting Instructional

Material 472

Assessing Students' Background Knowledge 475

Determining Modifications for Students with

Physical or Multiple Disabilities 476

Lesson Presentation 479
Prelesson Activities 479
Presenting New Materials and Guided Practice 481
Independent Practice of Material 486
Evaluating Content Knowledge 486

Social Studies Curriculum Considerations 487
Social Studies Defined 487
Process Skills for Social Studies 487
Social Studies Curriculum Design and Adaptations 488

Social Studies Software 489

Science Curriculum Considerations 489
Science Defined 489
Process Skills for Science 490
Science Curriculum Design and Adaptations 490
Science Software 496

Summary and Conclusion 496
Questions for Discussion 497
Focus on the Net 497
References 497

16 Adaptations and Instruction in Mathematics 501

Barriers in Mathematics 501
Assessing Math Skills 502

Standardized Achievement Tests
for Mathematics 504
Diagnostic Tests of Math Performance 504
Curriculum-Based Measurement 505
Informal Teacher-Constructed Tests 505
Portfolio Assessment 505
Error Analysis 505

General Approaches and Principles of Math Instruction 507

Building on Previous Learning 507
Systematic and Explicit Instruction 507
Active Involvement of Students 508
Learning Strategies 508
Computer-Assisted Instruction 509
Adaptations and Attitudes 509

Beginning Math Skills 510
Prenumber Skills 510
Counting 511
Numerals and Place Values 514
Software for Early Math Skills 518

Computational Skills: Addition and Subtraction 518

Math Rules for Addition and Subtraction 521

Addition and Subtraction Algorithms 521

Addition and Subtraction Sequences 524

Computational Skills for Multiplication and

Computational Skills for Multiplication and Division 525

Multiplication and Division Rules 525
Heuristic Strategies 526
Multiplication and Division Algorithms 526
Multiplication and Division Sequences 529

Software for Computational Skills 529

Calculator Use 530 Word Problems 530

General and Advanced Math Skills 531

Functional Math Skills 531
Money 534
Time 536

Calendar Use 538

Summary and Conclusion 539

Questions for Discussion 539

Focus on the Net 540

References 541

Author Index 545

Subject Index 553

Note: Every effort has been made to provide accurate and current Internet information in this book. However, the Internet and information posted on it are constantly changing, and it is inevitable that some of the Internet addresses listed in this textbook will change.