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CEC Knowledge and Skills Discussed in This Chapter
1. The foundational development of the construct called “learning disability.”
2. How the definition of learning disabilities has developed over the years and continues to change.
3. How the development of the learning disability definition has affected schools.
4. The medical, legal, and ethical issues relating the definition to the identification of individuals as learning disabled, especially in the areas of gender equity and cultural/linguistic differences.
5. The relationship between definition and potential causes or etiology of the disability.
6. Consideration of ultimate goals, costs, and optimal student outcomes to determine effective methodologies.
Basic Concepts

I guess I'm going to have to understand a lot about learning disabilities now.

_Irene Smith, Jamal’s mother_

Almost everyone understands learning disabilities in an informal sense. However, students who have learning disabilities, teachers, school administrators, parents, speech pathologists, psychologists, physicians, and many others need to understand the term _learning disability_ in a more formal way. They need to know that learning disability is a distinct category of special education, that it has legal status based on U.S. federal and state law (and similar laws in other countries), and that there is a substantial body of research about it. They should have fundamental knowledge of the characteristics of individuals with learning disabilities, the causes of learning disabilities, how to assess learning disabilities, teaching methods for treating learning disabilities, and the long-term outcomes for individuals who have learning disabilities.

When told that her son Jamal had a diagnosis of learning disability, Mrs. Smith wanted answers to a lot of questions. What caused this disability? How might it have been prevented? What is it like to have a learning disability? What can be done about it? How will this disability change my interaction with my child? Can he learn anything? Does this mean my child will not graduate from high school? Will he ever be able to take care of himself? What kind of job will my child be able to get and keep?

Learning disability is one of many differences characteristic of people in contemporary society. Other differences include intellectual _giftedness_, _cerebral palsy_, athletic prowess, _emotional or behavioral problems_, musical ability, _mental retardation_, _deafness_, artistic talent, _blindness_, and so forth (Hallahan & Kauffman, 2003). If we observe differences only in behavior, not in physical appearance, we may wonder whether the disability is real or imagined. We may also wonder whether our ignorance or bias is confusing the issue. To many people, learning disabilities seem less tangible than some other disabilities (e.g., cerebral palsy), and therefore some may wonder whether learning disabilities actually exist.

Teachers and those preparing to be teachers are likely to have other questions. If I have a student with a learning disability, what am I supposed to know about such students? What causes these disabilities? What are my responsibilities in such cases? How
do I decide the best ways to teach this student? Where can I turn for help? What works for such students? Will I really be able to help this student? Because learning disabilities are by far the most prevalent of student disabilities, these questions are most likely to be prompted by an encounter with a student who has a learning disability.

Finding the answers to such questions depends on gaining a basic understanding of underlying issues facing the field of learning disabilities. These issues are undoubtedly some of the most complex and challenging in all of education. They form the core of understanding learning disabilities. In this chapter, the authors introduce cases showing what learning disabilities are like, consider why studying learning disabilities is important, describe problems that impede progress in understanding learning disabilities, and discuss ideas that help to organize what we know about learning disabilities.

What Are Individuals with Learning Disabilities Like?

Like everyone else, each individual with a learning disability is unique. People with learning disabilities are not a type; they are individuals who, for whatever reason, require specialized instruction and access to accommodations and other adaptations that will permit them to succeed. To help show how different individuals with learning disabilities can be from one another, we refer to two students’ stories throughout this book. In this section, we introduce Jamal, the son of Irene Smith (see the quote at the beginning of this chapter), and Shannon, the daughter of Daniel and Kerri Ireland. In this and subsequent chapters you will find references to Jamal and Shannon. On the Website for this book (www.ablongman.com/hallahanLD3e) are school records and other information that provide a more comprehensive perspective on the cases of these students.

Jamal Smith was six years old and in first grade at Hereford Elementary School when we documented his story. He talked a lot about TV shows, dinosaurs, and rockets. He had recently developed an interest in space travel and very quickly was able to name all of the planets in the solar system. He was good at sports, a natural leader, liked by most of his peers, and unusually happy. When his teacher started a lesson, he was usually one of the most eager students. He followed directions right away, volunteered to answer the first questions the teacher asked, and tried to help his fellow students. On the playground, he helped organize games, was relied on as an arbiter by other students, and often was the star of his team.

His teacher, Alice Hamilton, observed that “he is a bright boy, but he just doesn’t get some things. He can talk your ear off about things that he knows, but he’s got no clue in reading.” She noted that he sometimes seemed
impatient during lessons that she was presenting, as if he already knew the content and wanted to learn about something else. “It’s as if he’s way ahead of me,” she said. “He’ll pick up on what I’m doing and seem to have an instant understanding of it. Then he’s ready to move on.”

Ms. Hamilton was so concerned about Jamal’s performance early in first grade that she contacted Jamal’s mother, Irene Smith. The two women knew each other from meetings two years earlier when Ms. Hamilton had taught Patricia, Jamal’s older sister. Ms. Hamilton remembered that Patricia had been a good student, not a star, but quite capable of earning passing grades.

They met, and Ms. Hamilton explained her concern: “Jamal seems really bright, but I’m worried that he’s not keeping up in reading. I have kids who are taking to reading like a duck to water, but I’m afraid Jamal could be sinking. He seems too smart to have trouble. He knows so much. He’s so verbal. So I want to know whether or not you see this, too.”

Jamal’s mother was shocked. She did not see the problem. She explained, “Of course, I don’t know much, but he can read whole books to me. He doesn’t have any reading problem.”

“Well, I’ve seen him read one or two whole books very well,” replied Ms. Hamilton. “However, when I ask him to read the same words that are in the book when they are on other pages or I write them on paper, he just can’t do it. I think he might have memorized the books he can read.”

“Oh, really?” asked Mrs. Smith.

“Yes, really. I also gave some simple tests to Jamal, and he can’t do things that lots of kindergartners can do,” Ms. Hamilton told Mrs. Smith. “He can’t take words apart into syllables or take sounds and blend them together into words.”

“Are you saying he’s retarded? He’s not retarded,” said Mrs. Smith quickly.

“No! He’s a bright boy. That’s what worries me.” Ms. Hamilton continued, “If he has problems, I think we should catch them now. It’s not that he’s mentally retarded, it’s that he has some specific learning problems. And they’re problems that can be helped. We just need to get the help.”

“Well, what does it take to get the help?” asked Mrs. Smith.

“We’ve already tried some things,” Ms. Hamilton replied. “We gave him extra reading time and some special attention, but that hasn’t taken care of things. He still didn’t take off.”

“I think we need an evaluation for special education,” said Ms. Hamilton. “That means that some people will give some tests to Jamal and they’ll report what they find to a team of people. And you’ll be part of the team. If the team says, ‘learning disability,’ then Jamal can get special education. That means he can get special help with his learning problems.”

“Well, I don’t understand much of anything about this.” Mrs. Smith shook her head. “But, I guess I’m going to have to understand a lot about learning disabilities now.”

Several months later, as you will learn in subsequent chapters, Jamal was identified as eligible for special education because of his problems with
some components of early reading. The decision to grant him special education services was not an easy one, and what happened along the way is instructive. Some members of the educational team charged with responding to the problems Jamal was experiencing were reluctant to apply the label of learning disability. Jamal’s teacher advocated strongly that he be eligible for special education, but the school psychologist recommended delaying the eligibility decision.

Shannon Ireland’s case is different from Jamal’s. Jamal was popular, but Shannon was shy. Shannon was good at art, and Jamal excelled in sports. Shannon’s case began in an earlier era of special education, when some ways of providing services were more popular than today. It also is different because, of course, Shannon’s problems were different. She was a different person.

Shannon was fourteen and in the eighth grade at Bishop Memorial Middle School when we wrote this book. When she was in third grade, a team of professionals decided that Shannon was eligible for special education because of a learning disability. Shannon’s special education teacher during elementary school was Peter Martens. He remembered Shannon as “sort of shy and ‘spacey.’ But as long as I kept her engaged, kept involving her, she learned like a champ.”

