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# Research-Based Practices in Developmental Disabilities

## Introduction and Scope of Textbook

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# Summary

This chapter presents a brief rationale for the topical approach used in the textbook, coupled with clarifying definitions of research-based and emerging best practices. The scope of the textbook is then presented, with descriptive overviews of each chapter. A standards chart provides readers with a broad overview of specific standards approved by the Division on Developmental Disabilities in April 2005, which are addressed in the chapters.

# Learning Outcomes

After reading this chapter, you should be able to:

- Define best practices.
- Define research-based practices.
- Understand the organizational framework for the textbook.

# Outline of Context

In the first edition of this textbook (Hilton & Ringlaben, 1998), the term *best practices* was defined as "those overriding practices that direct service provision to individuals with developmental disabilities" (p. 1). The Division on Developmental Disabilities (DDD) of the Council for Exceptional Children has expended considerable effort on developing and disseminating these practices to current and future practitioners in the field (see, e.g., Special Conference, Best Practices for Practitioners, in the September 2005, issue of *Education and Training in Developmental Disabilities*).

In recent years, however, greater emphasis has been placed on the role of research in documenting what should be deemed to be best practice in the field. In fact, the Individuals with Disabilities Education Improvement Act of 2004 authorized greater emphasis on competitive grants for research related to services provided to children with disabilities and to the outcomes/effectiveness of those services (20 U.S.C. § 175). This legislation also created the National Center for Educational Research, which has multiple responsibilities to identify, develop, and support use of *research-based practices* in service delivery to children with disabilities (U.S. Department of Education, 2005). With such legislated emphases on the role of research in special education service delivery (see the foreword in this textbook for a perspective), practitioners are expected to use best practices that have a research basis and to begin to document the effectiveness of their own practices in service delivery settings (i.e., *evidence-based practice*) (Odom, Brantlinger, Gersten, Horner, Thompson, & Harris, 2005).

The sections of this volume address research-based and current best practices, as discussed previously, and are organized around broad themes within the field of developmental disabilities. Each chapter addresses specific standards approved by the Division on Developmental Disabilities in April 2005 (see Table 1.1). The content of each chapter is supplemented by a variety of instructor support materials in the *Research-Based Practices in Developmental Disabilities Instructor's Manual*.

Section 1, Foundations of Developmental Disabilities, begins with an authoritative and comprehensive review of historical and legal issues that affect the field of developmental disabilities by James R. Thompson and Michael L. Wehmeyer (chapter 2). This review is complemented by the reflections of J. David Smith (chapter 3), pertaining to personal and cultural meanings of developmental disabilities. Readers should find both chapters to be of particular relevance, given the current understanding of developmental disabilities as it has evolved.

In section 2, Development and Characteristics of Learners, Tom E. C. Smith presents a broad overview of issues related to definitions of developmental disabilities, as well as a discussion of trends that are supportive of more-generic, functional classification groupings for these individuals (chapter 4). To address the substantive increase in interest in the field of autism spectrum disorders (ASD) in recent years, Brenda Smith Myles, Anastasia Hubbard, Kristin Muellner, and Alison Simonelli provide a cogent overview of ASD, models for assessment, interventions, and educational trends in the United States (chapter 5). Following this chapter, Michael L. Wehmeyer, James E. Martin, and Deanna J. Sands provide an opportunity to examine current thinking regarding the practice of self-determination by persons with developmental disabilities, supported by recommendations emerging in the field for promoting self-determination (chapter 6).

The next section, Individual and Learning Differences, presents two perspectives that emphasize the relationship of culture to the education of students with developmental disabilities. Scott Sparks (chapter 7) shares a broad cultural perspective, with emphasis on the broader facets of diversity (i.e., training needs for professionals, working with families, and cross-cultural adoptions) within special education versus a focus on ethnic issues among students and families from culturally and linguistically diverse backgrounds. Sparks then presents an insightful examination of more-specific cultural considerations that are needed for effective educational decision making and subsequent interventions with children with developmental disabilities and their families from culturally and linguistically diverse backgrounds. Howard P. Parette, Mary Blake Huer, and George R. Peterson-Karlan (chapter 8) examine cultural influences that come into play when working with persons with developmental disabilities and their families, particularly emphasizing three components related to culture and their impact on service delivery: (a) patterns of acculturation (individual change), (b) particular parameters within school systems, and (c) recently recognized generational differences.

