

# **SPECIAL EDUCATION: Contemporary Perspectives for School Professionals, Second Edition**

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## **SAMPLE CHAPTER 5: Students with Learning Disabilities**

The pages of this Sample Chapter may have slight variations in final published form.

# 5 Students with Learning Disabilities



## learning objectives

- Define learning disabilities, explain their prevalence and causes, and outline the development of the learning disabilities field.
- Describe characteristics of individuals with learning disabilities.
- Explain both traditional and emerging approaches for identifying learning disabilities.
- Outline how students with learning disabilities receive their education.
- Describe recommended educational practices for students with learning disabilities.
- Explain the perspectives and concerns that parents and families of students with learning disabilities may have.
- Identify trends and issues influencing the field of learning disabilities.

## Jermaine

Jermaine is a fourth-grade student in Mr. Hoover's class. He was identified as having a learning disability more than two years ago after he repeated second grade. Mr. Hoover has commented that Jermaine is a student of contradictions: When Jermaine is speaking in class it is obvious that he is a bright young man who has many abilities and interests. However, when he attempts to complete his assignments, it is as though his brain simply does not work properly. Jermaine reads at a second-grade level, struggling to pronounce words and often not comprehending what he has read. In math he is still learning basic facts, and he often solves word problems incorrectly because he does not know how to identify and use relevant information. Writing is also difficult for Jermaine, and Mr. Hoover usually asks him to explain what he has written because the words on the paper are jumbled and difficult to discern. To address his needs, Jermaine receives supplemental reading instruction every day, dictates test answers to a classroom assistant, is offered extra time to complete assignments that he needs to write himself, and has permission to ask classmates for assistance. Socially, Jermaine has many friends among his classmates. However, Mr. Hoover is concerned that Jermaine's challenges in learning are already having a negative impact on him; the other day he heard Jermaine telling a classmate that he hated school.

## Danielle

Danielle just started middle school. She likes having several different teachers, but she is having difficulty remembering the locations of all the classrooms and the names of all the teachers. She is finding that she also has to remember to keep all her textbooks with her, take home the right materials to complete her homework, and move promptly from class to class—all tasks involving organizational skills, which are a struggle for her. Danielle is also a little worried about whether she will pass all her classes. She likes her science teacher, and completing all the practical examples

and lab activities makes it easy to learn. In her other subjects, though, the amount of reading already seems endless. Danielle reads very slowly and often does not understand what she has read. She is hoping her resource teacher will have tapes of some of the books or study guides similar to those she used in fifth grade. Danielle is glad that her best friend Sophie from elementary school is in her classes; Sophie often helps Danielle indirectly by including her in conversations with other students. Danielle was identified as having a learning disability in third grade, and she has received special education services since then. In middle school two of her classes will be co-taught, and she can also work with the resource teacher during the advisory period, a time during the day when all students can receive extra assistance from their teachers.

## Derek

Derek will graduate from high school this year. He was diagnosed with severe learning disabilities early in first grade and has received special education services ever since. During elementary school he attended a special education class that was located in a school across town, but in middle and high school he has attended his neighborhood school and participated in an increasing number of general education classes, receiving the support he needed in a resource room. Derek now reads at approximately a tenth-grade level, and his math skills are close to average for a senior in high school. However, he continues to experience significant problems in written language; when he was last assessed his writing skills were at an early third-grade level. Derek is an extremely likable young adult; he volunteers to help others and enjoys talking with both peers and adults. He thrives on outdoor work and can mow a yard, build a fence, or plant a garden as well as anyone. He definitely wants to get a college degree, but he has decided to start by taking two classes next fall at the community college, where he can receive support from the Office of Disability Services. He is not yet sure what he wants to do for a living, but he is thinking of working in the building industry or in landscape architecture.

Have you ever been in a class—perhaps math or a foreign language—and suddenly realized that you had absolutely no understanding of the information being presented? Even after reviewing your notes and asking questions of classmates, you simply did not grasp the concept. Perhaps the experience left you questioning your abilities and feeling incapable of learning. Have you ever become disoriented while driving in an unfamiliar area? Not only did you not know how to get to your destination, but you also were not sure which direction was north or how to get back on your way. Friends may have found your situation funny, but your sense of discomfort was tinged with panic.

Neither of these experiences by itself indicates a learning disability (LD), but it can give you a small insight into what it is like to have a learning disability and how students with learning disabilities often experience frustration and a sense of failure, particularly in school. Their special needs may affect their ability to learn to read, to compute, to speak, to write, or any combination of these. These students may experience difficulty remembering, and they may show gaps in their social skills. Students with learning disabilities often are described as “puzzle children” because they can be highly proficient in one area (e.g., math) and significantly delayed in another (e.g., reading).

## fyi

Roper Starch Worldwide ([www.tremaineoundation.org/ld/roper-poll.pdf](http://www.tremaineoundation.org/ld/roper-poll.pdf)) conducted a national survey to measure public awareness and understanding of learning disabilities. Included in the findings were these interesting facts: Nearly two-thirds of the public inaccurately associates learning disabilities with mental retardation, and about half attribute learning disabilities to drug or alcohol abuse by parents.

### PROFESSIONAL MONITORING TOOL



**Standard 1** Foundations  
... historical points of view

## What Are Learning Disabilities?

Compared to other disability areas, the field of learning disabilities has had a relatively brief and intense evolution (Hallahan & Mercer, 2001). The work of medical professionals, psychologists, educators, and parents all contributed to the current understanding of this disorder.

### Development of the Learning Disabilities Field

The study of learning disabilities began long before the term was introduced. As early as the nineteenth century, researchers were interested in how injuries to the brain affected adults' functioning (Opp, 1994). In the twentieth century, this line of research became more focused when Goldstein (1942) studied brain-injured soldiers returning from World War I (C. R. Smith, 1998).

In the 1940s the work that had been conducted primarily with adults was applied to children. At the Wayne County Training School in Northville, Michigan—a residential facility for children with intellectual disabilities or brain injuries—psychologist Heinz Weiner and psychiatrist Alfred Strauss observed children with behavior similar to the soldiers described by Goldstein, and they concluded the children had brain injuries (Hammill, 1993). Gradually, professionals in the field began to assume brain injury or damage existed for some children even if it could not be documented. Although these children were at first called *brain injured*, the less-charged term *Strauss syndrome* was soon adopted, and it was later replaced with the term **minimal brain dysfunction**.

### A Focus on Process Interventions

During the latter part of the 1940s and throughout the 1950s, emphasis shifted to designing interventions to help children's learning when they exhibited the characteristics now known to indicate learning disabilities. Professionals concluded that they should directly address the symptoms of the disorder. They developed programs to improve how their students processed stimuli—that is, the way they interpreted and acted on information in their environments—believing that academic learning would improve if students' perceptual skills could be developed. For example, Alfred Strauss and teacher Laura Lehtinen's (1947) book on working with these children recommended specific instructional approaches related to perception (e.g., avoiding the contiguous use of the easily confused letters b and d) and also removal of all distractions (e.g., teacher jewelry) from the learning environment. Kephart (1960) developed a training regimen that focused on developing children's perceptual-motor

skills (e.g., balance and eye–hand coordination). Yet another pioneer in the field, Frostig, designed a program to remediate children’s problems with visual perception (e.g., tracing a path with a pencil between two undulating lines) (Frostig & Horne, 1964). Notice that none

*“During the latter part of the 1940s and throughout the 1950s, emphasis shifted to designing interventions to help children’s learning when they exhibited the characteristics now known to indicate learning disabilities.”*

of these programs taught reading or math skills; the assumption was that by focusing on distractibility and perception, the ability to learn academic skills would automatically improve.

During the latter part of this period in the development of the learning disabilities field, parents and professionals were arguing that the students being studied—as diverse as they seemed—shared a disorder that had not been recognized previously, and they began to campaign for its consideration.

The first public use of the phrase *learning disability* is attributed to Sam Kirk, an early leader in the field, who used the term while speaking to a parent group in 1963. By 1969 the first federal legislation acknowledging learning disabilities had been enacted. This law, the Children with Specific Learning Disabilities Act (Public Law 91-230), definitively established learning disabilities as a disability category, and it provided funding for teacher training (Lerner & Kline, 2006).

### Focus on Instructional Interventions

Even as learning disabilities were being recognized formally, controversy began. In particular, during the 1960s and early 1970s the process-based interventions that had become the hallmark of the field began to be criticized. A new group of researchers failed to find that such interventions had a direct positive effect on student achievement, and they argued that direct instruction of academics, not the remediation of processing ability, was the superior way to help these students learn (Hallahan & Kauffman, 1976). When research continued to show the effectiveness of direct academic instructional approaches, interest in process methods eventually ebbed (Hammill, 1993).

From the 1980s into the beginning of the twenty-first century, there have been continued attempts to understand learning disabilities scientifically, to explore alternative instructional methods for students with learning disabilities, and to clarify the nature of learning disabilities in adults (e.g., Chiappe, 2005; Kavale & Forness, 2000a; McDermott, Goldberg, Watkins, Stanley, & Glutting, 2006; Swanson, 2000b). To meet a young adult who has a learning disability and hear his perspective on his school experiences, read the Firsthand Account.

## Definitions of Learning Disabilities

Although the term **learning disabilities** was coined forty years ago and the study of learning disabilities has been pursued intensely ever since, considerable controversy still exists

*“Considerable controversy still exists over what a learning disability really is.”*

over what a learning disability really is. The two definitions that are noted most often and that largely shape students’ programs and services are (1) the federal definition included in the Individuals with Disabilities Education Act (IDEA) and (2) the definition proposed by the National Joint Committee on

Learning Disabilities (NJCLD). Each is explained in the following sections.

### Federal Definition

The federal definition of learning disabilities articulated in P.L. 94-142 in 1975 has changed very little since then. According to IDEA,

Specific learning disability means a disorder in one or more of the basic **psychological processes** involved in understanding or in using language, spoken or written, that may manifest itself in imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculation, including conditions such as perceptual disabilities, brain injury,

### INTERNET RESOURCES

[www.teachingld.org](http://www.teachingld.org)  
The Division for Learning Disabilities is part of the Council for Exceptional Children. At its website, you can communicate with professionals working with students with learning disabilities, find answers to questions about this disorder, explore tips for teaching these students, and read current news affecting the field.

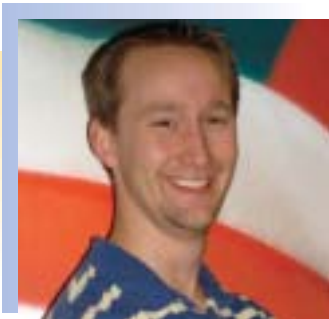
### INTERNET RESOURCES

[www.ldonline.org](http://www.ldonline.org)  
LD Online is one of the best-known sites for teachers and parents of children with learning disabilities. It offers expert advice, contains recent news on learning disabilities, and has a section for children to share their experiences.

### PROFESSIONAL MONITORING TOOL



**Standard 1** Foundations  
... issues in definition and identification



## FIRSTHAND ACCOUNT

### Michael's Story of Unrealistic Goals

*Michael knows firsthand what it is like to be a student with a learning disability. His story explains his passion for making a difference in the lives of students with disabilities.*

I was first identified as having a learning disability in third grade—but by then I had been held back twice. They told my dad that it might be best to send me to a special school because there was not much of a chance that I would learn to read. Later, he told me that he stood up and told them that I *would* read—within a year. For the next year I remember that every time we were in the car and stopped at a traffic light, my father would show me flash cards. I remember saying to him, “But, Dad, I don’t want to look at any more flashcards.” He said, “I love you,” and kept on doing them. And I did learn to read.

By high school, I was very successful. I have ADHD so I have lots of energy. I was involved in everything: president of the drama club, very popular, well-liked by my teachers. I had a 3.5 GPA, a very bright future, and high hopes for myself. I was even taking honors and advanced placement classes.

So 11th grade rolled around and it was time to fill out transition paperwork. My parents had to be at the hospital because of my dad, who also has a disability, and so it was just me with the rest of the IEP team. They asked me, “What are your plans for the future?” I told them I wanted to go to college and be a special education teacher. I can still remember this . . . the psychologist was sitting to my right and he said, “We need to start thinking about more realistic goals.” Now that took me back, but here’s what

really kills me: I look around the table and the rest of the teachers, who knew me so well, knew how hard I worked, knew how successful I was . . . were all nodding their heads in agreement. I felt like someone had closed the door on everything I wanted to do. I got very

*“It’s important for teachers (and students) to have high expectations.”*

discouraged. My grades started to drop. I was scared to death to turn in any kind of writing assignment because I thought it wasn’t good enough.

After my grades started to go down, my dad, still in the hospital, had a meeting with me. I am sitting next to his bed and he asks, “What’s going on? You went from an A–B student to making Ds and Fs.” So I told him about the IEP meeting and how they had said I should start making more realistic goals for myself. Then my father reminded me about learning to read. What he said to me helped me decide to succeed in spite of what I was told at school.

So let’s jump to college. I am currently a special education major. I have made the dean’s list for the past three years. I am president of our local student chapter of the Council for Exceptional Children and vice president of the North Carolina Youth Leadership Network, an organization connecting youth with disabilities from all over the

state. I am also one of twelve members of the Youth Advisor Committee for the National Council on Disabilities, a group that advises the president on legislation pertaining to disability. All this from a person who “realistically” should not be in college.