During the elementary grades, Shannon had problems in virtually every academic area. She also had a quiet demeanor and a tendency to lose focus on class activities. After several years of Mr. Martens’s intensive remedial instruction, Shannon learned to read and understand what she read, to spell reasonably, and to compose essays and poems. She continued to have trouble with mathematics, lagging behind her classmates, and she never really broke out of her shyness. As you will learn later (Chapter 9), Shannon also had a second disability—attention deficit hyperactivity disorder (ADHD)—that became more apparent as she progressed into less structured educational situations.

To help you get to know Shannon, we have two documents. The first is an excerpt from a letter from Mrs. Ireland, and the second is a statement by Shannon herself (see the Case Connections box on page 6). In one part of a letter to a university professor written when Shannon was in middle school, Shannon’s mother wrote about Shannon’s school history and her continuing problems with math.

I will always be grateful to Pete Martens, Shan’s first special education teacher. Of course, Danny and I both wish that Pete could have taken care of her math problems the same as he took care of her reading. But, you know, you can’t have everything, and we’re just thankful that she can read and write now. At least she’ll be able to get through high
school and maybe get some college. And there are lots of jobs that she could do that don’t require math.

Anyway, in second and third grade, before she got into Pete’s class, she thought she was dumb and that nobody liked her. Then he made her work really hard and she started to catch on. She started learning and feeling better about herself. He told her, “You’re just going to have to work harder at some things. Just like some people would have to work really hard on drawing, but drawing’s easy for you.” Actually, I think it was the phonics he made her learn.

Now she’s in middle school and, next year, high school. She’s still worried about not being popular, that she doesn’t have many friends. Of course, the ADHD is a struggle for her. And, also, she still has trouble with math. She can do her basic facts now pretty well, but it’s all gotten a lot harder with algebra coming on. First it was just story problems, but now they want her to do pretty complicated math. We just want her to be able to get a diploma, so we’re keeping with it.

**Why Is It Important to Understand Learning Disabilities?**

Appreciation for the individuality of students who, like Shannon and Jamal, have learning disabilities is one of the most important concepts teachers can learn. Accepting differences or variations in student performance and altering instruction so that students who have different needs will have successful outcomes is the goal of teaching students with learning disabilities. The goal of teachers—regardless of whether they teach in general or special education and whether they work exclusively with students with learning disabilities, those who have no disabilities, or those who have more substantial disabilities—should be to meet the unique needs of their students. Perhaps the most important concept that the study of learning disabilities has contributed to education is that individuals have different strengths and weaknesses and those strengths and weaknesses should be taken into account in planning and providing education for them. Education needs to be flexible and adapt to students’ characteristics.

In addition to the philosophical benefits of treating individuals as unique learners, there are other reasons it is important to understand learning disabilities. In the next few sections, we explain some of these reasons.

**Most Teachers Will Have Students with Learning Disabilities**

As we show in a subsequent section, more than 5% of school-aged children are identified as having learning disabilities. Teachers in the primary or elementary
grades who have 20 to 25 students in their classes will have at least one and perhaps two or more students who have learning disabilities. If they share students with other teachers (for example, by grouping students for arithmetic instruction), this number may increase.

Teachers in the secondary grades, where students move from class to class, will have even more students with learning disabilities in their classes. Secondary teach-

Shannon’s Reflections on Learning Disabilities

In an essay she wrote on her own when she was in eighth grade, Shannon described her feelings about having a learning disability.

I think there are people in this world with disabilities that are treated unfairly. I have learning disabilities in math (story problems mostly) that I have always had as long as I can remember. I did not think it was important for me to be good in everything and I have to work really very hard in other subjects so I don’t have all the time in the world. Now I feel it is unfair if I have to take the exit exam to get my diploma because I just know I won’t do good in the math part and then I won’t get that diploma and then what am I going to do?

People should have a chance. Just because you have a disability doesn’t mean you can’t learn. It just seems like if you have a disability then they figure you are a failure. Well, I’m not. I have to work hard, but I can learn.

I know about my disabilities. It’s called dyscalculia and it means “disability in calculating” but I can calculate pretty good. I’m not real fast, but I can do it if you give me the time or if somebody would show me how to make those calculators work I could be faster maybe. I have trouble with making equations and factors and multiplying fractions. Dyscalculia isn’t as popular or known as dyslexia which they thought I had too. Dyscalculia is important though because if it keeps me from getting a diploma that would be terrible injustice.

So I think they should let me have extra time on the test and let me use calculators. What would they think if they had to do something that their whole life depended on it and they weren’t good at it? Well that is what it feels like to me.

As would most early adolescents, when Shannon wrote this statement she still saw the world in terms of personal fairness. From reading it, you may already have ideas about her skill with written expression, her attitude, and her ability. As you read this text, you will learn more about her, and some of those ideas probably will change. Even though you may already know a lot about them, we hope you will come to understand learning disabilities in a more complete way.
ers may have as many as six or seven class periods per day with 20 to 25 or even 30 students in each period. If the school in which these teachers work identifies 5% of its students as having learning disabilities, these teachers may have six or more students with learning disabilities.

It is important for those who teach these students to know about the nature, causes, assessment, and treatment of learning disabilities. Teachers who work primarily with students who have other disabilities, such as emotional or behavior disorders, also will benefit from knowing about learning disabilities, because these students often will have learning characteristics that are similar to those of students with learning disabilities. One of the most helpful ways to lessen behavior problems is to address the academic learning performance of students with emotional or behavior disorders (Kauffman, 2005).

For general educators—those who teach regular classes of elementary students or content classes composed of secondary students—one consequence of having students with disabilities is that they will become members of a team who collaborate to address the educational problems of those students. They will have to become familiar with these students’ individualized education programs—the IEP, as it is called, is a document that describes special practices needed by students because of their unique educational needs. Teachers will need to adjust their teaching to align with the requirements of the IEP.

Understanding Learning Disabilities Helps Us Understand Learning

When explaining a concept, it is often helpful to illustrate both what the concept is and what it is not. For example, we might explain that citrus fruits share certain features with but are different in certain ways from fruits that fit in other categories (berries, drupes, pomes). Similarly, understanding a complex concept such as “learning” means being able to explain what learning is not, what happens when learning does not happen. In this way, studying learning disabilities—when learning does not happen in the usual ways—helps us understand normal learning. Learning disabilities has provided a stimulus for research that has benefited not just students with learning disabilities but also students who have not been identified as having learning disabilities (Gerber, 2000).

Research on preventing reading problems illustrates the reciprocal relationship between research on learning and not learning. Because reading problems are common among students with learning disabilities, scholars in the field of learning disabilities have studied ways of preventing reading problems from the inception of the field through today (Blachman, Tangel, Ball, Black, & McGraw, 1999; Coyne, Kame’enui, & Simmons, 2001; de Hirsch, Jansky, & Langford, 1966; Liberman, 1971; Liberman, Shankweiler, Fischer, & Carter, 1974; Torgesen, 2002b; Vaughn, Levy, Coleman, & Bos, 2002; Vellutino, Steger, & Kandel, 1972). These researchers have found that certain component skills and teaching procedures are critical to learning to read and that many students with learning disabilities lack these skills. If young children do not have these critical skills or are not taught them, they are likely to fail in the beginning stages of reading. Once they have begun to fail, it is difficult
for them to catch up with their peers. (We explain more about these skills in later chapters on spoken language and reading.)

By conducting many studies that helped identify these missing skills in early reading over more than 30 years’ time, learning disabilities scholars have contributed to educators’ and psychologists’ understanding of normal reading development. Their contributions are apparent in the report of the National Reading Panel (2000), an extensive report on early reading instruction. Dozens of studies conducted by researchers associated with learning disabilities were included in the panel’s report or appeared in journals such as Learning Disabilities: Research and Practice, Learning Disability Quarterly, and Journal of Learning Disabilities, as well as other publications primarily associated with special education.