Section 4, Instructional Planning and Implementation, offers six contributions. Barbara G. Gartin and Nikki L. Murdick (chapter 9) describe the role of differentiated instruction (i.e., content, process, and product) and its relationship to evidence-based instructional planning. The importance of assistive technology (AT) "consideration" is then explored by George R. Peterson-Karlan and Howard P. Parette (chapter 10) in relation to the practice of technology integration into the curriculum. Earle Knowlton (chapter 11) discusses the underlying intent of legal requirements related to planning for the instruction of students with developmental disabilities and examines longitudinal planning, or "big picture" considerations, as a foundation for all planning. Debra L. Shelden and Margaret P. Hutchins (chapter 12) provide a concise overview of the process of implementing long-term planning by developing a "personalized curriculum" for learners with developmental disabilities,

**TABLE 1.1**
CEC Knowledge and Skills for Entry-Level Special Education Teachers of Students With Developmental Disabilities

| DDD Standard | Chapters | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
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| **Principle 1: Foundations** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DD1K1 | Definitions and issues related to the identification of individuals with developmental disabilities. | X | X | X | X | X | | | | | | | | | | | | | | X | | | | X | | | | | | |
| DD1K2 | Continuum of placement and services available for individuals with developmental disabilities. | | | | | | | | | | | | | | | | | | | | | | | | | X | | X | | X |
| DD1K3 | Historical foundations and classic studies of developmental disabilities. | X | X | | | X | | | | | | | | | | | | | | | | | | | | | | | | |
| DD1K4 | Trends and practices in the field of developmental disabilities. | X | X | X | | X | | X | X | X | | | | X | | X | | X | | | X | | | X | X | X | X | X | X | X |
| DD1K5 | Theories of behavior problems of individuals with developmental disabilities. | | | | | X | | | | | | | X | | | | | | | | | | | | | | | | | |
| **Principle 2: Development and characteristics of learners** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DD2K1 | Medical aspects of developmental disabilities and their implications for learning. | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DD2K2 | Psychological, social/emotional, and motor characteristics of individuals with developmental disabilities. | | | X | X | X | | | | | | | | | | | | | | X | | | | | | | | | | |
| DD2K3 | Identification of significant core deficit areas for individuals with pervasive developmental disabilities, autism, and autism spectrum disorder. | | | | | X | | | | | | | | | | | | | X | X | | | | | | | | | | |
| DD2K4 | Factors that influence overrepresentation of culturally/linguistically diverse individuals. | | | | | | X | X | | | | | | | | X | | | X | | | | | | | | | | | |
| DD2K5 | Complications and implications of medical support services. | | | | | | | | | | | | | | | | | | | | | | X | | | | | | | |

(*continues*)

**Principle 3: Individual learning differences**

DD3K1　Impact of multiple disabilities on behavior.

**Principle 4: Instructional strategies**

DD4K1　Specialized materials for individuals with developmental disabilities.

DD4K2　Evidence-based practices for teaching individuals with pervasive developmental disabilities, autism, and autism spectrum disorders.

DD4K3　Specialized curriculum specifically designed to meet the needs of individuals with pervasive developmental disabilities, autism, and autism spectrum disorders.

DD4S1　Use specialized teaching strategies matched to the need of the learner.

DD4S2　Relate levels of support to the needs of the individual.

**Principle 5: Learning environments/social interaction**

DD5S1　Provide instruction in community-based settings.

DD5S2　Demonstrate transfer, lifting and positioning techniques.

DD5S3　Use and maintain assistive technologies.

DD5S4　Structure the physical environment to provide optimal learning for individuals with developmental disabilities.

DD5S5　Plan instruction for individuals with developmental disabilities in a variety of placement settings.