It’s important for teachers (and students) to have high expectations. My father had high expectations for me. I think one of the biggest fears of people who work with people who have disabilities is the fear that they will fail. So they lower their expectations for them to be sure they won’t fail and so the programs they are in can be called successful. It is true that people with disabilities might fail, but they might not. Young people with disabilities need to know that there are successful people out there. They need to know that they are not struggling alone and that they can make it! I work with hundreds of youth with disabilities in my state and on a national level and I can tell you for every person like me there are more youth who do not make it.

Given the opportunity, youth at risk can achieve great things. I am not saying it is as easy, but we have to make this our core in the field of education. Disability is a natural part of the human experience—it empowers. If we believe that students with learning disabilities can do great things, we will see greater things than we ever believed were possible—and I’m proof of that.

minimal brain dysfunction, dyslexia, and developmental aphasia. Specific learning disability does not include a learning problem that arises primarily as the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of

environmental, cultural, or economic disadvantage. (IDEA 20 U.S.C. §1401 [2004], 20 C.F.R. §300.8[c][10])

Because states are required to adhere to the provisions of the federal special education law, most of them use either this definition or a variation of it (Schrag, 2000). As you would expect, the definition focuses on school tasks and learner characteristics and needs, and it clearly explains that learning disabilities are distinct from other disabilities. What are other important components of the federal definition?

### **NJCLD Definition**

The **National Joint Committee on Learning Disabilities (NJCLD)** includes representatives from thirteen professional and parent organizations concerned about individuals with learning disabilities (National Joint Committee on Learning Disabilities, 2006). This group has expressed concern about the federal definition for several reasons, most of which are related to what the definition does not address: the heterogeneity of students with learning disabilities, the impact of learning disabilities on social perception, the life-span nature of learning disabilities, and the possibility that learning disabilities can exist concomitantly with other disabilities.

Because of these perceived deficiencies in the federal definition, the NJCLD created its own definition of learning disabilities, which was revised in 1990:

Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual, presumed to be due to central nervous system dysfunction, and may occur across the lifespan. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions (for example, sensory impairment, mental retardation, serious emotional disturbance), or with extrinsic influences (such as cultural differences, insufficient or inappropriate instruction), they are not the result of those conditions or influences. (NJCLD, 1990)

### **Essential Dimensions of a Definition of Learning Disabilities**

Although discussions about the definition of learning disabilities continue, most professionals seem to agree that learning disabilities include these dimensions (Kavale & Forness, 2000b):

- Learning disabilities comprise a heterogeneous group of disorders. Students with learning disabilities may have significant reading problems (**dyslexia**), difficulty in mathematics (**dyscalculia**), or a disorder related to written language (**dysgraphia**). They may have difficulty with social perceptions, motor skills, or memory. Learning disabilities can affect young children, students in school, and adults. No single profile of an individual with a learning disability can be accurate because of the interindividual differences in the disorder.
- Learning disabilities are intrinsic to the individual and have a neurobiological basis. Learning disabilities exist because of some type of dysfunction in the brain, not because of external factors such as limited experience or poor teaching.
- Learning disabilities are characterized by unexpected underachievement. That is, the disorder exists when a student's academic achievement is significantly below her intellectual potential, even after intensive, systematic interventions have been implemented to try to reduce the learning gap. This topic is addressed in more detail later in this chapter.

#### **PROFESSIONAL MONITORING TOOL**



**Standard 2** Development and Characteristics  
... similarities and differences among individuals  
... typical and atypical development  
... educational implications

Students with learning disabilities are a diverse group, and no one set of characteristics can describe them all.



- Learning disabilities are not a result of other disorders or problems, but individuals with learning disabilities may have other special needs as well. For example, being deaf cannot be considered to be the basis for having a learning disability. However, some students who are deaf also have learning disabilities.

## Research

### Notes

Recent research by the National Institutes of Health indicates that about 20 percent of the school population has difficulty acquiring early reading skills. Many of these children are later diagnosed as having learning disabilities.

## dimensions of DIVERSITY

The National Association for the Education of African American Children with Learning Disabilities ([www.charityadvantage.com/aacl](http://www.charityadvantage.com/aacl)) was established to raise awareness and promote understanding of minority children with learning disabilities.

### PROFESSIONAL MONITORING TOOL



**Standard 1** Foundations  
... issues in definition and  
identification

## Prevalence of Learning Disabilities

According to annual data gathered as part of IDEA during the 2002–2003 school year, approximately 2.8 million students between ages six and twenty-one had learning disabilities (U.S. Department of Education, 2004). This number represented about 4.3 percent of the entire school population.

Further exploration of prevalence data reveals several interesting facts. For example, learning disability has been the fastest-growing category of special education since the federal law was first passed in 1975. At that time students with learning disabilities comprised only 22 percent of all students receiving special education (Horn & Tynan, 2001); they now represent nearly half of all students with disabilities. Over the past ten years, the number of students identified as having learning disabilities ages twelve to seventeen has been growing. The number of students in this group ages six to eleven has dropped slightly, probably because younger students may be assigned the more general (and relatively new) designation of *developmentally delayed* (U.S. Department of Education, 2004).

The matter of gender can be raised as a prevalence issue, too. Researchers generally have found that the ratio of boys to girls identified as having learning disabilities is at least 2:1 (Coutinho & Oswald, 2005; Siegel & Smythe, 2005). Many explanations have been offered for this phenomenon: Boys may be labeled as having learning disabilities more frequently because of medical factors, such as their greater vulnerability to prenatal and postnatal brain damage; maturational factors, including their documented slower rate of development; sociological factors, such as societal expectations for high achievement from males; and brain organization factors, including the greater likelihood in boys of genetically based impulsivity (C. R. Smith, 2004). In practice, girls identified as having learning disabilities as a group usually have more severe academic deficits than boys (Lerner & Kline, 2006).

Taken together, what do all these prevalence figures mean? They illustrate that learning disabilities represent a complex disorder affecting many students. They also demonstrate that the current definition of learning disabilities probably leads to inconsistency in identifying students as having this special need. In fact, dissatisfaction about who is eligible to receive services as having this disability has led to significant developments in assessment procedures. This topic is addressed in more detail later in this chapter.

*“Learning disabilities has been the fastest-growing category of special education since the federal law was first passed in 1975.”*

## Causes of Learning Disabilities

As you might suspect from the preceding discussion about the development of the learning disabilities field and the definition of the disorder, in most cases the cause of a learning disability is simply not known, and it is highly unlikely that a single primary cause will ever be identified. C. R. Smith (2004) divides the possible causes of learning disabilities into two categories: physiological causes and curricular and environmental contributors.

### Physiological Causes

Several possible physiological causes of learning disabilities have been identified by education professionals and medical researchers. These include brain injury, heredity, and chemical imbalance.

First, as proposed from the earliest work in the learning disabilities field, brain injury probably causes some students' disorders. The injury may occur prenatally, as might happen when a mother consumes alcohol or drugs, contracts measles, or smokes cigarettes. An injury also might occur during the perinatal period, as when a baby is deprived of oxygen during birth. Brain injury also can occur postnatally because of a high fever, a head injury (e.g., falling from a bike or playground equipment), an illness (e.g., meningitis), or an accident (e.g., a near drowning). In the Technology Notes on pages 138–139, you can learn more about recent advances in understanding the brain and learning disabilities.

Considerable evidence indicates that another physiological cause of learning disabilities is heredity (Alarcon, Pennington, Filipek, & DeFries, 2000). Teachers have reported for years that many parents of children with learning disabilities comment, "He's just like his father [or mother]." Now research is supporting those claims. In fact, when one or both parents have a learning disability, their children may have as much as a 30 to 50 percent chance of also having that disorder (Castles, Datta, Gayan, & Olson, 1999). Critics of this research have noted that it does not consider possible environmental factors. That is, perhaps parents and their children share learning disabilities because of similar exposure to allergens or environmental toxins such as lead. However, studies of twins and siblings support the heritability of learning disabilities (Wadsworth, Olson, Pennington, & DeFries, 2000). The reading level of one identical twin is very likely to predict the reading level of the other, even when they are reared apart, and this holds true when one has been identified as having learning disabilities. In contrast, a nontwin sibling's reading level is much less likely to predict the reading level of the other sibling when they are reared separately. This line of research provides evidence of a genetic link.

A third physiological cause of learning disabilities sometimes mentioned is biochemical. For some children learning disabilities seem to be related to significant attention problems, which may be the result of chemical imbalances in the brain. This topic is explored in more depth in Chapter Six on students with attention deficit–hyperactivity disorder (ADHD).

You should be careful in attributing learning disabilities to physiological causes. Just because a child has a head injury does not mean that a learning disability is inevitable. Likewise, just because one child has a learning disability does not mean his sibling will have the disorder. Perhaps in the future, emerging medical technology will provide scientists and researchers with new tools for studying the relationship between the brain and individuals' patterns of learning. In the meantime, professionals should consider such information intriguing but somewhat speculative.

### Curriculum and Environmental Contributors

For some children learning disabilities are caused by the situations in which they live (C. R. Smith, 2004). For example, children who have poor nutrition may develop learning disabilities, as may those who live for an extended period of time in a highly adverse emotional climate. Some students have learning disabilities because of toxins in their environments, as might happen to children who develop lead poisoning because of the use of lead-based paint in older homes. Yet other children may have too little stimulation (e.g., adults who model language, access to books, experiences such as visits to the zoo) (Rashid, Morris, & Sevcik,



**Standard 2** Development and Characteristics  
... typical and atypical development

### INTERNET RESOURCES

[www.ldanatl.org](http://www.ldanatl.org)

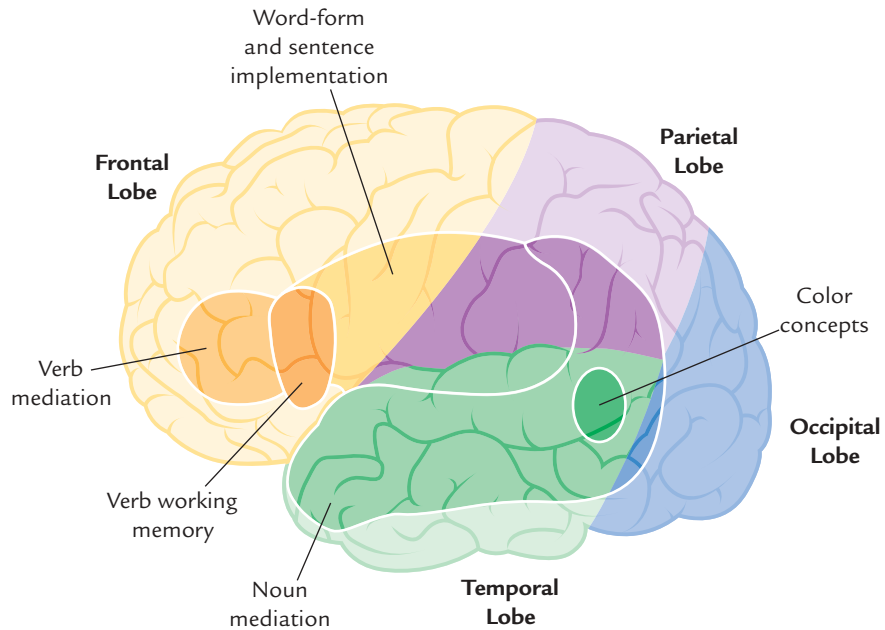
The website for the Learning Disabilities Association of America contains numerous links and resources for individuals with disabilities and their families, including information about rights and recent legislation regarding learning disabilities.

Advances in medical technology are making it possible for scientists to study the human brain and how it works with a precision never known before. This research is leading us to a much clearer understanding about the parts of the brain that are most critical for oral language and reading and the differences between the brains of individuals who read fluently and those with reading or learning disabilities (Shaywitz, 2003; Society for Neuroscience, 2006). Eventually, it may lead to new types of interventions for students.

### Brain Structure

One area of interest to scientists is whether the brains of individuals with learning disabilities are physically different from those of others. A technique for studying the structure of the brain is the computed tomography (CT) scan, in which the brain is X-rayed and bone, brain matter, and fluids are identified (Alarcon, Pennington, Filipek, & DeFries, 2000). Using these data, a computer can then construct an image of a “slice” of the brain. CT scans have shown that the brains of individuals with LD are symmetrical in the area called the *occipital lobe* (see figure, The Organization of

The Organization of the Human Brain for Language



Source: Burns, M. S. (2002, February). Language and reading in the brain. Retrieved July 9, 2002, from [www.brainconnection.com/topics/?main=col/burns00feb](http://www.brainconnection.com/topics/?main=col/burns00feb). Copyright © 2004 Scientific Learning Corporation. Used with permission. All rights reserved.

the Human Brain for Language), whereas the brains of those without LD are asymmetrical in this area (Bigler, Lajiness-O’Neill, & Howes, 1998).

2005). When you think about all these factors, can you identify a single group of youngsters who might be most expected to have learning disabilities because of environmental causes? If your response is children who live in poverty, you are correct. These children also may be placed at greater risk of having learning disabilities because of poor medical care or low parent education level (Skiba, Poloni-Staudinger, Simmons, Feggins-Azziz, & Chung, 2005).