Many Students with Learning Disabilities Can Contribute Valuably to Society

Popular discussions of learning disabilities, such as those one finds on the Internet (e.g., www.dyslexiaonline.org), often identify accomplished people (for example, inventor Thomas Edison, physicist Albert Einstein, entertainer Whoopi Goldberg, business tycoon Charles Schwab) as having learning disabilities. As we discuss later in this and other chapters, even when educators have extensive assessment data, it is very difficult to determine whether an individual has a learning disability. We do not have the assessment data needed to determine whether many of the historical and popular figures said to have had learning disabilities actually had learning disabilities. Therefore, absent independent diagnostic data, it is especially difficult to identify a historical figure or even a contemporary celebrity as having a learning disability.

Nevertheless, teachers and others sometimes point to these notable individuals to show that those who have learning problems can also produce great accomplishments. These teachers may believe that these examples can motivate students with learning disabilities to try harder and achieve more. We question whether such an approach produces better outcomes for students with disabilities. If learning disability means “lazy and dumb,” then motivating students will be critically important. Although motivating students is an important part of teaching, we doubt that it is the most important part of teaching students with learning disabilities.

It is clear that, learning disability or not, individuals such as Edison can overcome personal difficulties and contribute significantly to society. This is true for many individuals who have had learning disabilities and yet have gone on to have successful careers in many areas. Although not all will achieve the prominence of a Charles Schwab, these individuals can find quiet success in holding a good job, raising a fine family, contributing to their communities, and succeeding socially.

Why Are Learning Disabilities Controversial?

Probably more than any other category of special education, learning disabilities has been the subject of dispute and debate. Stanovich described the contentious history of learning disabilities:
The field of learning disabilities . . . has a checkered history that is littered with con-
tention, false starts, fads, dead ends, pseudoscience, and just a little bit of hard-won
progress. It seems as though the field is constantly getting into scrapes, is always on
probation, is never really secure. Why is this? (Stanovich, 1988, p. 210)

In asking this question, Stanovich was reflecting over the relatively brief time
period—fewer than 30 years when he posed it—that scholars have studied learning
disabilities. During that time, many people have made outstanding contributions to
learning disabilities. The five people described in Figure 1.1 (pages 10–11) were
among the earliest contributors. They, along with many who followed them, have
helped put learning disabilities on a more solid, scientific footing. This hard-won
progress was made despite ongoing controversy.

Controversy has enlivened discussion about learning disability since the in-
ception of the field, even before Samuel Kirk, speaking to a group of parents in
Chicago in 1963, suggested learning disability as the term for referring to children
who were having difficulty in school but who were not considered disabled by men-
tal retardation or emotional disturbance. As Kirk put it:

Recently I have used the term “learning disability” to describe a group of children
who have disorders in development, in language, speech, reading, and associated
communication skills needed for social interaction. In this group I do not include
children who have sensory handicaps such as blindness or deafness, because we have
methods of managing and training the deaf and the blind. I also exclude from this
group children who have generalized mental retardation. (Kirk, 1963)

In earlier decades, these children’s difficulties had been variously categorized
as mild exogenous mental retardation (mild mental retardation caused by brain in-
jury), minimal brain dysfunction (behavioral abnormalities similar to but less severe
than those caused by brain injury, although brain damage cannot be verified),
dyslexia (extreme difficulty in reading), perceptual impairment (persistent difficulty
in making sense of sensory stimulation), hyperactivity (excessive motor behavior
and inattention), and slow learning (a child whose intelligence is not far enough
below average to indicate mental retardation) (Hallahan & Cruickshank, 1973; Hal-
lahan & Kauffman, 1977; Hallahan & Mercer, 2002; Mann, 1979; Wiederholt,
1974). The complexities inherent in these and other terms were eventually distilled
into the concept of learning disabilities.

So why is providing special education for students who do not have obvious
physical disabilities, mental retardation, or other disorders but who do have clear
underachievement such a problem? To begin with, much of the difficulty lies in the
problem of defining learning disabilities. Although the layperson may have a gen-
eral idea of what the term means, there are substantial disagreements among pro-
fessionals of the many disciplines concerned with learning disabilities about
precisely how the term is defined.

There are both theoretical and practical reasons that it is important to define
phenomena, including categories of special education. The theoretical reasons in-
clude the idea that unless one can define something in clear terms, one does not re-
ally know that thing (Forness & Kavale, 1997; Hammill, 1990). The practical
William M. Cruickshank

Cruickshank’s career in special education spanned 46 years. He served on the faculty of both Syracuse University and the University of Michigan. In the late 1950s, he directed a federally funded research project establishing classes in the Montgomery County (Maryland) public schools that were recognized by many as the first organized attempt to teach students with learning disabilities in public schools. He was also one of the early pioneers in the notion of interdisciplinary cooperation and fought to ensure that special educators would have equal footing with other professionals. In 1978, he founded the International Academy for Research in Learning Disabilities.

Samuel Orton

Orton was a specialist in neurology and neuropathology. He theorized that dyslexia was attributable to some form of brain injury and that special techniques were required to instruct those with dyslexia. Orton felt that nearly all dyslexic symptoms could be explained by mixed dominance of the cerebral hemispheres and that the mixed dominant state of the brain was transferred hereditarily. In one of his most influential books, *Reading, Writing, and Speech Problems of Children* (1937), he described a systematic phonics program reinforced with kinesthetic aids (letter tracing). He coined the term *sterephosymbolia*, which he described as “word blindness.”

Katrina de Hirsch

De Hirsch adopted some of Orton’s thinking as a starting point for her own discussion of children with “specific dyslexia,” or what Orton would have called “sterephosymbolia.” She studied in Buenos Aires, attended the University of Frankfurt am Main, and went on to pursue a degree in speech pathology at London’s Hospital for Nervous Diseases. She believed that disorders of speech in children can be placed on a continuum of language dysfunction. At Columbia-Presbyterian Medical Center she started the first language disorder clinic in this country. Her thinking in the 1950s and 1960s overlapped with other perceptual-motor theorists in that she believed that for students with reading disabilities who can be predicted to fail, formal reading instruction should not take place until success has been achieved with perceptual-motor and oral language instruction.
considerations pertain to legislation, funding, identification, research, and treatment. When advocating for funds and legislation with lawmakers, it helps to be able to articulate clearly for whom the funds and legislation are intended. Definitions aid clear communication; if people have markedly different definitions of learning disability when they talk, the chances of miscommunication increase. As legal statements, definitions lead to criteria for determining who is eligible for, in this case, learning disabilities services; clear definitions produce clearer criteria which, in

**FIGURE 1.1** Continued

**Samuel Kirk**

One of the most significant figures in learning disabilities, Kirk became deeply involved in the language disabilities of children rather late in his career. He was employed as a psychologist at the Wayne County Training School and simultaneously enrolled in courses at the University of Michigan. After 15 years of clinical experience, graduate work by students, and field testing, he and his colleagues produced the landmark test *Illinois Test of Psycholinguistic Abilities* (ITPA) in 1968. Although the ITPA was first conceptualized as a diagnostic test in the area of mental retardation, it became one of the primary tests identified with learning disabilities. The term *learning disabilities* has been attributed to Kirk, who used it in public during a presentation to a group of parents at the first conference of the Association for Children with Learning Disabilities in 1963.

**Barbara Bateman**

Bateman began her career in special education as a teacher of children with multiple disabilities. While at the University of Illinois, where she received her Ph.D. in special education, she worked extensively with Samuel Kirk, publishing a paper in 1962 that was among the first to use the term *learning disabilities* in its title. After working for many years in instructional aspects of teaching students with disabilities, she began to focus her attention on special education law and received her law degree from the University of Oregon Law School in 1976. In more recent years, her book *Better IEPs* (Bateman & Linden, 1998) has informed teachers how to write legally correct, instructionally relevant IEPs.