**TABLE 1.1** (Continued)

| DDD Standard | Chapters | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DD6S1 | Plan instruction on the use of alternative and augmentative communication systems. | | | X | | | | | | | | | | | | | X | | | | | | | | | | | | |
| DD6S2 | Use pragmatic language instruction to facilitate ongoing social skills instruction. | | | | | | | | | | | | | | | | | X | | | | | | | | | | | |
| **Principle 7: Instructional planning** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DD7K1 | Model career/vocational transition programs for individuals with developmental disabilities including career/vocational transition. | | | | | X | | | | | | | | | | X | | | | | | | | | | | | X | |
| DD7S1 | Plan instruction for independent functional life skills relevant to the community, personal living, sexuality, and employment. | | | | | | | | X | | X | X | | X | | X | | | | | | X | | | | | | | |
| DD7S2 | Plan and implement instruction for individuals with developmental disabilities that is both age-appropriate and ability-appropriate. | | | | | X | X | | X | | X | X | | | | | | | | | | X | | X | X | | | | |
| DD7S3 | Select and plan for integration of related services into the instructional program for individuals with developmental disabilities. | | | | | X | | | | | | | | | | | | | | | | | | | | | | | |
| DD7S4 | Design, implement, and evaluate specialized instructional programs for persons with developmental disabilities that enhance social participation across environments. | | | | | X | | | | | X | X | | | X | | | | | | | X | | | X | | | | |
| **Principle 8: Assessment** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DD8K1 | Specialized terminology used in the assessment of individuals with developmental disabilities. | X | | | | X | | X | | | | | | | | | | | X | | | | | | | | | | |

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| Code | Description |
|---|---|
| DD8K2 | Environmental assessment conditions that promote maximum performance of individuals with developmental disabilities. |
| DD8K3 | Adaptive behavior assessment. |
| DD8K4 | Laws and policies regarding referral and placement procedures for individuals with developmental disabilities. |
| DD8S1 | Select, adapt and use instructional assessment tools and methods to accommodate the abilities and needs of individuals with mental retardation and developmental disabilities. |
| **Principle 9: Professional and ethical practice** | |
| DD9K1 | Organizations and publications in the field of developmental disabilities. |
| DD9S1 | Participate in the activities of professional organizations in the field of developmental disabilities. |
| **Principle 10: Collaboration** | |
| DD10K1 | Services, networks, and organizations for individuals with developmental disabilities. |
| DD10S1 | Collaborate with team members to plan transition to adulthood that encourages full community participation. |

Source: Division on Developmental Disabilities. (n.d.). *CEC knowledge and skills for entry-level special education teachers of students with developmental disabilities.* Retrieved April 27, 2007, from http://www.dddcec.org/secondarypages/standards/dddstandards.doc

one that includes person-centered planning processes, a long-term vision, a variety of assessments to identify educational priorities, and decision making about short-term and long-term priorities. John J. Wheeler and David Dean Richey (chapter 13) emphasize positive behavior support strategies in the curriculum, with an emphasis on the theoretical framework of positive behavior supports and their application to learners with developmental disabilities. Dennis D. Munk and Toni Van Laarhoven (chapter 14) discuss other aspects of instructional planning by providing a concise review of research on grouping arrangements and delivery of instruction to students with developmental disabilities.

Section 5, Learning Environments and Social Interactions, discusses two important facets of research-based and emerging best practices. Mary Ann Demchak (chapter 15) explores the importance of social relationships and friendships, with particular emphasis on minimizing the negative influence of adults, facilitating positive attitudes, use of peer buddy programs, extracurricular and non-instructional activity involvement, participation in conversations, and friendship circles. Dianne Zager, James Brown, Pamela H. Stenhjem, and Arthur Maloney (chapter 16) advocate for the importance of considering the nature of individual students and their vocational preferences in transition planning, devoting attention to self-determination, the role of assistive technology, independent living, and service learning.

In section 6, Communication, Ann R. Beck (chapter 17) reviews the research on children's attitudes toward and their subsequent impact on the communication needs of peers with developmental disabilities. Additional sections address intervention strategies for altering attitudes and review the characteristics of beginning communicators and strategies for intervention. Julia B. Stoner (chapter 18) focuses on communication skills and strategies for working with children who have ASD and provides classroom recommendations for development of prelinguistic skills, language comprehension, language production, language use, transitions, and communication with families.