One other environmental cause of learning disabilities should be mentioned. Although in an ideal world this paragraph would not need to be written, some students have learning disabilities because of poor instruction (Lyon et al., 2001). When teachers use outdated instructional practices, do not consider the differences in students’ maturational levels, and ignore students’ learning styles, they can cause some students to display characteristics of learning disabilities. This cause of learning disabilities is one of the most controversial. IDEA specifically prohibits students who receive poor instruction from being identified as having this or any other disability on that basis. However, some professionals argue that if teaching

PROFESSIONAL MONITORING TOOL



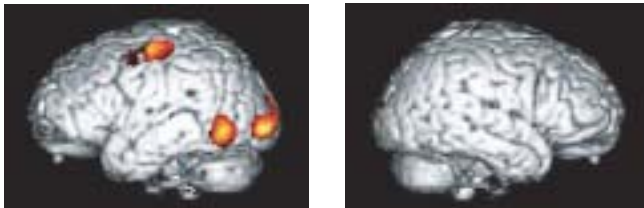
Standard 1 Foundations  
... issues in definition and  
identification

## Brain Function

A second area of scientific interest in brain research is how the brain functions. Several techniques are used to study brain functioning. Some studies use positron emission tomography (PET) scans or single photon emission computed tomography (SPECT) scans in which radioactive material is injected into the brain so that its activity can be measured while participants engage in a reading task. Another technique is functional magnetic resonance imaging (fMRI), which measures bloodflow during brain activity. Results of studies using these approaches indicate that oral language and reading use the same parts of the brain and that individuals with LD do not have as much brain activity in the occipital lobe during reading activities as individuals without LD (Joseph, Noble, & Eden, 2001). The figure entitled Brain Activation during Reading illustrates these brain differences.

### Brain Activation during Reading

The yellow areas show where typical readers have greater brain activation during word reading, compared to those with LD.



Note: Images above show left and right hemispheres of the brain.

Source: Copyright 2001 by Lynn Flowers and Frank Wood. Reprinted with permission from Lynn Flowers and Frank Wood.

One other technique used in the study of brain functioning is the electroencephalogram (EEG). Electrodes are attached to the head, and the amount of electrical activity in the brain can then be measured. Individuals who have LD show less of this electrical activity than individuals without LD (Fiedorowicz, 1999). The greatest differences occur when individuals are engaged in activities that require phonological awareness—that is, the ability to relate letters to specific sounds (Burns, 2002).

## Cautions

Although promising, brain research also must be viewed with caution. Most of the work has been completed with adults, not children, and although it is assumed that the results are valid for both groups, this is not known for sure. In addition, although the different parts of the brain activated during oral language and reading are being mapped, it is not accurate to assume they function exclusive of each other. The relationships among the parts of the brain used for speaking and reading are not known at this time. Next, most studies have involved reading single letters or words, not paragraphs or passages. Whether brain function during the latter type of activity is different in any meaningful way from the former is not clear. Finally, information on brain structure and function is not diagnostic; that is, it does not directly tell us the nature of an individual's learning disability or the interventions that might ameliorate or compensate for it.

Source: Bigler, E. D., Lajiness-O'Neill, R., & Howes, N. (1998). Technology in the assessment of learning disability. *Journal of Learning Disabilities*, 31, 67–82.

has been so inadequate that a learning disability has been created, that student should receive the benefit of a specialized education to remediate the problem.

## What Are the Characteristics of Individuals with Learning Disabilities?

Individuals with learning disabilities are an extraordinarily heterogeneous group, with different areas of strengths and special needs in the cognitive, academic, social/emotional, and behavior domains. The following sections highlight some of the most common characteristics.

### PROFESSIONAL MONITORING TOOL



**Standard 2** Development and Characteristics  
... similarities and differences among individuals

## Cognitive Characteristics

Although students with learning disabilities typically have average or above-average intelligence, they usually display weaknesses in one or more areas of cognition, including attention, perception, memory, and thinking/processing.

### Attention

Students with learning disabilities may have poor selective attention (Mayes, Calhoun, & Crowell, 2000; Zera & Lucian, 2001). One way to illustrate what this means is to think about the setting you are in as you read this paragraph.

Stop to listen and look around. Is air blowing from a vent? Is there noise in the hallway or on the street? Is there a pile of other reading material right beside you? Until you were directed to notice items such as these, you likely ignored them because your attention was devoted to reading your textbook. Students with learning disabilities may have extraordinary difficulty attending to only the important stimuli in their environments. The other reading material is as captivating as the book in front of them; the plane overhead is as noticeable as the teacher's voice.

*“Individuals with learning disabilities are an extraordinarily heterogeneous group, with different areas of strengths and special needs.”*

### Perception

Many students with learning disabilities exhibit perceptual problems (Lerner & Kline, 2006; Silver, 2004). *Perception* does not pertain to whether a student sees or hears but rather to how her brain interprets what is seen or heard and acts on it. For example, a student with a visual perception problem may see perfectly well the words on a page. However, when asked to read the words, the student may skip some of them. Other symptoms of visual perception difficulties include spatial orientation and judgment (e.g., bumping into things; knowing how to safely get from one point to another); the ability to distinguish right from left; labored handwriting; and overall clumsiness or awkwardness in walking, skipping, balancing, and other large-motor activities (C. R. Smith, 2004). Problems in auditory perception often include difficulties with perceiving sounds that are not attributable to a hearing loss (Kruger, Kruger, Hugo, & Campbell, 2001). For example, some students may have trouble understanding whether the word spoken was *team* or *teen*, *odor* or *over*, *pet* or *bet*. Of course, the result can be misunderstood directions, poor communication, and awkwardness in social interactions.

### Memory

In addition to problems related to attention and perception, students with learning disabilities may experience problems with memory (McNamara & Wong, 2003). Everyone has two types of memory: short term and long term. **Short-term memory** is the mechanism by which a person holds information in the mind for a brief amount of time—less than a minute. Unless it is acted on in some way, it is gradually lost. One simple example is when you look up a phone number. You remember it long enough to dial it, but if you delay dialing you probably have to look up the number again unless you have consciously taken steps to remember it (e.g., by repeating it several times). **Long-term memory** is the permanent storage mechanism in the brain, and information to be remembered generally has to be transferred from short-term to long-term memory. An example might be verses from a favorite childhood song: Even if you have not recalled them for many years, you can still sing the words as soon as you hear the title “If You’re Happy and You Know It” or “The Barney Song.” Students with learning disabilities may have difficulty with either short-term memory or long-term memory or both.

### Information Processing

Finally, students’ general information-processing or thinking skills may be deficient (Geary, Hoard, & Hamson, 1999). Students with learning disabilities may have difficulty with **metacognition**, or thinking about thinking. They may lack the ability to actively consider how new

#### PROFESSIONAL MONITORING TOOL



**Standard 2** Development and Characteristics  
... educational implications of exceptionalities

#### fyi

If you look ahead to the characteristics of students with attention deficit-hyperactivity disorder (ADHD), discussed in Chapter Six, you will see that some overlap can exist with learning disabilities.

information being learned relates to other information already stored or how to apply that knowledge in a novel learning situation. For example, as you read this chapter, you probably are actively relating the concepts to people you know who have learning disabilities or perhaps to knowledge you acquired in a course in psychology. You might also be using a strategy to help you remember information that may be on a test—for example, by repeating key ideas aloud. These are all metacognitive activities. Without explicit training (discussed in a later section of this chapter), some students with learning disabilities will not use such strategies to foster their learning.

## Academic Characteristics

By far the most commonly noted characteristic of students with learning disabilities is their struggle with school learning. Their difficulties may occur in reading, spoken language, written language, mathematics, or any combination of these. Academic difficulties comprise the most likely reasons for classroom teachers to suspect a student has a learning disability, and such difficulties often are emphasized in the services provided by special education teachers.

### Reading

Most students with learning disabilities experience significant problems in reading (Sperling, 2006; Vaughn & Edmonds, 2006). For example, many students struggle with *phonological awareness*, which is the ability to make the connection between letters and the sounds they stand for that is essential for developing reading skills. These students are not able to sound out words, and they often rely on visual cues or the context in which a word is used to determine what the word is.

Other students struggle with *oral fluency* (Therrien & Kubiana, 2006). They may read aloud in a word-by-word manner without appropriate inflection or rhythm, unable to relate the patterns of spoken language to the printed word. Students with weakness in this area often dread being asked to read aloud in class.

One other typical reading problem for students with learning disabilities is *comprehension* (Humphries, Cardy, Worling, & Peets, 2004). Unlike the student previously described who labors to say each word, some students are able to read a passage so fluently that you might assume they are highly proficient readers. However, when they are asked questions about what they have read, these students may have little or no understanding of the words. Not surprisingly, students who have difficulty with phonological awareness and oral fluency also are likely to experience weakness in reading comprehension.

You might find that some people refer to reading problems of all sorts as *dyslexia* (e.g., Bell, McCallum, & Cox, 2003). The Professional Edge clarifies the use of this term and strategies for addressing dyslexia.

### Oral Language

Another academic area that can be a significant problem for students with learning disabilities is oral language. Problems usually fall into the areas of phonology, morphology, syntax, and pragmatics.

Students may have difficulties with *phonology*—that is, using the correct sounds to form words. They may struggle with *morphology*, the study of the smallest meaningful units of language (e.g., that *-ed* denotes past tense or that *pre-* means “before”). Likewise, students may have problems with *syntax*, the rules of grammar, or with *semantics*, the meanings of words or phrases. Finally, *pragmatics*—the ability to successfully participate in interactions with others—may be a weakness.

If you think about all these elements of spoken language, you can begin to see how pervasive the effects of this type of learning disability can be. For example, a student with poor oral language skills may miss subtle meanings of words during conversations or might fail to understand the punchline of a joke based on word meanings. Such a student also may have difficulty participating in conversations with classmates or adults.

## dimensions of DIVERSITY

When Hispanic American students in the primary grades were provided with supplemental reading instruction (e.g., word attack skills), their overall fluency and literacy increased. This result occurred regardless of the students' initial levels of English proficiency (Gunn, Smolkowski, Biglan, & Black, 2002).

### INTERNET RESOURCES

[www.dyslexia.com](http://www.dyslexia.com)

At the Gift: Dyslexia you can find a discussion board and links to additional information as well as a bookstore and other aids.

### PROFESSIONAL MONITORING TOOL



**Standard 3** Individual Learning Differences

... effects on an individual's life

The term *dyslexia*, which means developmental word blindness and is considered a common type of learning disability, is used a lot these days. You hear that a friend's child has dyslexia, or you see a person who is dyslexic on television, or you read that Albert Einstein and Thomas Edison had dyslexia. Dyslexia has a medical sound to it, and evidence is beginning to accumulate of an organic basis for it. Recent studies using computerized imaging show that the brain activity of students with dyslexia differs from students who are good readers (Shaywitz, 2003). For example, from an early age, and often into adulthood, dyslexics show a pattern of underactivation in a region in the back of the brain that enables first accurate and then automatic reading. This pattern of underactivity appears to be present regardless of age, sex, or culture (Shaywitz, 2003). That is why dyslexics have problems initially "cracking the code," and then problems later on developing reading fluency.

Put very simply, students with dyslexia have serious problems learning to read despite normal intelligence, normal opportunities to learn to read, and an adequate home environment. While the precise organic cause of dyslexia continues to be researched, considerable evidence suggests that reading problems associated with dyslexia are phonologically based (Denton, Foorman, & Mathes, 2003). Students with dyslexia have difficulty developing *phonemic awareness*, the understanding that spoken words are comprised of sounds. Phonemic awareness problems make it hard for them to link speech sounds to letters, ultimately leading to slow, labored reading characterized by frequent starts and stops and multiple mispronunciations. Students with dyslexia also have comprehension problems largely because the struggle for them to identify words leaves little energy for understanding what they read. They also have trouble with the basic elements of written language, such as spelling and sentence and paragraph

construction. Finally, students with dyslexia may have difficulty understanding representational systems, such as telling time, directions, and seasons (Bryan & Bryan, 1986).

Early identification for students with dyslexia is particularly urgent given recent studies showing that effective language instruction appears to generate repair in underactivated sections of the brain (Shaywitz, 2003). A large body of research (Denton, Foorman, & Mathes, 2003; McCardle & Chhabra, 2004; Oakland, Black, Stanford, Nussbaum, & Balise, 1998; Swanson, 2000c) shows that many students with severe reading disabilities benefit from a beginning reading program that includes the following elements:

1. *Direct instruction in language analysis.* For example, students need to be taught skills in sound segmentation or in orally breaking down words into their component sounds.
2. *A highly structured phonics program.* This program should teach the alphabetic code directly and systematically using a simple-to-complex sequence of skills
3. *Writing and reading instruction in combination.*
4. *Intensive instruction.* Reading instruction for at-risk students should include large amounts of practice in materials that contain words they are able to decode.
5. *Teaching for automaticity.* Students must be given enough practice so that they are able to read both accurately and fluently.

Source: Friend, M., & Bursuck, W. D. (2006). *Including students with special needs: A practical guide for classroom teachers* (4th ed., p. 244). Boston: Allyn & Bacon. Copyright © 2006 by Pearson Education. Reprinted by permission of the publisher.

### Written Language

For some students, learning disabilities are manifested in written language (Brice, 2004; Graham, Harris, & Fink-Chorzempa, 2003; Wong, 2000). For example, the motor coordination required for handwriting can be overwhelming for some students. As shown in the sample in Figure 5.1, it is nearly impossible to determine what these students have written even though the words form complete sentences and are spelled correctly. For other students, the deficiency is spelling. Not only do these students labor to discern the sounds comprising words, but they also may be unable to distinguish between appropriate uses of homonyms (e.g., meet—meat; there—their) or to recognize when they have written a misspelled word (e.g., *seperate* instead of *separate*; *advise* instead of *advice*). Students also may have difficulty knowing when and how to punctuate the sentences they write, struggling not only with the appropriate application of periods and commas but also with the use of apostrophes (e.g., *it's*—*it is* instead of *its*—possessive form). Finally, they may also be uncertain about capitalizing words (e.g., *My Brother likes mexican food*).

In an era when spelling, punctuation, and many other conventions of written language can be corrected with computer software and other electronic tools, perhaps the most serious

Figure 5.1

Writing Sample from a Student with Learning Disabilities

2/6/02  
49

If I could leave class  
early, I would...