**CEC Knowledge Check**

Of the five influential leaders in the early development of learning disabilities, which two are the most important? Support your choices. LD1K1
turn, lead to more consistent eligibility decisions. Definitions also affect our estimates about how many individuals might have a disability. If a clear, easily communicated definition produces consistent criteria, then we can expect that a count of how many individuals have been found eligible for services will be more precise than when a count is based on an ambiguous definition.

**Defining Learning Disabilities Has Been Difficult**

Today, people from nearly every walk of life recognize the term *learning disability*. Learning disability is one of 13 specific categories in special education, is defined by federal and state laws, and is a specialization for which teachers in many states must obtain special teaching certification. In some parts of the world, the term *learning disability* is equivalent to the U.S. term *mild mental retardation* or includes what in the United States would be called “behavior disorders” (Opp, 2001; Stevens & Werkoven, 2001). However, the concept of learning disabilities as referring to below-average achievement that is not explained by other intellectual or sensory factors has gained almost complete acceptance among educators and the general public in the United States and many other foreign countries (Mazurek & Winzer, 1994; Winzer, 1993). Although it is widely accepted, the concept of learning disabilities is not yet completely formed. Like other complex but useful concepts, it repeatedly requires refinement (see Bradley, Danielson, & Hallahan, 2002; Kavale & Forness, 1985, 1992; Lyon et al., 2001; Moats & Lyon, 1993; Torgesen, 1991).

To say that considerable debate has surrounded the issue of defining learning disabilities is an understatement. At least 11 definitions have enjoyed some degree of official status in the field (Hammill, 1990), and professional and federal committees have convened to write a definition that is acceptable to the various constituencies. During the early 2000s, the President’s Commission on Excellence in Special Education (2002) conducted hearings about special education that influenced the changes in special education law debated in 2003 by the U.S. Congress. The definition of learning disabilities and how states implemented it was one of the most controversial areas examined by the President’s Commission. Understanding how the definition of learning disability has evolved provides context for how learning disability is defined today.

**Definitions of Learning Disability Have Changed**

When he spoke to the meeting of parents, professors, and others in Chicago in 1963, Kirk recommended that the group adopt the term *learning disability* to identify the children about whom they were concerned. Kirk argued that the term *learning disability* was the best choice of various alternatives, some of which Kirk said referred to causes of problems (e.g., such as the terms *brain injury* or *minimal brain dysfunction*) or that referred to behavioral manifestations of the problems (e.g., the terms *hyperkinetic behavior* or *perceptual disorder*). Kirk said that the term *learning disability* placed the emphasis on problems that could be assessed and changed. The group followed Kirk’s recommendation and formed an organization called the Association for Children with Learning Disabilities (ACLD). This group later renamed
itself the Association for Children and Adults with Learning Disabilities and, most recently, the Learning Disabilities Association of America (LDA). Consisting of both parents and professionals, LDA is the major organizational voice for parents of children with learning disabilities.

Although Kirk is often said to have coined the term learning disability in his speech to the people who would form the ACLD, the term had been used earlier (Hodges & Balow, 1961; Kirk & Bateman, 1962; Thelander, Phelps, & Walton, 1958). In the 1962 edition of his influential introductory text on exceptional children, Kirk defined learning disability as follows:

A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subject resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural and instructional factors. (Kirk, 1962, p. 263)

Five components in Kirk’s definition have appeared in many of the definitions that followed it:

1. subaverage achievement (reading, writing, arithmetic) or achievement-related behavior (speech or language)
2. intra-individual differences—the possibility that the subaverage achievement or achievement-related behavior occurs in only one or some areas, with average or above-average achievement in the other areas
3. reference to psychological processing problems as causal factors or at least as correlated factors
4. suggestion of cerebral dysfunction as a possible causal factor
5. exclusion of other disabling conditions (e.g., mental retardation) and environmental conditions as causal factors.

As various groups and individuals grappled with defining learning disability, other components emerged, too. These included:

1. life-span problems—the idea that learning disabilities persist into adulthood
2. social relations problems—that learning disability may also affect behavior in social situations and even that social problems may be a form of learning disability
3. comorbidity—the possibility that learning disabilities may occur in combination with other conditions or individual attributes (especially giftedness or serious emotional disturbance).

Kirk’s initial definition of learning disability was the first of many efforts to define the phenomenon, with subsequent definitions changing the emphasis on one or another of the components and adding or omitting components. Table 1.1 (pages 14–15) lists a few of the many definitions that have been offered since Kirk’s early effort to define the term and shows how each definition emphasized different components.
A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subject resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural and instructional factors.

Children who have learning disorders are those who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance related to basic disorders in the learning process, which may or may not be accompanied by demonstrable central nervous system dysfunction and which are not secondary to generalized mental retardation, educational or cultural deprivation, severe emotional disturbance, or sensory loss.

Children with special (specific) learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken and written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems that are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage.

The term “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, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include children who have learning disabilities which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage.

“Learning disabilities” is a generic 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 and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g., cultural differences, insufficient-inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences.

Specific Learning Disabilities is a chronic condition of presumed neurological origin which selectively interferes with the development, integration, and/or demonstration of verbal and/or nonverbal abilities. Specific Learning Disabilities exists as a distinct handicapping condition and varies in its manifestations and in degree of severity. Throughout life, the condition can affect self-esteem, education, vocation, socialization, and/or daily living activities.

| TABLE 1.1 Definitions of Learning Disabilities and Their Common and Unique Features |
| Kirk (1962, p. 263) | A learning disability refers to a retardation, disorder, or delayed development in one or more of the processes of speech, language, reading, writing, arithmetic, or other school subject resulting from a psychological handicap caused by a possible cerebral dysfunction and/or emotional or behavioral disturbances. It is not the result of mental retardation, sensory deprivation, or cultural and instructional factors. |
| Bateman (1965, p. 220) | Children who have learning disorders are those who manifest an educationally significant discrepancy between their estimated intellectual potential and actual level of performance related to basic disorders in the learning process, which may or may not be accompanied by demonstrable central nervous system dysfunction and which are not secondary to generalized mental retardation, educational or cultural deprivation, severe emotional disturbance, or sensory loss. |
| NACHC (U.S. Office of Education, 1968, p. 3) | Children with special (specific) learning disabilities exhibit a disorder in one or more of the basic psychological processes involved in understanding or in using spoken and written language. These may be manifested in disorders of listening, thinking, talking, reading, writing, spelling or arithmetic. They include conditions which have been referred to as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, developmental aphasia, etc. They do not include learning problems that are due primarily to visual, hearing or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. |
| 94–142 (U.S. Office of Education, 1977, p. 65083) | The term “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, which may manifest itself in an imperfect ability to listen, speak, read, write, spell, or to do mathematical calculations. The term includes such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia and developmental aphasia. The term does not include children who have learning disabilities which are primarily the result of visual, hearing, or motor handicaps, or mental retardation, or emotional disturbance, or of environmental, cultural, or economic disadvantage. |
| NICLD (Hammill, Leigh, McNutt, & Larsen, 1981) | “Learning disabilities” is a generic 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 and presumed to be due to central nervous system dysfunction. Even though a learning disability may occur concomitantly with other handicapping conditions (e.g., sensory impairment, mental retardation, social and emotional disturbance) or environmental influences (e.g., cultural differences, insufficient-inappropriate instruction, psychogenic factors), it is not the direct result of those conditions or influences. |
| LDA (Association for Children with Learning Disabilities, 1986, p. 15) | Specific Learning Disabilities is a chronic condition of presumed neurological origin which selectively interferes with the development, integration, and/or demonstration of verbal and/or nonverbal abilities. Specific Learning Disabilities exists as a distinct handicapping condition and varies in its manifestations and in degree of severity. Throughout life, the condition can affect self-esteem, education, vocation, socialization, and/or daily living activities. |
Achievement Deficits

From the beginning of interest in learning disabilities, there has been an emphasis on problems in achievement. As a hallmark of learning disabilities, achievement deficits are important, but not all students who have low achievement necessarily have learning disabilities. Some students with other disabilities, especially emotional or behavior disorders and mental retardation, have below-average achievement. However, it very unlikely that a student with above-average achievement would be identified as having a learning disability. (We discuss achievement problems in almost every chapter of this book.)