In section 7, Assessment, Christine A. Macfarlane (chapter 19) discusses the legal obligations of local education agencies regarding children who enter school or who transition from an early-intervention program. Special emphasis is placed on team-driven and collaborative processes that include parents, with references to legal authority. Dave L. Edyburn (chapter 20) provides an introduction to theoretical and practical issues associated with measuring assistive technology outcomes in education, particularly the application of principles and practices for professionals working with students with developmental disabilities. Colleen E. Klein-Ezell, Randy LaRusso, and Dan Ezell (chapter 21) discuss the role of alternate assessment in the context of legislative mandates to ensure that all students participate and are counted in district- and statewide assessment results. The authors stress the role of Making Action Plans (MAPS) as tools to facilitate the process of collecting information about students to determine effective ways to plan for their futures. Jeffrey P. Bakken (chapter 22) provides an insightful discussion of how teachers of students with developmental disabilities can incorporate a cadre of data-based techniques and decision-making principles into their daily routines to measure how students are performing on content, skills, and behaviors.

In section 8, Professional and Ethical Practice, Ravic P. Ringlaben and Kimberly Griffith (chapter 23) examine the effect of multiple environmental assumptions, biases, stereotypes, and service delivery philosophy on the development of positive and negative attitudes toward persons with developmental disabilities. Strategies that promote positive attitudes are presented.

In section 9, Schools and Community Involvement, Ann P. Turnbull, H. R. Turnbull, Jean A. Summers, and Denise Poston (chapter 24) provide a review of family-related disability policy in the United States, emphasizing that such policies

support caregiving efforts and enhance the quality of life for all families. The authors discuss strategies in five areas: disability-related support, physical/material well-being, parenting, emotional well-being, and family interaction. Anna Lou Pickett (chapter 25) addresses a range of issues related to the role of paraeducators in the education of children with developmental disabilities. Specific issues include historical factors contributing to the employment of teacher aides, teacher and principal supervisory roles of these professionals, paraeducator instructional and direct service roles, and administrator responsibilities in developing policies, standards, and systems that affect paraprofessionals. Darlene E. Perner and Gordon L. Porter (chapter 26) describe the importance of establishing a vision and a set of values for inclusive education, and present two models (i.e., support teacher and multilevel instructional approach) that provide support to classroom teachers. In chapter 27, Darlene E. Perner examines the crucial role played by administrators and teachers charged with the responsibility of implementing inclusive education. Emphasis is placed on approaches that develop and maintain inclusive school practices.

Garnett J. Smith, Patricia J. Edelen-Smith, and Robert A. Stodden (chapter 28) describe a field-based and well-researched operational strategic-planning process that initiates, installs, and supports the creation of transdisciplinary (TD) learning organization teams. The authors identify six factors that are crucial to core transformational change in special education and community support systems. Finally, Jack J. Hourcade (chapter 29) discusses professional collaboration—both direct and indirect—along with potential barriers to the effectiveness of this approach (i.e., focus on the present versus the future, resistance to change, lack of administrative support, lack of knowledge and skills, and lack of perseverance).

The Division on Developmental Disabilities of the Council for Exceptional Children hopes that readers find this text to be a valuable tool in increasing their awareness and knowledge of current issues in the field. It is also anticipated that the textbook will help current and future practitioners to better understand educational practices that are deemed effective in working with children with developmental disabilities and their families.

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# Glossary

Best practices—Those overriding practices that direct service provision to individuals with developmental disabilities.

Evidence-based practice—Best practices that have a research basis and that have been documented to be effective in service delivery settings.

Research-based practice—Best practices that have a research basis.

# References

Hilton, A., & Ringlaben, R. (Eds.). (1998). *Best and promising practices in developmental disabilities*. Austin, TX: PRO-ED.

Individuals with Disabilities Education Improvement Act of 2004, 118 Stat. 2647. (2004).

Odom, S. L., Brantlinger, E., Gersten, R., Horner, R. H., Thompson, B., & Harris, K. R. (2005). Research in special education: Scientific methods and evidenced-based practices. *Exceptional children*, 71, 137–148.

U.S. Department of Education. (2005). *National Center for Educational Research*. Retrieved January 11, 2006, from http://www.ed.gov/about/offices/list/ies/ncer/index.html