~~go~~ go home and  
do my work. I work on  
my poster truck and  
rebuild the motor. fix  
my motor on my rider.  
or watch my TV in my  
room. play with my favorite  
she is a lot of fun  
to play with she will  
bite your feet or get  
in your stuff... I can  
go out and pull the  
bouncing bag. climb a tree.  
run around the block  
every time. it is fun  
for me to do that.  
I would play with  
a dog that is half  
my size and riding with  
him.

issue for students with learning disabilities in written expression is composition skill. In order to write effectively, students need to be able to organize their thoughts, present them in some type of logical order, and provide enough details to convey the intended message to readers (Williams & Ward-Lonergan, 2001). These tasks can be exceedingly difficult for students with learning disabilities like Derek, who was described at the beginning of the chapter. When telling a story, they may make assumptions about what the reader knows (e.g., not explaining who a main character is but writing as though the reader is familiar with this character) or jump from topic to topic (e.g., mixing together information about the causes, battles,

## INTERNET RESOURCES

[www.cldinternational.org](http://www.cldinternational.org)  
The International Council for Learning Disabilities is an organization for professionals interested in learning disabilities; its website addresses current issues regarding learning disabilities.

## dimensions of DIVERSITY

Wagner, Francis, and Morris (2005) noted that recent trends in the field of learning disabilities, including recognition of the importance of early intervention and phonological awareness, should also apply to English-language learners but that adequate models for assessment and intervention do not exist at this time.

### PROFESSIONAL MONITORING TOOL



**Standard 2** Development and Characteristics  
... similarities and differences of individuals

and outcomes of World War II instead of presenting them as categories of information). Because of their disability, these students sometimes struggle with using adjectives to enrich their writing (e.g., *The meal was good. We had lots of stuff.* instead of *Thanksgiving dinner was delicious. We devoured turkey roasted to a golden brown, fluffy mashed potatoes, crunchy green bean casserole, and pecan pie.*). As these students move through school, they will likely find it difficult to succeed in the many school tasks that rely on clear written expression.

### Mathematics

A final domain in which students with learning disabilities may experience difficulty is mathematics (Dowker, 2005; Parmar & Signer, 2005; Swanson & Jerman, 2006), a disorder sometimes referred to as *dyscalculia*. Some students are not able to learn basic math facts or fundamental computational skills. Others cannot grasp the principles of estimation, mental calculation, and probability. Yet others find mastery of fractions or decimals difficult. For some students, learning various types of measurement or concepts related to time is extraordinarily challenging. Geometry is a weakness for others. One other area that may cause difficulty is problem solving. Whether because of the reading requirement or the inability to understand the mathematical concepts that underlie the problem, students like Jermaine, who you read about in the opening to this chapter, may be unable to sort relevant from extraneous information, to recognize the correct computational procedure, or to determine whether the answer they obtain is reasonable (Fletcher, 2005; Jordan & Hanich, 2003).

### Social and Emotional Characteristics

Understanding the social and emotional characteristics of students with learning disabilities is as important as understanding their cognitive and academic traits. How students perceive themselves and others and how adept they are in social situations can significantly affect their learning success (Welsh, Parke, Widaman, & O'Neil, 2001). Further, their accomplishments in life may depend on this ability to interact effectively with others. Two areas are particularly relevant: social perception and motivation.

### Social Perception and Social Competence

Many students with learning disabilities may have some type of deficit in the area of social skills (Bauminger, Edelsztein, & Morash, 2005). When compared to peers without disabilities, these students tend to have lower self-esteem. They often are less accepted by their

*In addition to experiencing difficulties with reading, writing, math, and other academic areas, students with learning disabilities also may struggle in their social interactions with peers.*



nondisabled peers than are other students, and they are more likely than typical peers to be rejected by classmates (Pavri & Luftig, 2000). Danielle, the middle school student discussed at the beginning of this chapter, experiences such difficulties.

Studies of teachers' ratings also suggest that students with learning disabilities have lower social status than other students (Al-Yagon & Mikulineer, 2004; Wiener & Tardif, 2004), a fact that may be explained in two ways. First, among nondisabled peers who value school and

*“Understanding the social and emotional characteristics of students with learning disabilities is as important as understanding their cognitive and academic traits.”*

proficiency at school-related tasks, students with learning disabilities may be viewed as less-desired classmates because of their academic struggles. Second, the status of students with learning disabilities may be related to their *social competence*—that is, their ability to accurately receive, interpret, and respond to the subtleties of interpersonal interactions (Murray & Greenberg, 2006). Michael exemplifies problems in social competence. He was seated on

the floor of the office in his middle school with several of his peers, waiting to be seen by the principal about an altercation that occurred during lunch. The boys were discussing a variety of topics including who had won the cafeteria shoving match and who had bragging rights for the lowest grades on their recently issued report cards. In the middle of this conversation, Michael chimed in, “I’m going to see my grandma next weekend.” Even though the other boys’ topics of conversation may not have been those preferred by an adult, Michael’s comment illustrates his obvious lack of awareness of the nuances and expectations of him in this social situation. The other boys immediately began making fun of him. As you might expect, students with learning disabilities who have poor social skills often are reported to have difficulty making and keeping friends (Pavri & Monda-Amaya, 2001), and they may feel lonely and depressed, especially through adolescence and adulthood (Maag & Reid, 2006).

It is important to note, however, that some students with learning disabilities are well adjusted and well liked by their peers and teachers (Greenham, 1999). One explanation for this finding concerns the learning environment. When teachers value and respect students, focus on their abilities, and create a supportive social environment, students thrive. Conversely, when too much emphasis is placed on students’ problems, they become negative about themselves and are viewed in this way by peers.

Another explanation is offered by those who hypothesize that students with learning disabilities and poor social competence form a distinct subgroup who have **nonverbal learning disabilities (NLDs)** (Court & Givon, 2003; Telzrow & Bonar, 2002). These students may read and speak fluently, but because of a dysfunction in the part of the brain that controls nonverbal reasoning, they are unable to accurately interpret nonverbal communication (e.g., facial expressions, posture, eye contact), and they fumble in social interactions. For example, a student with this disorder might not recognize that he is receiving “the look” from a teacher or parent and thus may not change the behavior at issue. Likewise, this student might keep talking during a conversation, failing to understand the signals from others that they would like to talk, too.

### **Motivation**

Many special education and general education teachers, especially those in middle and high schools, comment that students with learning disabilities are not motivated to learn, and research suggests that this is a common characteristic (Fulk, Brigham, & Lohman, 1998; Garcia & deCaso, 2004). *Motivation* is the desire to engage in an activity. This desire can be **intrinsic** (e.g., out of curiosity, as when you complete a crossword puzzle simply to see if you can) or **extrinsic** (e.g., for payment, as when you agree to help a neighbor with chores to earn money for a planned vacation). Ideally, all students would be intrinsically motivated to learn, but many students with learning disabilities are not. This could be due to what is called their *locus of control*, which is their belief about whether their life experiences are determined by internal (e.g., personal effort and skill) or external (e.g., luck) factors. Students with learning

*“It is difficult to determine whether motivation is a characteristic of some students with learning disabilities because of neurological dysfunction or an effect of students’ school experiences.”*

#### PROFESSIONAL MONITORING TOOL



**Standard 5** Learning Environments and Social Interactions  
... teacher attitudes and behaviors

#### dimensions of DIVERSITY

Using data from reports to Congress on IDEA, the Advocacy Institute estimates that dropout rates among students with learning disabilities vary by race/ethnicity: 18.8 percent for Asian students, 26.9 percent for white students, 32.3 percent for Hispanic students, 33.7 percent for African American students, and 44 percent for Native American students ([www.advocacyinstitute.org/resources/LD\\_Review02.pdf](http://www.advocacyinstitute.org/resources/LD_Review02.pdf)).



**Standard 3** Individual Learning Differences  
 . . . impact of abilities, attitudes, and interests

disabilities often attribute academic success to external factors and failure to internal factors. For example, if a student with learning disabilities does well on a test, he may comment that it is because of “good luck” or “an easy test.” If the student does not pass it, he may say, “I’m dumb.” You can easily see how this would eventually lead to a low level of motivation.

However, it is difficult to determine whether motivation is a characteristic of some students with learning disabilities because of neurological dysfunction or an effect of students’ school experiences. For example, some students demonstrate **learned helplessness** by giving up on a task before they even try. They may do this because they have failed at so many school tasks that they would rather not begin the work than fail again, or they may have discovered that if they say they cannot do a task, the teacher or a peer will help them do it.

## Behavior Characteristics

If you think about the possible results of having deficits in academic subjects, selective attention, social competence, and motivation, you probably will conclude that a significant number of students with learning disabilities (although not all) also have behavior problems. You are correct. However, it is unclear whether the behaviors are part of the learning disability or a result of the frustration that many of these students experience (Farmer, 2000). For some students, difficulties in communicating with others may lead to inappropriate behaviors (Valance, Cummings, & Humphries, 1998). For others, the prospect of not being able to complete an academic task might cause them to act out in a sort of learner “road rage.” Examples of behavior problems that have been studied for students with learning disabilities include excessive out-of-seat behavior, talk-outs, and physical and verbal aggression.

One of the difficulties in discussing the behavior characteristics of students with learning disabilities is the fact that a significant number of these students have co-morbid (i.e., occurring simultaneously) learning disabilities and **attention deficit–hyperactivity disorder (ADHD)** (McNamara, Willoughby, Chalmers, & Cura, 2005); estimates range from 15 to 70 percent or more (Forness & Kavale, 2001a; Mayes, Calhoun, & Crowell, 2000). This comorbidity factor raises the possibility that the behavior problems of some students with learning disabilities are, in fact, symptoms of a second disorder. Details about the characteristics of students with ADHD are covered in Chapter Six. The Positive Behavior Supports provides one example of educators’ efforts to help students with learning disabilities learn appropriate classroom behavior.



**Standard 8** Assessment  
 . . . screening and classification procedures

### fyi

During the late 1960s and early 1970s, an assessment to determine whether a learning disability existed had to include a statement from a physician because a learning disability was considered a physiologically based disorder.

## How Are Learning Disabilities Identified?

In order for students to receive special education services to address their learning disabilities, they must be identified as being eligible for them. This involves assessments to determine the existence of learning disabilities. Based on the information derived from these assessments, the multidisciplinary team must decide that the disability exists and that students are eligible for services (if the disability negatively affects educational performance).

IDEA 2004 changed dramatically the basis on which students may be identified as having a learning disability. The law still permits traditional assessment procedures based on identifying discrepancies between ability and achievement. However, it also explicitly introduces and gives permission for a procedure called *response to intervention (RTI)* based on the extent to which a student’s learning does not improve when specific interventions are implemented. Both the traditional and RTI procedures are explained in the following sections.

## Traditional Approach to Assessment for Learning Disabilities

In Chapter Two, you learned that all students who receive special education services first go through a careful process of assessment. For students with learning disabilities being



## Teaching Students to Manage Their Own Behavior

Many students with learning disabilities can learn to manage their own behavior. Steps to teaching them this research-based approach include the following:

1. Help the student clearly identify the problem behaviors to be changed. Try to focus on behaviors that are harming the student's classroom success. If problems are particularly serious, do not try to change too many behaviors at one time.
2. Define the behavior to be demonstrated clearly, using words the student understands.
3. Collect baseline data with the student. You and the student should monitor the desired behavior to see how often it occurs.
4. Schedule a conference with the student to discuss the behavior of concern, identify the alternative behavior, gain student commitment to try to change, and explain the student's responsibility. You should also help the student set realistic goals for increasing the positive behavior.
5. Decide with the student on how to record the behavior and how often.
6. Teach the student how to use the self-management procedures.
7. Implement the plan.
8. Monitor how well the student is doing by periodically recording the same information that the student is recording. Reward the student for being accurate in recording, even if the behavior is still not at the desired goal.
9. Follow up once goals are reached to ensure ongoing success.

Review the figure below, which is one example of a self-management recording sheet for a student. This sheet lists several behaviors, a judgment made by the teacher. How could you adapt such a sheet for use with younger students? Older students? Can you think of other situations in which this type of approach to address student behavior could be successful?

Source: McConnell, M. E. (1999). Self-monitoring, cueing, recording, and managing: Teaching students to manage their own behavior. *Teaching Exceptional Children*, 32(2), 14-21. Copyright © 1999 by the Council for Exceptional Children. Reprinted with permission.

### Classroom Self-Monitoring Scale

NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

CLASS: \_\_\_\_\_ TEACHER: \_\_\_\_\_

Circle one of the four choices

4 = Always      3 = Most of the time  
2 = Some of the time      1 = Did not do

1. Worked without disturbing others.	4	3	2	1
2. Participated in class.	4	3	2	1
3. Listened and paid attention when the teacher was talking.	4	3	2	1
4. Asked for help when I needed it.	4	3	2	1
5. Followed teacher directions.	4	3	2	1
6. Completed class assignment.	4	3	2	1
7. Turned in completed assignment.	4	3	2	1

Student Score \_\_\_\_\_

28-24	SUPER
23-20	GOOD
19-14	FAIR
13-0	MAKE A PLAN



**Standard 8** Assessment  
 . . . administer formal and informal assessments

assessed in the traditional way, this process includes both formal and informal assessments. These assessments are designed to create a picture of a student's learning capacity, academic achievement in reading and mathematics, social and emotional skills, and behavior patterns.