Intra-individual Differences

A student may have especially marked achievement deficits in only one or in multiple areas. This aspect of learning disability distinguishes it from mental retardation, in which one would expect lowered performance across the range of academic areas. Some people regard intra-individual differences as related to ability and achievement, postulating an ability-achievement discrepancy (an idea discussed more fully in a subsequent section). We discuss

<table>
<thead>
<tr>
<th>Definition</th>
<th>Subaverage Achievement</th>
<th>Intra-individual Differences</th>
<th>Process Deficits</th>
<th>CNS Dysfunction</th>
<th>Discrepancy</th>
<th>Exclusion of Other Disabilities</th>
<th>Life-span Problem</th>
</tr>
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<tbody>
<tr>
<td>Kirk</td>
<td></td>
<td></td>
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<tr>
<td>Bateman</td>
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<td>94–142</td>
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<tr>
<td>NJCLD</td>
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<td>LDA</td>
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<tr>
<td>IDEA</td>
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</tbody>
</table>

The upper panel shows the definitions, with a label for each. The lower panel shows which components appeared in each labeled definition. Following is a brief discussion of the important aspects identified in definitions of learning disabilities:

**Achievement Deficits** From the beginning of interest in learning disabilities, there has been an emphasis on problems in achievement. As a hallmark of learning disabilities, achievement deficits are important, but not all students who have low achievement necessarily have learning disabilities. Some students with other disabilities, especially emotional or behavior disorders and mental retardation, have below-average achievement. However, it very unlikely that a student with above-average achievement would be identified as having a learning disability. (We discuss achievement problems in almost every chapter of this book.)

**Intra-individual Differences** A student may have especially marked achievement deficits in only one or in multiple areas. This aspect of learning disability distinguishes it from mental retardation, in which one would expect lowered performance across the range of academic areas. Some people regard intra-individual differences as related to ability and achievement, postulating an ability-achievement discrepancy (an idea discussed more fully in a subsequent section). We discuss
intra-individual differences in many chapters, especially those having to do with eligibility and identification (Chapter 3) and the academic areas (Chapters 11 through 14).

**Psychological Processing Problems** The concept of psychological processes dominated discussions in the 1960s and 1970s. Early authorities in learning disabilities believed that certain deficits in how children received, organized, and expressed auditory (verbal) and visual information were closely related to their learning problems and might even be at the root of those problems. Because these deficits were hard to assess reliably and because improving children's performance on them rarely resulted in improved achievement, the idea of processes was controversial and ultimately discarded (Hallahan & Cruickshank, 1973; Mann, 1979). More recently, however, educators have come to understand that there are precursor skills for some areas of academic achievement that appear very similar to some of the psychological processes discussed in the early days of learning disabilities. For example, phonemic awareness, which is often considered a psychological process, is important in reading and spelling (Torgesen, 2002a). We discuss some of the modern processes of importance in the chapters about cognitive, metacognitive, and motivational problems (Chapter 8) and the academic areas (Chapters 11 through 14).

**Neurological Deficits** Throughout the history of learning disabilities, authorities have grappled with the idea that the behavioral problems referred to in Kirk's definition are, in fact, the consequence of minor variations in neurological functioning. The idea is appealing because we know that conditions with identifiable neurological bases, such as cerebral palsy, often are accompanied by anomalies in learning and behavior. However, until recently, scientists have not been able to measure subtle neurological differences consistently. Furthermore, were those differences actually found to cause learning disabilities, there would probably be few implications for teaching. We examine the important role of neurological deficits in learning disabilities in the chapter on causes of learning disabilities (Chapter 2).

**Exclusion** When the field of learning disabilities was emerging in the 1960s, there was strong pressure to distinguish it from other already-recognized disabilities. Parents and others wanted to make it clear that children's problems were not the result of other handicapping conditions. These children did not have mental retardation, emotional disturbance, cerebral palsy, or other problems. They had academic underachievement that could not be explained by other disabilities (Kavale, 2002). As a result, many definitions of learning disabilities incorporated phrasing that defined learning disability by excluding other problems. For some authorities (e.g., Henley, Ramsey, & Algozzine, 1996), a definition by exclusion was unacceptable, and this became a reason to doubt whether learning disabilities were real problems.

**Life-span Problems** Most early efforts in the area of learning disabilities were focused on preventing learning problems in young children, but many in the field came to recognize that even though prevention was an important goal, it was not practiced (Kauffman, 1999). Furthermore, some students' disabilities did not
become obvious until they were older. For example, Shannon's attention problems probably were masked during her first few years of school by an absence of requirements for self-sustained attention and then, during her middle elementary years, by the fact that her teacher used highly engaging techniques of instruction so that her attention problems were mitigated. But will she have attention problems as an adult? Some accounts indicate that despite successful remedial instruction, individuals with learning disabilities continue to have problems as adults (Reiff, Gerber, & Ginsberg, 1997). In addition, some children who have no obvious problems prior to school entry turn out to have learning disabilities. We discuss the problems of individuals with learning disabilities outside of the usual K–12 schooling period in Chapters 5 and 6.

**Social Relations Problems** Because of the emphasis on academic problems in learning disabilities, related problems in social relations were often overlooked. As it happens, such problems often are related. Early on, Bryan (1974a, b) showed that many individuals with learning disabilities were both less popular than their peers and communicated in ways that provoked enmity from them. As a result, we have come to understand that some students with learning disabilities may lack the social graces to permit them to relate with their peers and others (Wong & Donahue, 2002). Thus, many authorities now contend that the definition of learning disabilities should include problems in social relations. We address social-emotional problems in Chapter 7 and also in Chapter 11, where we discuss verbal language problems.

**Comorbidity** When two problems or disabilities occur together in the same person, they are said to be *comorbid*. Given the emphasis on academic problems in learning disabilities, some might expect that learning disabilities would not overlap with other disabilities. This is not the case. Some children have disabilities in only one academic area, but others have problems in more than one area (e.g., Fuchs & Fuchs, 2002). This was the situation for Shannon when she was in elementary school, but instruction focused more strongly on correcting her problems in reading than in arithmetic. Furthermore, students with learning disabilities may have other handicapping conditions as well; this was also the case with Shannon, who had attention deficit hyperactivity disorder. Also, authorities in gifted education have discussed the potential for students with exceptional talents to have learning disabilities (Brody & Mills, 1997). The topic of comorbidity reappears in later chapters on social behavior (Chapter 7) and attention and ADHD (Chapter 9). All of these factors have affected how learning disabilities have been defined in the past and have profound influences on how learning disabilities are defined now.

**Today’s Definition of Learning Disability**

In 2000, the U.S. Department of Education Office of Special Education Programs (OSEP) convened a group of 18 educators to reexamine the problem of defining learning disabilities with the purpose of providing a basis for future legislation. The focus of the meeting was to commission a set of papers on issues related to the
definition of learning disabilities and to plan a later meeting. The issues addressed included detailed treatments of historical perspectives, classification approaches, ability-achievement discrepancy, and other topics. In August 2001, OSEP invited authors of the papers, authors of responses to the papers, and representatives of organizations and agencies interested in learning disabilities to a meeting on learning disabilities called “Building a Foundation for the Future” (also known as the “LD Summit”). After the summit, a subgroup of researchers met and developed consensus statements about selected issues. In one of those statements, the group reaffirmed the concept of learning disabilities.