### Formal Assessments

In many school districts the formal assessments used to determine whether a student has a learning disability are either norm-referenced or criterion-referenced tests. **Norm-referenced tests** are those in which the student taking the test is being compared to a large number of students, or *norm group*. Examples of norm-referenced tests used to identify learning disabilities include intelligence tests, such as the Wechsler Intelligence Scale for Children–IV (Wechsler, 2003), and achievement tests, such as the Woodcock–Johnson Psychoeducational Battery–III (Woodcock, McGrew, & Mather, 2001). Another example is the relatively new Learning Disabilities Diagnostic Inventory (LDDI) (Hammill & Bryant, 1998), which was designed specifically to assist professionals in identifying in school-age children intrinsic processing problems related to listening, speaking, reading, writing, mathematics, and reasoning. Unlike other assessments that compare the achievement of students to all other students, the LDDI compares the learning patterns of the student only to those of students known to have learning disabilities.

**Criterion-referenced tests** are another type of formal assessment that may be used during this type of evaluation for learning disabilities. These tests are designed to determine whether a student has learned a specific body of information, so they represent an absolute standard rather than the comparative standard of norm-referenced tests. One example of a criterion-referenced test nearly everyone has experienced is a driver's test. This test is designed to determine whether you have learned enough to drive an automobile safely; comparing you to others is not relevant. Examples of criterion-referenced tests to assess for learning disabilities include the Stanford Diagnostic Reading Test (Karlsen & Gardner, 1995) and the Brigance Comprehensive Inventory of Basic Skills (e.g., Brigance, 1999).

### Classroom Assessments

Classroom assessment information, usually considered informal, is the second type of data gathered to determine whether a student has a learning disability. Three types of classroom assessments are most often used: curriculum-based measurement, portfolio assessment, and observation.

**Curriculum-based measurement (CBM)** is designed specifically to supplement information obtained from formal assessments by sampling a student's understanding of the classroom curriculum (L. S. Fuchs & D. Fuchs, 1998). CBM may include having a student read short passages from books in the district language arts or English curriculum and answer comprehension questions. By comparing the student's reading rate (i.e., correct words read per minute) and comprehension to a sample of other students in the classroom or the district, a determination can be made about the student's learning progress.

Teachers may complete a portfolio assessment as another type of classroom assessment. A *portfolio* is a purposeful collection of a student's work that demonstrates the quality and progress of her learning (Jochum, Curran, & Reetz, 1998). For a student being assessed for learning disabilities, a portfolio might include drafts and final versions of writing assignments, a list of books read, an audiotape of the student reading, samples of assignments and problems solved in mathematics, and some type of student self-evaluation. The intent of a portfolio is to capture a snapshot of the student's performance in the reality of the classroom.

A third form of classroom assessment is observation. For a student to be identified as having a learning disability, federal law requires that he be observed in the general education classroom or, for young children, in a school-like environment, such as a preschool. Observation often involves getting a general sense of the student's academic and behavioral functioning in the classroom. It may also include tabulating information of interest—how often the student leaves his seat, how often the student blurts out answers instead of raising



**Standard 8** Assessment  
 . . . individualized assessment strategies

his hand, and how the frequency of such behaviors compares to that among other students in the class.

### Criteria for Eligibility

In schools using a traditional approach to identifying learning disabilities, once assessment data have been gathered, the multidisciplinary team convenes. Using all of the assessment information, the team then decides whether a student meets the eligibility criteria for having a learning disability using these questions:

1. *Does a significant gap exist between the student's ability and academic achievement?* Although a number of methods can be used for determining the presence of a learning disability and IDEA explicitly states that school districts do not have to find a severe ability–achievement discrepancy, the most common method is to compare the student's scores on an individual intelligence test with his scores on the individual norm-referenced or criterion-referenced achievement measures (Schrag, 2000) and then to consider curriculum-based measures and portfolio information. For example, if a student's measured intellectual ability (i.e., IQ) is 100 but his equivalent reading score is 80, a decision might be made that a learning disability exists. However, if the intelligence score is 90 and the reading score is 88, no significant discrepancy and hence no learning disability exists. Any other related information (e.g., information from parents or teacher records) also can be used in answering this question. Keep in mind, too, that a discrepancy may be found between ability and any area of academic achievement, including thinking skills, oral expression, listening comprehension, written expression, basic reading skills, reading comprehension, mathematics calculation, and mathematics reasoning.

2. *Is the learning problem the result of a disorder in an area of basic psychological processing involved in understanding language?* These processes are included in the definition of learning disabilities that you learned earlier and in the description of student characteristics. They include sensory–motor skills, visual or auditory processing, and cognitive skills, such as attention and memory. As the team looks at all the assessment data, it must consider whether such processing problems are present.

3. *Can other possible causes of the learning problem be eliminated?* As noted earlier, the IDEA definition of a learning disability includes the provision that the discrepancy cannot be the result of other factors including environmental factors (e.g., an unsatisfactory home or school situation), poor teaching, poverty, and poor school attendance. Similarly, learning disabilities cannot be the result of other disabilities (e.g., mental retardation, vision or hearing disability, behavior disability) or a language difference. This requirement to eliminate possible alternative explanations for a student's learning problems is called the *exclusionary clause*.

If the student's learning problems are serious enough, the other criteria are met, and the team determines the student would benefit from special education, the student is eligible to receive services as having a learning disability.

## A New Approach for Identifying Students Who Have Learning Disabilities

The traditional approach to identifying the presence of learning disabilities has been criticized as a “wait to fail” model because students must progress far enough in school and experience significant academic frustration to even be considered as having learning disabilities (Lyon et al., 2001). Professionals also speculate that practitioners sometimes ignore the traditional diagnostic standards for learning disabilities in order to provide services to students without having to use more potentially objectionable labels (e.g., mental retardation) and in order to provide help to those students sometimes referred to as “slow learners,” who exhibit overall marginal achievement but otherwise would not be eligible for special education.



*Response to intervention (RTI) is a federally approved, data-based approach to identifying students with learning disabilities. It is an alternative to traditional approaches that measure discrepancies between ability and achievement.*



#### PROFESSIONAL MONITORING TOOL



**Standard 8** Assessment  
... legal provisions regarding  
assessment

#### fyi

In many ways response to intervention (RTI) is a specific application of universal design for learning and differentiated instruction. It considers learner needs, relies on changing procedures to accommodate students, and advocates basing decisions on data.

Response to intervention (RTI) represents a federally legislated option for addressing these problems (Bradley, Danielson, & Doolittle, 2005). RTI is permitted, not required, in IDEA 2004, and it is receiving widespread attention. It includes these principles:

1. It replaces the ability–achievement discrepancy criteria with a simple direct assessment of the extent of a student’s underachievement. This solves the problem of identifying young children and providing early intervention because it eliminates the need to wait for a discrepancy to emerge.
2. It removes the provision that inadequate instruction, emotional disturbance, and cultural or social issues make a student ineligible for services as learning disabled. In RTI, if learning problems are extreme, the reasons for them are not as important as providing assistance to the student.
3. It requires measures of a student’s achievement on well-designed early instructional interventions (especially in prekindergarten through second grade) as part of the assessment process. Doing so ensures that the quality of instruction will be high as well as provides clear documentation of efforts to address student learning problems (Lyon et al., 2001).

#### **Three-Tiered Models in Response to Intervention**

The most common procedures being used to implement the RTI approach address reading problems, and they are outlined in three-tiered models of intervention (Vaughn & Fuchs, 2003; Vaughn, Linan-Thompson, & Hickman, 2003). Here is an explanation of each tier:

■ **Tier 1.** Most students should succeed when they are taught to read using practices that have been demonstrated through research to be effective (Denton, Vaughn, & Fletcher, 2003). All students participate in tier 1, and educators are responsible for implementing proven instructional methods, including differentiation, and closely monitoring the progress of students in the core reading curriculum.

■ **Tier 2.** For approximately 20 to 30 percent of students, tier 1 instruction is not enough. That is, the gap between their skills and what would be considered average progress is significant, and it is likely, based on the data, to get worse. Based on diagnostic data gathered (Speece, 2005), students in tier 2 receive supplemental instruction that may include structured tutoring by a trained assistant or peer, additional opportunities to practice skills, and individually paced instruction. The interventions are research based, and they are in addition to the core reading instruction being delivered in the classroom.

■ **Tier 3.** If diagnostic data indicate that a student still is not making adequate progress in acquiring essential reading skills when tier 2 interventions are being implemented, even more intensive interventions are initiated. For the few students who need this intensive assistance

(i.e., usually no more than 5 to 10 percent of all students), instruction usually is delivered by a reading specialist or special educator and often occurs outside the general education classroom. The instruction may include a specific reading program (e.g., Wilson Reading, Corrective Reading), but it is primarily characterized by its intensity, its repeated opportunities for practice and review, its reliance on carefully analyzed and sequenced instruction, and its use of continuous monitoring of progress. In some but not all applications, this tier is considered special education service.

### Criteria for Eligibility

When RTI is the approach used to assess students for the possible presence of learning disabilities, decision making is slightly different from that in traditional approaches. The multidisciplinary team still convenes and considers the available data, but their focus is on the following:

1. Even though research-based, individually designed, systematically delivered, and increasingly intensive interventions have been implemented, is the student still exhibiting significant gaps in learning compared to what would be expected? Is it likely that, despite the interventions, the gaps will stay the same or increase instead of decrease? Because this approach to identifying learning disabilities is relatively new, in some states traditional achievement data, classroom observation data, other curriculum-based measures, and even measures of ability (all described in the preceding section) also may be considered in making a decision about eligibility. However, emphasis remains on the existence of a significant learning gap that, without additional support, will worsen over time.
2. If the team decides that the student is *nonresponsive to intervention*, he may be determined to have a learning disability.

Notice that this approach completely eliminates an ability–achievement discrepancy. It also takes out issues related to psychological processing, environmental factors, and quality of instruction. You should note, though, that RTI has raised many questions related to specific guidelines for use, including the length of time each tier should be implemented before it is determined to be inadequate, the way that RTI applies to mathematics, and the types of research-based practices teachers should be using.

Perhaps the most important question related to RTI concerns whether it is a valid approach to identifying students with learning disabilities, and controversy is growing on this topic. You can read more about this rapidly evolving debate in the last section of this chapter.

## How Do Students with Learning Disabilities Receive Their Education?

**S**tudents with learning disabilities are educated in a range of settings. However, strong emphasis is placed on ensuring that these students are held to the same academic expectations as typical learners. Federal law outlines the basic requirements for how all students with disabilities receive their education. Within those guidelines, though, many options exist.

### Early Childhood

Young children generally are not diagnosed as having learning disabilities for several reasons. First, the indicators of learning disabilities (e.g., problems related to reading, math, oral and written language) usually are not apparent in preschool children. Second, because the possibility of misdiagnosis is so high, professionals are reluctant to risk the negative impact on child self-perception and teacher expectations that might occur if the learning disability

PROFESSIONAL MONITORING TOOL



Council for Exceptional Children

**Standard 8** Assessment  
... use assessment information

### CHECK Your Learning

What criteria must be met for a student to be eligible for special education services as having a learning disability? How are these criteria different in traditional and RTI approaches?

PROFESSIONAL MONITORING TOOL



Council for Exceptional Children

**Standard 2** Development and Characteristics  
... similarities and differences of individuals

## Research

### Notes

In studying schools that “beat the odds”—that is, schools with high levels of poverty where reading is taught successfully—Denton, Foorman, and Mathes (2003) found that these schools shared a sense of urgency and commitment to learning, had strong instructional leadership and accountability, relied on strong professional development and coaching, closely monitored student progress, targeted instruction, and took no excuses for lack of success.

label is applied in error. Overall, the considerable normal differences in rates of development among young children make formal identification inappropriate; what might appear to be a learning disability could easily turn out to be a developmental difference well within the normal range (Appl, 2000).

Programs for young children with *developmental delays* (the general term you have learned, often given when young children receive special services) usually address areas indirectly related to learning disabilities. For example, such programs focus on improving children’s gross-motor skills (e.g., hopping) and fine-motor skills (e.g., using scissors or crayons), their expressive language skills (e.g., naming objects, asking questions to indicate need) and receptive language skills (e.g., following simple directions), their attention (e.g., persisting in a task for several minutes), and their social skills (e.g., taking turns, playing in a group). Interventions in all of these areas help create a solid foundation for later academic tasks, and students with significant delays in these areas may or may not later be identified as having learning disabilities.

## Elementary and Secondary School Services

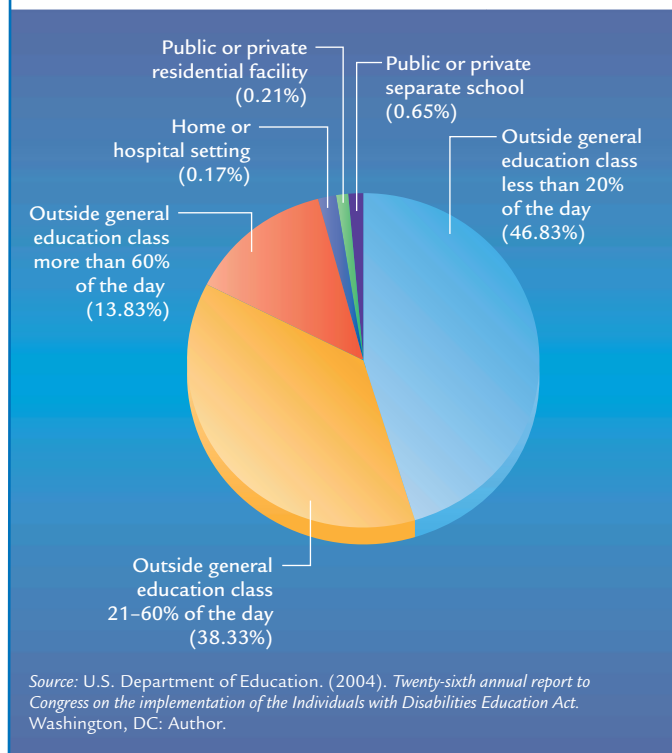
Ninety-nine percent of school-age students with learning disabilities receive their education in a typical public school setting (U.S. Department of Education, 2004). As you can see from the information presented in Figure 5.2, approximately 48 percent of today’s students with learning disabilities spend nearly their entire school day in general education settings with their peers. These statistics illustrate the strength of the trend toward inclusive practices introduced in Chapter One. Only 20 years ago, just 15 percent of students with

learning disabilities spent this much time in general education settings (U.S. Department of Education, 1988). However, these data vary greatly from state to state, with New Hampshire and North Dakota educating 80 percent or more of their students with learning disabilities primarily in general education and Hawaii and Massachusetts educating less than 15 percent of their students in this setting (U.S. Department of Education, 2004). What do the data for your state suggest about how students with learning disabilities receive their services? Why do you think there are such large discrepancies across states regarding placement options for students with learning disabilities?

Knowing the proportion of time students spend in general education versus special education settings does not adequately convey what an individual student’s services might involve. In schools using best practices, a student in general education—whether for a large or small part of the day—would use materials adjusted for his reading level and other special needs and access a computer and other appropriate assistive technology, as illustrated in the Technology Notes on page 153. Peer supports, such as peer tutoring or a buddy system, would be in place, and a special educator might co-teach in the classroom for part of the day (Friend & Cook, 2007). In the resource setting (the usual arrangement when students leave the classroom for part of the day), the student would receive intense, individually designed, and closely monitored instruction in any academic area affected by the learning disability. A student who is away from the general education classroom for more than 60 percent of school time is in a self-contained program in which most

Figure 5.2

Educational Placements of Students Ages Six to Twenty-One Who Have Learning Disabilities (in percentages)



Current technology provides many tools to help students with learning disabilities to take in information, organize their thinking, and demonstrate their learning. Here are three excellent examples:

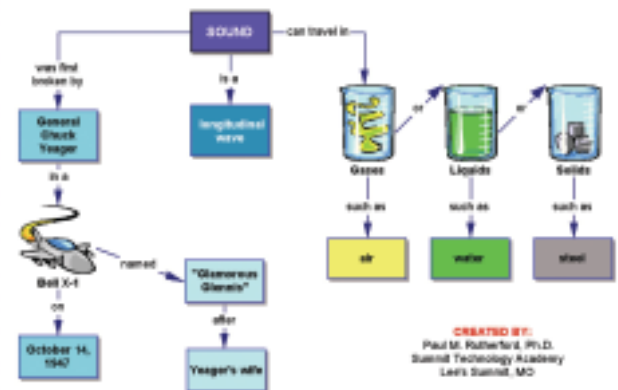
- AlphaSmart Neo** is a self-contained unit that enables students to enter and edit text and then send it to any computer for formatting or to a printer. Its rugged construction means it can survive the occasional fall from a student desk, and its simplicity eliminates the complexities and distractions of a computer. The units are operated by battery, so no wires are involved. They are compatible with both Macintosh and PC computers. Students who may be reluctant to compose by handwriting often can succeed using this widely available technology, particularly because information from one file can be pasted into another.



AlphaSmart

- Inspiration Software** produces a suite of tools (Inspiration, Kidspiration, Inspiredata) that provide visual learning tools for students. For example, they can create webs or concept maps that enable them to see a visual organization of information they are learning. They also can convert information they have put into tables into clear visual representations. The software also can be an integral part of brainstorming ideas for a project or for prewriting activities. Versions of this program exist for younger or older students.

- Write:OutLoud** is a talking word processor software package designed for students across grade levels and reading abilities who experience difficulties writing. As the student types, it can say each letter, word, or sentence, thus providing constant feedback about what is being written. The program also has a talking spell checker. It can read information to the student that has been accessed from the Internet or another source, so it can be used to assist poor readers in preparing reports.



Inspiration concept map



Write:OutLoud® story

Of course, any technology can only be as good as the knowledge base of the professionals teaching students how to use it. Technology specialists are sometimes used in school districts to help teachers learn how to use technology most effectively with their students with LD and other disabilities. As students with LD spend more and more time in general education settings, technology is becoming more and more integral to their education.

Source: Adapted from Quenneville, J. (2001). Tech tools for students with learning disabilities: Infusion into inclusive classrooms. *Preventing School Failure*, 45, 167-170. Reprinted with permission of the Helen Dwight Reid Educational Foundation. Published by Heldref Publications, 1319 Eighteenth St., NW, Washington, DC 20036-1802. Copyright © 2001.

or all core academic instruction is delivered by a special education teacher highly qualified in the core content areas. However, students in such settings often join general education classmates for some instruction, as well as for related arts and electives such as art, music, and technology. In middle and high school settings, students might take exploratory classes, electives, or study skills training with other students.

### *Inclusive Practices*

As you know, decisions about where students receive their education are determined on the IDEA principle of *least restrictive environment (LRE)* and the specific needs identified in their IEPs. Within this context the issue of whether inclusive practices are the best educational approach for students with learning disabilities has been debated for many years (e.g., Carlberg & Kavale, 1980; De Simone & Parmar, 2006; McPhail & Freeman, 2005; National Joint Committee on Learning Disabilities, 2003). In the early twenty-first century it appears that fundamental questions about whether students with learning disabilities should receive at least some services with their peers are largely answered, but data suggest that over the past decade only fifteen states have clearly increased the time spent in general education for these students (McLeskey, Hoppey, Williamson, & Rentz, 2004).

Several serious issues remain to be addressed. It is important to remember the premise of this book—that inclusion is about how the adults and students in any particular school think about teaching and learning for all the students who go there. Being inclusive does not mean that students never leave the general education setting. Instead, it means that consideration is given to how a student’s needs can be met within the classroom context before resorting to instruction in a separate setting. If the latter is considered in the student’s best interest, it is provided for as long as it is warranted. Within that framework, professionals in the field now are thinking about the outcomes for students who receive an inclusive education versus those who receive more traditional services. The data are mixed.

*“Inclusion is about how the adults and students in any particular school think about teaching and learning for all the students who go there.”*

For example, Idol (2006) studied inclusive practices at eight elementary, middle, and high schools. She generally found positive results related to teacher perceptions and student outcomes. Ritter, Michel, and Irby (1999) found that parents and teachers of students with learning disabilities in an inclusive program reported higher student self-confidence, higher expectations, and improved academic progress. Rea, McLaughlin, and Walther-Thomas (2002) reported similar results for students in middle schools. They found that the students with learning disabilities in inclusive programs earned higher grades, scored at comparable or higher levels on achievement tests, and attended school more days when compared to students with learning disabilities in resource programs.

Not all the results are clearly positive, however. For example, Magiera and Zigmond (2005) explored the question of whether co-taught versus solo-taught middle school classes had differential effects on students with learning disabilities. They found no significant differences except that general education teachers interacted less often with the students with learning disabilities when the special educator was present. Vaughn and her colleagues (e.g., Klingner, Vaughn, Hughes, Schumm, & Elbaum, 1998; Vaughn, Elbaum, Schumm, & Hughes, 1998; Vaughn & Klingner, 1998) have examined the locations in which services are delivered and the academic and social outcomes of inclusion. They found that students have better social outcomes when in-class services, such as co-teaching, are available on a part-time rather than a full-time basis, and they found that both social and academic outcomes vary based on individual student characteristics. Ultimately, whether this approach is successful depends largely on the quality of the instructional practices in general education classrooms, including implementing universal design for learning (UDL) and differentiation; the availability of supports such as assistive technology; and the provision of intense, separate instruction as it is needed (Sapon-Shevin, 2003).

#### PROFESSIONAL MONITORING TOOL



**Standard 1** Foundations  
... issues, assurances, and due  
process rights

### Research

#### Notes

A report released by a coalition of New York City advocacy groups states that students with disabilities who are included in general education classes are three times more likely to pass standardized tests than those who are separated into special education classrooms, as long as they continue to receive the supports they need (<http://specialed.about.com/library/blinclusionworks.htm>).

#### PROFESSIONAL MONITORING TOOL



**Standard 4** Instructional  
Strategies  
... select and use instructional  
strategies

## Michael's Perspectives on His Education

**H**ave you ever wondered what students with learning disabilities think of their services? Connor (2006) reported on his study of Michael, a young adult with learning disabilities who is also African American and living in poverty. Here are excerpts from Michael's story:

The kids who are placed in that special ed. classroom,  
 They don't want to learn.  
 Most of the kids act like they don't care.  
 They destroy the rooms, they play around, make jokes, throw  
 stuff. . . .  
 But once you're placed in an environment with regular ed. kids,  
 they sit there. . . .  
 A totally different person, coz they don't want to embarrass  
 themselves.  
 When you're placed in a room with people who they claim that  
 is your kind,  
 You don't care.  
*"Oh, we all special ed., so we can all act the same way."  
 "You're here, I'm here. So something's wrong with all of us."  
 "He's stupid, I'm stupid, we're all in special ed."*  
 When it starts at a young age, when it goes up, it just gets more  
 corrupt.  
*"I'm special ed. I'm slow in all these classes. I don't need to do none of the  
 work."*  
 They don't think they're good in anything.  
 It seems like teachers have pity on the special ed. kids.  
*"He can't pass the test, but he's a good boy so let's just pass him"*

I used to sit in the corner and like, *"This work, Oh, my God,  
 might as well go to sleep."*  
 When you're in regular ed., everyone loves you and adores you.  
 In special ed, you're treated differently.  
 They have mercy on you.  
 When you do special ed. work, they try to help you too much.  
 Special class work was easy.  
 Basically special ed. kids only stick with special ed. kids.  
 Coz, at the lunch table if they find out that you're in special  
 ed;  
 No one's gonna hang out with you—you might as well hang  
 out with your own kind.  
 You're just lost, labeled as a reject. . . .  
 In high school, no one ever really knew I was in special ed.  
 Coz I'd sit there and carry myself like a regular kid.  
 I'd come to all my classes. Just to make sure the hall is  
 clear,  
 I'd go into the classroom and hide in the corner, coz you  
 don't want people to know.  
 Once they find out, girls don't want to date you . . . No one  
 wants to talk to you.  
 I kept it to myself, I still do keep it to myself.

*Source:* Connor, D. J. (2006). Michael's story: "I get into so much trouble just by walking": Narrative knowing and life at the intersections of learning disability, race, and class. *Equity & Excellence in Education*, 39, 154-165.

The discussion of inclusive practices often overlooks the perspectives of students. In the Inclusion Matters, read the poetry of Michael, a young adult with a learning disability who received special education through junior high and high school. What does Michael's experience tell you about students' perspectives on special education and learning environment?

### Transition and Adulthood

The outcomes for students with learning disabilities as they move into adulthood are as varied as the individuals who comprise this group. Some of these young adults successfully complete high school and move into postsecondary options—vocational training, college study, and employment—with confidence and success. However, the majority of young adults experience difficulties (Scanlon & Mellard, 2002). For example, Murray, Goldstein, Nourse, and Edgar (2000) followed the progress of two cohorts of high school graduates with and without learning disabilities for up to ten years. They found that the graduates with learning disabilities were significantly less likely to have participated in any form of postsecondary education, and if they did participate, they were more likely to have attended a training school or vocational program than a college or university. Others have found that adults with learning disabilities are more likely to be employed in part-time jobs, to have lower occupational status, and to earn lower wages (Collett-Klingenberg, 1998; Reder & Vogel, 1997).

**PROFESSIONAL MONITORING TOOL**



Council for  
 Exceptional  
 Children

**Standard 3** Individual Learning  
 Differences  
 . . . effects on life



*Students with learning disabilities may attend college and receive supports there through the Americans with Disabilities Act.*

## Research

### Notes

School professionals now are required to use research-based practices in their interventions with students. You can read more about this very important topic at the U.S. Department of Education website: [www.ed.gov/rschstat/research/pubs/rigorous/vid/index.html](http://www.ed.gov/rschstat/research/pubs/rigorous/vid/index.html).

#### PROFESSIONAL MONITORING TOOL



**Standard 4** Instructional Strategies

... strategies to promote transitions

**Standard 5** Learning Environments and Social Interactions

... encourage self-advocacy and independence

## Transition Planning

Why do many students with learning disabilities who are acknowledged to have at least average intelligence continue to have various difficulties as they become adults? Consider the traits and skills needed to go to college or to obtain and keep a job, including an ability to work independently and to seek assistance as needed; to be organized; to focus attention for long periods of time; to listen, speak, read, write, and compute effectively and efficiently; to problem solve; and to handle social situations with competence. These are the precise areas in which students with learning disabilities may be deficient. And because these students may demonstrate a slower rate of career maturity, poor ability to advocate for themselves, and low self-esteem, they may have unrealistic job expectations in terms of how to juxtapose their strengths and weaknesses with vocational choices (Bear, Kortering, & Braziel, 2006).

Since transition planning was added to federal special education law in 1990, increased attention has been paid to preparing students with learning disabilities for life after high school. As you know, a transition plan includes a statement of needs that begins at age sixteen and is updated annually pertaining to the student's course of study, along with a specific plan with measurable goals and an explanation to the student of his rights. However, the quality of transition plans and services is still not fully established (Carter, Lane, Pierson, & Glaeser, 2006). Hitchings and his colleagues (Hitchings, Luzzo, Ristow, Horvath, Retish, & Tanners, 2001) studied students with learning disabilities who were attending college. Of the students who had received special education services during their elementary or secondary school years, only one could recall participating in a meeting specifically to plan transition. Many of the students had difficulty explaining the nature of their disabilities and the impact their disabilities might have on career choice.