Strong converging evidence supports the validity of the concept of specific learning disabilities (SLD). The evidence is particularly impressive because it converges across different indicators and methodologies. The central concept of SLD involves disorders of learning and cognition that are intrinsic to the individual. SLD are specific in the sense that these disorders each significantly affect a relatively narrow range of academic and performance outcomes. SLD may occur in combination with other disabling conditions, but they are not due primarily to other conditions, such as mental retardation, behavioral disturbance, lack of opportunities to learn, or primary sensory deficits. (Bradley et al., 2002, p. 792)

U.S. federal and state legislation has influenced learning disabilities in many ways, and major laws have had substantial effects on today’s definition of learning disabilities (Martin, Martin, & Terman, 1996). Table 1.2 shows many of the major laws and their relation to the definition of learning disabilities. As shown in the table, in 2003–2004 the U.S. Congress debated the fundamental law governing special education. Congress considered leaving the formal definition essentially unchanged. However, Congress proposed that the U.S. Department of Education Office of Special Education and Rehabilitative Services (OSERS) test alternative ways to identify students with learning disabilities. The legislators proposed this action because of intense controversy over the issue about whether a discrepancy between children's ability and their achievement is an appropriate basis for deciding if a student should receive special education services.

Discrepancy between Ability and Achievement Is Controversial

Given the historical importance of unexpected underachievement in defining learning disabilities, it may seem surprising that there is controversy about the concept of a discrepancy between ability and achievement and the use of such discrepancy in identifying who is eligible for special education (Hallahan & Mercer, 2002; Kavale, 2002). However, the topic has been widely discussed, especially since the 1980s.

Concerns about the Concept of Discrepancy

Researchers have pointed to at least four problems inherent in the ability-achievement discrepancy concept. First, the concept of ability, as measured by intelligence tests, is fraught with problems. Disputes regarding the definition and measurement
of intelligence have been characteristic of the field since Alfred Binet constructed the first IQ test at the beginning of the 20th century. Issues surrounding the concept of intelligence have increased in intensity over the years. As one researcher put it, “The decision to base the definition of a reading disability on a discrepancy with measured IQ is . . . nothing short of astounding. Certainly one would be hard-pressed to find a concept more controversial than intelligence in all of psychology” (Stanovich, 1989, p. 487). And as others have stated:

It seems unfortunate that the LD field has placed so much emphasis on intelligence in attempting to define LD. The concept of intelligence, itself, is fraught with difficulties, and they become magnified when applied to LD. Intelligence is not as fundamental to LD as has been believed. The LD concept needs to be examined in its own right, not built on another extant, but shaky, concept. Despite its longer history, and the comfort of its familiarity, intelligence is a relatively minor player in the complex

<table>
<thead>
<tr>
<th>YEAR</th>
<th>LAW</th>
<th>NAME</th>
<th>FEATURES</th>
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<tbody>
<tr>
<td>1975</td>
<td>PL 94-142</td>
<td>Education for All Handicapped Children Act</td>
<td>Mandated a free, appropriate public education (FAPE) for all children, including those with learning disabilities; provided for Individual Education Plans (IEPs); ensured due process rights; provided a funding mechanism.</td>
</tr>
<tr>
<td>1983</td>
<td>PL 98-199</td>
<td>Education of the Handicapped Act (amendments)</td>
<td>Reauthorized the act, changing its name slightly, and established special projects in transition to work, early childhood, and support of parents.</td>
</tr>
<tr>
<td>1986</td>
<td>PL 99-457</td>
<td>Education of the Handicapped Act (amendments)</td>
<td>Extended the time for early intervention, making special education services available to preschoolers.</td>
</tr>
<tr>
<td>1990</td>
<td>PL 101-476</td>
<td>Individuals with Disabilities Education Act (IDEA)</td>
<td>Amended EHA and changed its name. Also required that assistive technology and transition plans be part of educational plans and added other areas of disability to the list of those recognized by the U.S. federal government.</td>
</tr>
<tr>
<td>1992</td>
<td>PL 102-119</td>
<td>Individuals with Disabilities Education Act (amendments)</td>
<td>Reauthorized the law and placed even greater emphasis on early intervention for preschool children.</td>
</tr>
<tr>
<td>1997</td>
<td>PL 105-17</td>
<td>IDEA Amendments of 1997</td>
<td>Reauthorized the law and increased influence of parents.</td>
</tr>
<tr>
<td>2004</td>
<td>pending</td>
<td>Improving Education Results for Children with Disabilities Act</td>
<td>Allow determination of eligibility through mechanisms such as response to scientific, research-based intervention. Require that IEPs contain statements of measurable annual goals and how progress toward them will be measured rather than benchmarks or short-term objectives.</td>
</tr>
</tbody>
</table>

**TABLE 1.2 Legislative Milestones Affecting Learning Disabilities**
amalgam of what is termed LD. It seems appropriate that the alliance be broken and the LD field begin to seek its own identity. (Kavale & Forness, 1995a, p. 186)

One of the problems with intelligence tests (and many achievement tests, too) is that they focus on the end product of learning (Meltzer, 1994). These tests provide a score but provide little information on what processes and strategies the individual taking the test used or did not use to arrive at that score. Some students may get the right answer for the wrong reason—they follow a mistaken rule that accidentally leads to the correct answer.

Second, some researchers have pointed out that the intelligence of students with learning disabilities may be underestimated by IQ tests because, to a certain extent, IQ depends on achievement (Siegel, 1989; Stanovich, 1989). In part, intelligence tests assess what a person has learned in comparison to what others have learned by a similar age. If IQ is used when determining a discrepancy, then one is basically comparing one form of achievement test to another form of achievement test.

Most people have come to accept the idea of a Matthew effect. A Matthew effect refers to the idea of the rich getting richer and the poor getting poorer. Those who know more are able to learn more in the future. (It is derived from Matthew XXV:29 in the Bible: “For unto every one that hath shall be given, and he shall have abundance; but from him that hath not shall be taken away even that which he hath.”) With reference to intelligence, a Matthew effect dictates that students who are better readers will have a better chance to learn from what they read than will poor readers, because better readers will not be laboring with the decoding aspects of reading. They will have more time to expand their vocabularies and comprehend more complex concepts, which will result in their better performance on intelligence tests (Stanovich, 1986). The implication for learning disabilities is that the poor reading skills of children with disabilities may lead to poorer performance on intelligence tests; their resulting lower IQs will reduce the discrepancy between IQ and achievement, making it more difficult for them to qualify as having a learning disability.

Third, discrepancies between IQ and achievement, once considered a hallmark of learning disabilities, may not reliably discriminate among students identified as having learning disabilities and similar students who have not been identified as having learning disabilities (Fletcher et al., 2002). Comparisons of students with discrepancies between IQ and achievement (i.e., average IQ and low achievement in reading) and those poor readers who do not have discrepant achievement and IQ (i.e., lower IQ and low achievement in reading) show that they lack similar skills in early reading. Both groups need to learn the same skills (discussed in Chapter 12), regardless of whether they had IQ-achievement discrepancies (Fletcher, Francis, Rourke, Shaywitz, & Shaywitz, 1992; Fletcher et al., 1994; Fletcher et al., 2002; Pennington, Gilger, Olson, & DeFries, 1992; Stanovich & Siegel, 1994). At best, results comparing the two groups are mixed. Furthermore, research on one of the most important skills for learning to read—phonemic awareness (see Chapter 12)—has found the two groups to be more similar than different (Stanovich & Siegel, 1994).

Fourth, using a discrepancy makes it difficult to identify students in the early grades as having a learning disability, because they are not yet old enough to have
demonstrated a discrepancy (Kavale, 2002; Mather & Roberts, 1994; Sawyer & Bernstein, 2002). Some authorities in learning disabilities call this a “wait-to-fail model,” because children must suffer through months or even years of problems before they can be found eligible for special education. In the first grade, for example, the average child has only begun to master the rudiments of reading and math. In the case of a first-grader such as Jamal, who is smart but has academic problems, the problems may be obvious. But for children who have average or even slightly below-average IQs, the narrow range between where they should be and where they actually are functioning makes it difficult to establish a discrepancy. Some teachers are concerned that even when they are sure a student has a learning disability, they must wait until the next year for the child to score low enough in achievement.

Concerns about the Methods for Establishing a Discrepancy

Professionals have used various methods to determine a discrepancy between ability and achievement. For many years, they used a very simple method of comparing the mental age obtained from an IQ test to the grade-age equivalent taken from a standardized achievement test. A difference of two years between the two test results was frequently used as an indicator of a discrepancy. This method has largely been abandoned because, for one thing, there are statistical problems in computing grade-equivalent scores. Furthermore, two years below grade level is not an equally serious discrepancy at every grade level. For example, a child who tests two years below grade 8 has a less severe deficit than one who tests two years below grade 4.

As an alternative, some local education agencies (LEAs) compare standard scores. Standard scores have a mean of 100 and a standard deviation of 15, so a standard score of 85 would be one standard deviation below the average. Most IQs are standard scores, and most achievement tests yield a standard score, too. So, for example, if an LEA’s rules say that to be identified as having a learning disability, there must be a discrepancy of 22 standard score points, then a student with an IQ of 103 would have to have a standard score of 81 in some area to qualify. Comparing standard scores avoids the problems of using grade equivalents but does not avoid other problems with relying on discrepancy. For example, there is no objective standard for how large a discrepancy must be to establish learning disability. Also, directly comparing standard scores still involves tying learning disability to the questionable construct of IQ.

Table 1.3 (page 22) shows selected scores for Jamal and Shannon. Shannon’s full-scale IQ (FSIQ—the measure usually used in comparing standard scores) of 94 may not qualify her for services when compared to her score of 83 in math, her lowest area of achievement. Jamal’s FSIQ is high enough that his reading score would be considered discrepant by many LEAs.

Beginning in the late 1970s and early 1980s, many state education agencies (SEAs) and LEAs began to adopt different formulas for identifying IQ-achievement discrepancies. Most of the early formulas were statistically flawed, however. They did not take into account the strong statistical relationship between tested IQ and tested achievement. The U.S. federal government even proposed a formula in the
rules for implementing PL 94-142, but it was immediately criticized and abandoned (Lloyd, Sabatino, Miller, & Miller, 1977). Some have advocated the use of formulas that correct for the relationship between IQ and achievement; these are referred to as regression-based discrepancy formulas.

On the surface, regression-based formulas appear objective and professional, but they have problems as well. They still use IQ, require that some arbitrary cutoff score be set, and encourage people to make what are nuanced, human decisions solely on a statistical basis. For these and other reasons, many have questioned the wisdom of using even statistically adequate formulas (Board of Trustees of the Council for Learning Disabilities, 1986).

Consensus about Discrepancy

Overall, researchers appear to have reservations, although not unanimous reservations, about the usefulness of discrepancy (Fletcher et al., 2002; Kavale, 2002; Speece & Shekitka, 2002, Scruggs & Mastropieri, 2002). Even when OSEP convened the LD Summit to reexamine the problem of defining learning disabilities, the issue of discrepancy was the one area on which there was a divided opinion among the experts.

Today there is considerable disagreement among practitioners and researchers alike on the usefulness of the discrepancy approach. Although many IDEA stakeholders in the field reject the use of the discrepancy approach because it does not identify the students they believe are in most need of services, many others continue to depend on psychometric tests as a way of corroborating their clinical judgment. The majority of researchers [attending the consensus meeting] agreed that use of IQ tests is neither necessary nor sufficient as a means of classifying students with SLD. However, a minority viewpoint cautioned that the field of SLD could be compromised by eliminating the discrepancy approach because it may be an appropriate marker for unexpected underachievement, which is one measure of SLD. (Bradley et al., 2002, p. 797)

The concept of discrepancy has provided a foundation for learning disabilities throughout most of the brief history of the area of study, and given its historical place in the fabric of learning disabilities, discrepancy will always be a part of the concept of learning disability. Although it does not formally appear in recent or current definitions of learning disabilities, the concept of discrepancy is still familiar

<table>
<thead>
<tr>
<th>STUDENT</th>
<th>IQ</th>
<th>LOWEST ACHIEVEMENT STANDARD SCORE (AREA)</th>
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<tbody>
<tr>
<td>Jamal</td>
<td>105</td>
<td>90 (reading)</td>
</tr>
<tr>
<td>Shannon</td>
<td>94</td>
<td>83 (mathematics)</td>
</tr>
</tbody>
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<table>
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<tr>
<th>CEC Knowledge Check</th>
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<tbody>
<tr>
<td>Why do you think using discrepancy formulas can be of ethical concern?</td>
</tr>
<tr>
<td>CC8K2, CC8S6</td>
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and intuitively sensible to many teachers of students who need special education services. The idea of unexpected underachievement serves to distinguish learning disabilities from mental retardation. For these reasons, it is likely that the concept of discrepancy will continue to be associated with learning disabilities.

Criteria Used to Determine Eligibility for Special Education Vary

The criteria used in determining eligibility for special education are perhaps more important than the definition itself. Formal definitions are often the work of scholars and thus may be more academic and less applicable than definitions needed by practitioners. Practitioners, in contrast, apply rules, guidelines, criteria, and definitions flexibly so that they can meet the needs of individual students or the policies of their agencies.

The majority of states use a definition based on the U.S. federal definition. Though the definition does not explicitly mandate use of discrepancy, states have historically adopted criteria that refer to an ability-achievement discrepancy (Mercer, Jordan, Allsopp, & Mercer, 1996). In the United States, because education is primarily a function of state governments rather than the federal government, rules developed by state educational agencies are usually implemented by local education agencies. To be sure, state rules often are based on federal rules, allowing states to receive federal funds, but states can write their own criteria for determining eligibility.

The exact mechanisms used for identification have varied from state to state and are often quite detailed. To illustrate, Iowa published a 52-page, single-spaced document describing procedures to be used in determining eligibility (Learning Disability Study Group, 1997). Wisconsin provided explicit directions for computing a grade score to be used in determining whether a severe discrepancy exits (Wisconsin Department of Public Instruction, 2002). With the changes in U.S. laws, these mechanisms will be in flux for several years after 2004.

Researchers have examined the way that state and local educational agencies determine whether students are eligible for special education because of learning disabilities. A teacher’s decision to refer a student for eligibility assessment—as Ms. Hamilton referred Jamal—is a critical step in the process (Gerber & Semmel, 1984; Ysseldyke, Algozzine, & Epps, 1983; Zigmond, 1993). When a general education teacher considers a student hard to teach, this makes it clear that there is a problem.

Teachers usually attempt to solve learning problems prior to recommending a formal evaluation for eligibility. Jamal’s teacher informally tested alternative methods to address his problems with important prereading skills. (“We’ve already tried some things,” Ms. Hamilton told Mrs. Smith. “We gave him extra reading time and some special attention, but that hasn’t taken care of things. He still didn’t take off.”) If the general education teacher has already tried prereferral interventions, the probability of a disability becomes even greater.

When instruction usually available in general education classrooms is not sufficient and simple supplements have not solved learning problems, schools often use more formal ways of addressing the situation. Since at least the late 1970s, schools have sought ways of serving students with learning disabilities without having to
identify them as needing special services, often by providing special interventions prior to beginning the referral that leads to evaluation and then to a decision about eligibility (e.g., Chalfant, Pysh, & Moultrie, 1979). The concept of intervening prior to referral appeals to many. When it works, it provides a simple solution to problems, builds competence in general education, prevents a student from being labeled as having a disability, and reduces expenses for evaluation and special education.

Over the years, efforts to intervene early have been known by different terms: child-study team, consultative teacher model, prereferral intervention, teacher assistance team. These approaches presume that lesser learning problems can be differentiated from learning disabilities by making adjustments in the general education environment.