### Model Transition Practices

Model practices for transition for students with learning disabilities in one high school were found to include these features (Collett-Klingenberg, 1998):

- Inclusion of career awareness and exploration activities beginning in the freshman year and continuing through high school
- Instruction related to skills needed for successful transition, including problem solving, organization, self-advocacy, and communication
- Transition-planning activities for school professionals and community members regarding the next steps that might be needed to improve activities and services

In addition, students and parents were integrally involved in transition planning, and transition-planning teams included community representatives as appropriate. Academics were given priority; however, work experiences were increasingly being incorporated into student plans, and linkages were created between students and their parents and postschool services, such as the Division for Vocational Rehabilitation.

### Self-Advocacy

One other topic needs to be considered in a discussion of students with learning disabilities and transition: **self-advocacy** (Carter et al., 2006; Madaus & Shaw, 2006). First, students need to be willing to identify themselves as having a disability. Some are reluctant to do so on college applications because they fear it will affect their admission status; others have been advised by school counselors to drop their learning disability designation (Hitchings et al., 2001). In addition, students need to research and access the supports available to them from

the college or university campus office designed to provide such assistance (Lock & Layton, 2001). These supports might include tutors, notetakers, and audiotaped textbooks. Finally, students need to be confident enough to articulate their needs to professors and negotiate accommodations, such as extended time for tests, so that they can compensate for their learning disabilities. Unless students learn and use strong self-advocacy skills, they are likely to drop out of college or to remain underemployed or unemployed (Field, Sarver, & Shaw, 2003; Trainor, 2005). If they have these skills, they are likely to complete college and enter the workforce much like other young adults (Madaus, Foley, McGuire, & Ruban, 2001).

## What Are Recommended Educational Practices for Students with Learning Disabilities?

**F**or more than two decades, professionals have been investigating which techniques and methods are most effective for addressing the academic, cognitive, social, and behavioral needs of students with learning disabilities. A wealth of research information now is available to guide teachers' practices (e.g., Jitendra, Edwards, Sacks, & Jacobson, 2004; Vaughn & Linan-Thompson, 2003). It indicates that two methods, used in combination, are most effective for most students, regardless of age or specific type of learning disability: direct instruction (DI) and strategy instruction (SI).

### Direct Instruction

One method for effectively instructing students with learning disabilities is direct instruction. **Direct instruction (DI)** is a comprehensive, teacher-led approach based on decades of research that emphasizes maximizing not only the quantity of instruction students receive but also the quality (National Institute for Direct Instruction, 2006; Stein, Carnine, & Dixon, 1998). It includes clear demonstrations of new information in small segments, practice that is teacher guided, and immediate feedback to students on their work (Henley, Ramsey, & Algozzine, 2001). Direct instruction is based on these guiding principles:

1. Present lessons in a well-organized, sequenced manner.
2. Begin lessons with a short review of previously learned skills necessary to begin the lesson.
3. Begin lessons with a short statement of goals. Provide clear, concise explanations and illustrations of what is to be learned.
4. Present new material in small steps with practice and demonstrations at each step. Provide initial guidance through practice activities.
5. Provide students with frequent opportunities to practice and generalize skills.
6. Ask questions to check students' understanding, and obtain responses from everyone (Mather & Goldstein, 2001, p. 146).

The Specialized Instruction on pages 158–159 illustrates the use of direct instruction in a sample lesson plan.

### Strategy Instruction

One of the overall goals for all students' education is independence. Because of students' learning disabilities, achieving academic independence can be particularly difficult. Some students cannot write essays because they do not know the components of an essay and what content goes in an introduction, body, and conclusion. Others do not comprehend their textbooks because they do not have a plan for processing and remembering the information presented. Yet others struggle to take notes because they cannot decide

#### PROFESSIONAL MONITORING TOOL



**Standard 4** Instructional Strategies  
... teach problem-solving

**Standard 5** Learning Environments and Social Interactions  
... teach self-advocacy

#### PROFESSIONAL MONITORING TOOL



**Standard 4** Instructional Strategies  
... facilitate maintenance and generalization of skills

### CHECK Your Learning

How do the characteristics of direct instruction address the learning characteristics of students with learning disabilities?



## Using Direct Instruction

**D**irect instruction (DI) is one of the most recommended approaches for teaching students with learning disabilities. Here is a sample lesson plan based on DI principles:

### Title of Lesson: Contractions (e.g., *he's, she's, it's, that's*)

#### Classroom Management: (1–2 minutes)

**Grading Criteria:** 15 percent reading sentences correctly, 35 percent generation of new sentences with learned contractions, 25 percent completed worksheet, and 25 percent slate writing activity.

**Contingency:** If the entire class's criterion level performance is at or better than 85 percent correct, students qualify for extra slate time (i.e., free choice to write or draw on their slates).

#### Specific Learning Outcomes: (1–2 minutes)

"Today, we are going to learn about contractions. You will learn to read a contraction alone and in a sentence. You will also learn to correctly write a contraction when given two words, and use the newly learned contraction in a sentence."

#### Anticipatory Set: (3 minutes)

**Focus Statement.** "Most often when we speak, we shorten a word or phrase by omitting one or more sounds. Listen to this sentence, 'It is raining.' Now listen again as I omit a sound, 'It's raining.' What two words did I shorten by omitting a sound?" (Students respond.) (Repeat with other examples such as "He's going to the store" and "She's at the mall.")

"When we shorten a word or phrase by omitting one or more sounds or letters, it is called a contraction."

**Relevance of the Lesson.** "It is important to learn how to read contractions because they are often used in storybooks, newspapers, magazines, and most material that you read. Also, you need to learn how to write contractions to use in your own writing."

**Transfer of Past Learning.** "We learn many new words in reading. A contraction is a special word because it is written differently than a regular word. Learning how to read and write contractions will make you a better reader and writer."

#### New Vocabulary Terms: (1–2 minutes)

- Contraction—shortening of a word or phrase by omitting one or more letters or sounds.
- Apostrophe—a mark that takes the place of the missing letter(s) in the contraction; it looks like a comma but is placed at the top of the line.

#### Teaching (10–12 minutes)

1. Review decoding words in isolation and in sentences: *he, she, it, that, is*. Have students use words in their own sentences.

##### Questions

- "What is this word?"
- "Read this sentence."
- "Use this word in your own sentence."

#### PROFESSIONAL MONITORING TOOL



**Standard 4** Instructional Strategies  
... increase self-awareness and self-management

### CHECK Your Learning

How could you use principles of universal design for learning to incorporate learning strategies into instruction?

what information is essential or how to organize it. **Strategy instruction (SI)** is a highly recommended method for students with learning disabilities that addresses these types of problems. *Strategies* are techniques, principles, and rules that guide students to complete tasks independently (Friend & Bursuck, 2006). Strategies outline the steps students can take to accomplish learning tasks and provide some type of memory assistance (often an acronym) so that students can easily recall them. Teachers usually introduce strategies by helping students realize an instructional dilemma (e.g., a challenge students encounter with word problems in math) and then explaining why the strategy will help them overcome the dilemma. In the Specialized Instruction on page 160, you can see specific examples of learning strategies.

Think about strategies and students with learning disabilities. How does strategy instruction address some of the characteristics they have? In what areas do you think these students would benefit from strategy instruction? Many research-based strategies have been described in the professional literature (e.g., Deshler, Ellis, & Lenz, 1996; Deshler et al., 2001; Friend & Bursuck, 2006), and you are likely to find a strategy that can assist a student with learning disabilities regardless of her age or specific needs.

2. Define a contraction and an apostrophe.

**Questions**

“When a word or phrase is shortened by omitting one or more letters or sounds, it is called a \_\_\_\_\_.”

“What is the name of the visual mark used to take the place of the missing letters?”

3. Present examples and nonexamples of contractions and have students identify them.

**Examples:**

*he’s, she’s, it’s, that’s.*

**Nonexamples:**

*cat, drum, bell.*

**Questions**

“Is this a contraction? Why or why not?”

4. Model the sequence of steps for forming contractions.

**Example: It is**

- a. Write the two words together without a space between them.
- b. Erase the letter *i* in *is* and put an apostrophe in its place.
- c. Read the new word by blending the sounds. Point out that the apostrophe doesn’t make a sound. Have students read the word, spell it, and repeat the word again.
- d. Write sentences:

*It is hot today.*

*It’s hot today.*

“Do these two sentences mean the same thing? How do you know?”

Have students read sentences with the teacher.

Have students use the contraction in a new sentence.

- e. Repeat steps a–d with other examples (e.g., *he, she, that*) using simple sentences.

5. Do a discrimination test of irregular words and previously known words. Call on students as a group to read words by randomly pointing to each word several times.

6. Test individual students on reading contractions.

### Guided and Independent Practice: (5–8 minutes)

1. Students first complete a worksheet with teacher direction and then do similar exercises independently. Students match the contraction with the two words that it is composed of.
2. The teacher provides guided and independent practice in writing the contractions on slates when the two words that make up the contraction are presented on the board.
3. Examples on board: *He is, she is; it is; that is*
4. Students will correctly write the contractions in newly generated sentences and share sentences with the class.

### Closure: (3 minutes)

“Today, we learned about contractions and the apostrophe. We also learned that contractions have the same meaning as the two words that make them up. What is a contraction? What is an apostrophe? What word means the same as *it is*? What two words make up *he’s*?”

Source: Jitendra, A. K., & Torgerson-Tubiello, R. (1997). Let’s learn contractions! *Teaching Exceptional Children*, 29(4), 16–19. Copyright © 1997 by the Council for Exceptional Children. Reprinted with permission.



*For many students with learning disabilities, intense, phonologically based interventions have been demonstrated effective for improving reading achievement.*



## Sample Learning Strategies

Learning strategies are effective tools for helping students with learning disabilities succeed in a wide variety of tasks. Here are two examples of learning strategies.

### The AWARE Strategy for Note-Taking

The AWARE strategy is designed for high school and college students who need a systematic way to remember to take notes effectively during lectures and other instruction.

1. **Arrange to take notes.**  
Arrive early.  
Take a seat near the front or center.  
Obtain a pen and notebook.  
Note the date.
2. **Write quickly.**  
Indent minor points.  
Record some words without vowels.
3. **Apply cues.**  
Attend to accents and organizational verbal cues.  
Record cued lecture ideas.  
Make checkmarks before cued ideas.
4. **Review notes as soon as possible.**
5. **Edit notes.**  
Add information you forgot to record.  
Add personal details.  
Supplement notes with details from readings.

### TREE for Writing

TREE is designed for elementary school students as a way to assist them in learning how to write persuasive essays.

1. **Topic sentence.**  
Tell what you believe.
2. **Reasons**  
Tell three or more reasons: Why do I believe this?  
Will my readers believe this?
3. **Ending**  
Wrap it up!
4. **Examine**  
Ask myself: Do I have all my parts?

Keep in mind that students need to be taught how to use strategies. They should see the importance of the strategy, discuss it, watch you model it, and memorize it. You should provide on-going support until students can use a strategy independently.

*Sources:* Based on Hughes, C. A., & Suritsky, S. K. (1993). Notetaking skills and strategies for students with learning disabilities. *Preventing School Failure, 38*(1), 7–11. Harris, K. R., Graham, S., & Mason, L. H. (2003). Self-regulated strategy development in the classroom: Part of a balanced approach to writing instruction for students with disabilities. *Focus on Exceptional Children, 35*(7), 1–16.

## What Are the Perspectives of Parents and Families?

Unlike the parents of students with significant sensory, cognitive, or physical disabilities, who may learn of their child’s disabilities soon after birth, parents of children with learning disabilities often are not aware of their child’s special needs until the child is enrolled in school and experiences frustration and failure in academic tasks. Parents may be surprised when they are informed about their child’s disability, relieved to hear an explanation for their child’s struggles to learn, or concerned about the time lost in finding effective interventions. As Mary, a college-educated professional and the mother of first-grader Guy, told school professionals as they conducted the initial eligibility and IEP meeting,

*“Parents of children with learning disabilities often are not aware of their child’s special needs until the child is enrolled in school and experiences frustration and failure in academic tasks.”*

Stop. Wait. You’re saying my son has a disability—a disability. You’ve just changed my whole world and how I think about Guy. You can’t just say, “He’s learning disabled. Let’s write a plan for his education.” I need to think about this. I need to understand better what this means. It may be routine to you, but he’s my son. I can’t sit here right

now and make decisions. It's his life we're talking about. I wouldn't sign a contract to buy a car without a lot of thought and some careful research. How can you expect me to sign these papers about Guy's life without even knowing what I'm signing? I need to know what this means and what I'm agreeing to before I can sign anything.

Although not all parents can express their sentiments in such an articulate way, it is important to remember that the disability label often affects parents of students with learning disabilities in ways that school professionals cannot completely understand (Lardieri, Blacher, & Swanson, 2000). Many parents will have to redefine their image of their child. Especially if a child is identified during middle or high school, some parents may blame school personnel for their child's problems. Other parents may believe that they have failed their child and that they should have been able to prevent the disability. Special education teachers and other school professionals need to be aware that their attitudes toward parents, their communications with them, and their openness to parent and family perspectives can affect greatly the quality of the student's education and support received from home. In fact, one of the most common concerns expressed by parents of students with learning disabilities about school services is the frequency (i.e., too little) and focus (i.e., negative instead of positive) of communication from teachers and other professionals.

## Parents as Partners

Many parents of students with learning disabilities take active roles in their children's education. For example, Polloway, Bursuck, and Epstein (2001) conducted a series of studies on homework for students with learning disabilities and other disabilities. They found that school-home collaboration led to clear expectations, effective communication, and increased student success. Munk and Bursuck (2001) took a collaborative approach, involving students with learning disabilities, their parents, general education teachers, and special education teachers to create personalized grading plans. They found that the team effort resulted in a greater sense of fairness regarding grading students with learning disabilities and that students reported trying harder with this coordinated effort.

Although parent involvement is preferred, sometimes it can be a challenge. For example, Hughes, Schumm, and Vaughn (1999) examined Hispanic parents' perspectives on home reading and writing activities. They found that many parents of Hispanic children with learning disabilities provided books to their children, took them to the library, and read to them. However, some parents reported that they did not receive enough communication from school regarding how to help their children, and others indicated that their own difficulty with the English language constrained their ability to provide assistance. Torres-Burgo, Reyes-Wasson, and Brusca-Vega (1999) studied the involvement and treatment of urban Hispanic parents of children with learning disabilities in the entire special education process. They found that these parents rated their knowledge about IEPs significantly lower than non-Hispanic parents, particularly regarding the severity of their children's disabilities and the types of services received. Although all of the parents reported that special education teachers were sensitive to cultural issues, the Hispanic parents of children with learning disabilities communicated less with special education teachers than the non-Hispanic parents, and they were far less likely to report receiving advice on how to work with their children at home.

## What Trends and Issues Are Affecting the Field of Learning Disabilities?

**C**ontroversy has characterized the field of learning disabilities almost since its inception, and that trend continues today. In this era in which standards are rising and accountability for education outcomes is increasing, it is not surprising that many aspects of learning disabilities are being examined under a critical lens.

**PROFESSIONAL MONITORING TOOL**



**Standard 10** Collaboration  
... concerns of families

**INTERNET RESOURCES**

[www.matrixparents.org](http://www.matrixparents.org)  
An excellent website for parents, the Matrix Parent Network for Parents of Children with Learning Disabilities includes a discussion board for parents to exchange ideas.

**PROFESSIONAL MONITORING TOOL**



**Standard 10** Collaboration  
... becoming participants in the educational team  
**Standard 1** Foundations  
... impact of differences between home and school

## Issues Related to Response to Intervention for Identifying Students as Learning Disabled

Earlier in this chapter, you learned that IDEA 2004 authorized for the first time a procedure for identifying students as having learning disabilities that is significantly different from traditional approaches—response to intervention (RTI). RTI has many benefits, including its reliance on data directly related to instruction and its potential for heading off serious learning problems through early intervention (Fletcher, Denton, & Francis, 2005; Vaughn & Fuchs, 2003). A rapidly growing body of professional literature is exploring both the applications and the viability of RTI. Not surprisingly, a number of questions are being raised regarding its use (Holdnack & Weiss, 2006; Johnson, Mellard, & Byrd, 2005; Kavale, 2005).

First, some professionals are concerned that RTI may not adequately and fairly address the diversity of students who may have learning disabilities. For example, students who are gifted and who also have learning disabilities may be able to compensate enough for their areas of deficiency that they will not be identified using an RTI model, even though a traditional approach would have highlighted a discrepancy between these students' potential and achievement (National Joint Committee on Learning Disabilities, 2005). A potential result is that RTI would underidentify students who are gifted and learning disabled. Conversely, preliminary research has raised concern regarding RTI for students who live in poverty and other high-risk situations. For these students, a real risk of overidentification may exist (Skiba et al., 2005).

A second area of concern has to do with the specific procedures that comprise response to intervention and the ways these procedures are implemented (Gerber, 2005; Mastropieri & Scruggs, 2005). Some of the questions being raised are these:

- For how long should an intervention be implemented before it is determined to be ineffective?
- How often and for how long should students receive tier 2 and tier 3 interventions (Fuchs, 2003; Speece, 2005)?
- Which research-based interventions should be used at each tier (Deshler, 2003; Semrud-Clikeman, 2005)?
- Is a three-tier model the best approach, or might four- or even more tier models, as are being designed in some states, be more effective?

A third set of concerns pertains to the resources required to effectively and fully implement RTI models. For example, implementing RTI requires that educators understand research-based interventions and strategies for data collection related to screening, diagnostics, and progress monitoring (Vellutino, Scanlon, Small, & Fanuele, 2006). The implication is that considerable professional development will be needed, and resources must be committed for that purpose. In addition, professionals need appropriate materials for assessment and instruction; again, resources must be allocated for the purchase of such items. A third example of resource needs concerns personnel; someone has to be available to gather data and interpret data and meet with others to problem solve regarding the next steps for individual students. RTI generally is labor intensive, and resources may be needed for paraprofessionals or substitute teachers to provide coverage for classroom personnel. Finally, little has been discussed regarding parents as resources, and no specific role for parents is included in most RTI models.

Response to intervention has the potential to significantly change the ways in which students who struggle to learn receive their education (Francis, Fletcher, Stuebing, Lyon, Shaywitz, & Shaywitz, 2005). However, most professionals agree that far more information is needed before RTI can be considered valid and well established (Fuchs, Mock, Morgan, & Young, 2003). Whatever your planned role as a professional educator, you should anticipate that you will be affected by RTI, and you should closely watch for developments related to its implementation.

### INTERNET RESOURCES

[www.jimwrightonline.com/  
php/rti/rti\\_wire.php](http://www.jimwrightonline.com/php/rti/rti_wire.php)

At the RTI Wire website, you can learn details about implementing this alternative approach to identifying learning disabilities and also access helpful tools, such as templates for gathering data.

### INTERNET RESOURCES

[www.intervention  
central.org](http://www.interventioncentral.org)

The Intervention Central website is designed to help educators find and implement research-based practices. Reading, writing, math, behavior, and motivation are among the areas addressed.

## High School and College Students and Learning Disabilities

As the field of learning disabilities has matured and services have improved for older students, more and more students have successfully completed high school and continued on to college. In fact, students with learning disabilities now make up the largest single group of students with disabilities at the college level (Henderson, 2001; Scott, McGuire, & Shaw, 2003). However, a challenge accompanies what seems like a strongly positive trend: Increasingly, students are being identified for the first time as having learning disabilities during

*“The rapid increase in students identifying themselves as having learning disabilities late in their school careers has led colleges and universities to outline more carefully the documentation necessary to be eligible for services and the types of supports that can be provided.”*

the high school years (U.S. Department of Education, 2004). Advocates applaud this as evidence of a deeper understanding among professionals about what learning disabilities are and how the increased demands in high school for student independence and responsibility expose previously unidentified learning disabilities. Critics claim that many students thus identified in high school are hoping to take advantage of the testing accommodations they may be able to obtain to improve their scores on SATs and other college entrance exams and to parlay a disability label into special treatment while in college (Siegel, 1999). The rapid increase in students identifying themselves as having learning disabilities late in their school careers has led colleges and universities to outline more carefully the documentation necessary to be eligible for services and the types of supports that can be provided (Madaus & Shaw, 2006).

### PROFESSIONAL MONITORING TOOL



**Standard 1** Foundations  
... issues in definition and identification

## SUMMARY

The origin of the learning disabilities field can be traced to nineteenth-century research on the brain, but recognition of learning disabilities as a discrete category occurred in the 1960s. The definition that guides most school practices was included in the first federal special education law in 1975, and it has changed little since; an alternative definition has been proposed by the NJCLD. Nearly 50 percent of all students receiving special education services are identified as having learning disabilities, which may be caused by physiological factors or curriculum and environmental influences. Students with learning disabilities may experience problems in cognition (e.g., perception or memory), one or more academic areas, social or emotional functioning, and behavior.

Students are assessed for learning disabilities through one of two approaches. Beginning with IDEA 2004, response to intervention (RTI) may be used to determine whether a learning disability exists. In addition, traditional formal and informal assessments still may be employed. Eligibility is determined either by a failure to improve significantly or by the

presence of a discrepancy between ability and achievement. Most students with learning disabilities receive their services in general education settings with some type of special education assistance. As students near school completion, attention is focused increasingly on helping them make the critical transition to adulthood. Recommended instructional practices for students with learning disabilities include direct instruction, which is a highly structured teacher-led approach for teaching students across academic areas, and strategy instruction, which includes steps to guide students so that they can achieve independence for completing common academic tasks. Parents of students with learning disabilities often are highly involved in their children's education, but sometimes barriers to participation occur. Two important issues currently facing the learning disabilities field are (1) the validity of response to intervention as a method for identifying the presence of learning disabilities and (2) whether high school and college students should be identified as having learning disabilities for the first time.

## BACK TO THE CASES

### Jermaine

Jermaine is a student who has many needs, and you are a member of the IEP team that will make decisions about his placement for the next school year. Jermaine has told his general education teacher that he hates going to the special education classroom—his friends call him “retarded.” Jermaine’s mother, though, has indicated that she likes the individual attention Jermaine receives there and would even like additional services there. You are going to be asked to give your professional opinion about how Jermaine should receive his services next year. Prepare a statement that captures your thinking. (See CEC Standard 10 and INTASC Principles 10.01 and 10.05.)

### Danielle

You will be working with Danielle during her advisory period. Prior to meeting with her for the first time, you will need to find strategies (see CEC Standard 4) and assistive technologies (see INTASC Principle 4.08) to help Danielle become more organized so that she can be independent and academically successful in middle and high school. Based on the information provided in Danielle’s folder, prepare a summary of strategies and technolo-

gies you think are appropriate to meet Danielle’s organizational challenges. Include the rationale for your recommendations.

### Derek

Derek, like many students with or without learning disabilities, is apprehensive about his choices for the future. He only has a few months remaining in high school, but there is time to enhance his possibilities of a successful transition to postsecondary education (see CEC Standard 7). You and Derek have outlined a plan for his last semester of high school. Now you must write a letter to his general education teachers and family stating what Derek needs and wants from each of them as well as your own role (see INTASC Principles 1.09 and 7.07). Be sure to include the following points:

- What might his general education teachers do to ensure that he will be able to complete college-level academic work?
- What should Derek’s special education teachers do to support his transition to college?
- How should Derek’s family be involved in this process?

## KEY TERMS AND CONCEPTS

Attention deficit–hyperactivity disorder (ADHD), p. 146  
Criterion-referenced test, p. 148  
Curriculum-based measurement (CBM), p. 148  
Direct instruction (DI), p. 157  
Dyscalculia, p. 135  
Dysgraphia, p. 135

Dyslexia, p. 135  
Extrinsic motivation, p. 145  
Intrinsic motivation, p. 145  
Learned helplessness, p. 146  
Learning disabilities, p. 133  
Long-term memory, p. 140  
Metacognition, p. 140  
Minimal brain dysfunction, p. 132

National Joint Committee on Learning Disabilities (NJCLD), p. 135  
Nonverbal learning disability (NLD), p. 145  
Norm-referenced test, p. 148  
Psychological processes, p. 133  
Self-advocacy, p. 156  
Short-term memory, p. 140  
Strategy instruction (SI), p. 158

## REVIEW, DISCUSS, APPLY

1. What are the critical differences between the federal and NJCLD definitions of learning disabilities? How might school practices change if the latter definition were adopted in federal law? (Learning Objective 1)
2. Why are researchers so interested in determining the causes of learning disabilities? How might some of the areas of research explored in this chapter influence future practices for educators? (Learning Objective 1)
3. Interview the parent of a student with learning disabilities. What characteristics are mentioned by the parent? How do the child’s characteristics affect school learning? Activities at home? (Learning Objective 2)
4. Response to intervention (RTI) is a radical departure from traditional approaches to identifying students as having learning disabilities. Do you think this approach will lead to more students being identified? Fewer? What might be the direct impact of RTI on you as a professional educator? (Learning Objective 3)
5. In using traditional assessment strategies to identify learning disabilities, why is it helpful to have both formal and informal assessment data? (Learning Objective 3)
6. If you are currently participating in a practicum or field experience, compare with classmates the ways in which students with learning disabilities receive their services. Are the schools inclusive? How common are resource programs? Do any students receive most of their core instruction in a special education classroom? (Learning Objective 4)
7. Do you know someone with a learning disability who is attending college? If so, what is this person’s perspective on the quality of supports and services available to students with learning disabilities as they leave high school for college? (Learning Objective 4)

8. Considerable research demonstrates that strategy instruction is very effective for facilitating learning for students with learning disabilities. What characteristics do you think account for its effectiveness? What additional research-based learning strategies can you find by completing a search of the university library and the Internet? For whom might these strategies be appropriate? (Learning Objective 5)
9. What is your responsibility as a teacher in working with the parents of students with learning disabilities? How

would you respond if a parent expressed concern that her child was not learning in the way expected? (Learning Objective 6)

10. Scan recent issues of newspapers and magazines. What topics related to learning disabilities appear in the popular press? Do these issues help the public's understanding of LD? Hinder it? How? (Learning Objective 7)



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Go to Allyn & Bacon's MyLabSchool ([www.mylabschool.com](http://www.mylabschool.com)) and enter Assignment ID SPV7 into the Assignment Finder. Watch the video *Learning Disabilities*, in which Bridget, a teenager diagnosed with a learning disability, talks about how she deals with others' perceptions of her disability, and how it affects her.

**Question:** Relate Bridget's story to the material you have just read about dyslexia, social and emotional characteristics related to learning disabilities, special issues for older students diagnosed with learning disabilities, and Firsthand Account by Michael (see page 134). You may also answer the questions at the end of the clip and e-mail your responses to your instructor.

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