In the late 1990s and early 2000s, updated versions of these approaches were discussed extensively by authorities in learning disabilities (Gresham, 2002; Fuchs & Fuchs, 1998; McNamara & Hollinger, 1997, 2002; Marston, 2002; Sheridan, Welch, & Orme, 1996; Thomas & Grimes, 1995; Vaughn & Fuchs, 2003). When it considered excusing schools from using discrepancy in determining eligibility, the U.S. Congress recommended more extensive study of an even more formal method of prereferral intervention called “responsiveness to intervention.”

Responsiveness to Intervention

There are two broad approaches that authorities in learning disabilities have discussed under the label of responsiveness to intervention (or responsiveness to treatment) (Fuchs, Mock, Morgan, & Young, 2002). One of these approaches emphasizes a consultation process in which teams of educators collaborate to identify ways of solving problems experienced by individual children (e.g., Gresham, 2002). The plans these teams develop are implemented and monitored, and if these plans do not work, then students are evaluated for eligibility for special education. The second approach emphasizes provision of a standard curriculum, with supplemental instruction for students who do not respond to the main curriculum. For students who still struggle after receiving supplemental instruction, referral for special education evaluation is the next stage, with the possibility that these students will be found eligible. Although we return to the details of such administrative plans in Chapter 3 on eligibility, we illustrate them here to help explain some of the controversies in learning disabilities.

Behavioral Consultation  The first approach—behavioral consultation—draws heavily on approaches that have been advocated since the 1970s (e.g., Chalfant et al., 1979; Heron & Catera, 1980) and for which preliminary research support was weak (Lloyd, Cawley, Kohler, & Strain, 1988). In these approaches, schools (1) identify students who are struggling, (2) provide different degrees of specialized instruction within the education situation, and (3) monitor these students’ progress before and after they receive specialized instruction. If specialized instruction works (based on comparison of progress before and after the onset of that instruction), then these students continue to receive instruction under the general educational model prevailing in their school. If that instruction does not work, then the school may develop a new plan for even more specialized instruction or may initiate evaluation for special education. Some advocates of this approach place greater emphasis on form-
ing consultative relationships among general and special educators, but others place more emphasis on modifications of curricula and instruction (Gresham, 2002; McNamara & Hollinger, 1997; Sheridan, Eagle, Cowan, & Mickelson, 2001).

Advocates of the behavioral consultation approach contend that it permits delivery of instruction that is expressly tailored to students’ needs but does not require that they be labeled as having learning disabilities. One of the foundations of this approach is assessing students’ performance on tasks closely related to the curriculum and assessing it frequently and objectively—a method frequently called curriculum-based assessment or curriculum-based measurement; curriculum-based measurement has well-documented advantages (Fuchs & Fuchs, 1986). According to advocates, another advantage is that only those students who do not respond to treatment after one or more specialized interventions are evaluated for eligibility, with the result that fewer students are identified as having learning disabilities and thus more are spared the possible stigma of having a label. Advocates also suggest that officially designating fewer students as having learning disabilities will save money (see McNamara & Hollinger, 1997; Sheridan et al., 2002).

**Standardized Protocol** Whereas the behavioral consultation approach addresses problems across the academic domains and the age span, the second approach—standardizing the protocol or curriculum—operates more from a preventive stance, emphasizing early reading performance. Advocates of a standardized protocol are especially concerned about whether young children who have problems in important areas such as phonological processing (the kinds of problems that Jamal was experiencing) might be easily helped before their problems develop into more substantial deficits that can be labeled dyslexia. By the time this happens and they are then eligible for special education services, these students may be too old to have their problems corrected in a timely fashion.

As do their colleagues who support a behavioral consultation model, supporters of the standardized curriculum approach recommend that special education not be provided until after students have fallen through a cascade of less restrictive alternatives. This approach requires that schools adopt curricula that are documented as very effective. A key feature of laws passed in the United States in the early 2000s (for example, “No Child Left Behind” and “Improving Education Results for Children with Disabilities”) is that they emphasized “scientifically based reading” instruction. To receive federal funding, state and local education agencies needed to show that kindergarten through third-grade teachers had available and knew how to use curricula that had documented effectiveness and that they would receive help in how to adapt materials and methods to meet the instructional needs of students who were not making adequate progress. Ideally, schools would put into operation the most effective curricula they could find. They would provide a safety net composed of more intensive and supplemental help on specific skills in early reading for those who did not benefit from the main curriculum. For those who continued to fail, there would be the option of special education evaluation.

Critics of the standard curriculum approach have pointed out that it is also a wait-to-fail model. Because some students’ problems may be obvious early in their school years, it may be better to establish eligibility right away for them. Jamal’s
general education teacher thought this was true for Jamal, but as you will see in Chapter 3, other school personnel were reluctant to identify him as having a learning disability. Delays raise the chance of continued failure, exacerbating the problems students have. The International Dyslexia Association noted, “Using response-to-instruction as the criterion for identification is hazardous because it may prolong the process of identification and deny needed services to children who are clearly at risk” (Dickman, Hennesy, Moats, Rooney, & Toomey, 2002, p. 17).

The jury is still out about how useful response-to-treatment approaches will prove to be. Whereas these methods have great appeal, we need to know more about their promises and pitfalls (Vaughn & Fuchs, 2003a). Will students who receive these treatments no longer require special assistance? Will many still need later special education? How many will be helped? How many will still require special education? For those who do, will the delay in eligibility be detrimental? These are questions that researchers will study over the next few years.

Eligibility in Practice

When a team of professionals meets to decide whether an individual is eligible for special education, the members examine assessment data and reports (such as those for Jamal and Shannon, provided on the Website) to inform their judgment. The team also examines why prereferral interventions that have been used may not have been successful. Research has consistently shown that the procedures used by these teams vary from place to place, are sometimes inconsistent with rules and regulations, and often result in the identification of students as learning disabled who have such low IQs (below 75 and even below 60) that they might reasonably have been considered to have mild or moderate mental retardation (Bocian, Beebe, MacMillan, & Gresham, 1999; Gottlieb, Alter, Gottlieb, & Wishner, 1994; MacMillan, Gresham, Siperstein, & Bocian, 1996; Schrag, 2000).

Evidence such as this has led authorities to question whether the issue of definition is as important as the issue of consistency in criteria used to determine eligibility (MacMillan & Siperstein, 2002; Scruggs & Mastropieri, 2002). Sadly, such questions often become an indictment of practitioners. Educators should not assume that inconsistencies between academic models and practice mean that the practice is wrong and the models are right. The factors that influence the decisions of these different groups are not the same, so we should expect some discrepancy between them (Gerber, 2000).

Another reason for the inconsistencies in definitions of learning disabilities used by researchers and practitioners is that the two groups have different purposes in defining the phenomenon (Lloyd, Hallahan, & Kauffman, 1980; MacMillan & Speece, 1999). Although researchers seek clarity and consistency, teachers and others are confronted with murky and irregular phenomena that demand immediate resolution and do not fall into neat categories.

The science and practice of learning disabilities appear to be headed in two different directions. Schools serve children as LD who exhibit extremely low achievement and do not necessarily meet IQ-achievement discrepancy standards. Researchers may use sample selection procedures that bear no resemblance to the children served by the
schools, or depend on school-identified samples that vary in unknown ways. In either case, the results of research studies employing either approach to samples have limited external validity for practitioners. (MacMillan & Speece, 1999, pp. 124–125)

Because of changes in U.S. laws, state and local education agencies are revising their procedures for identifying students as having learning disabilities. Some agencies may have adopted more formal response-to-treatment systems, some may continue to use ability-achievement discrepancy methods, and some may depend on the clinical judgment of the members of an eligibility team. Whatever system is in place, it is important for teachers to proceed carefully.

Given all the false starts and contention in learning disabilities, it should be no surprise that problems in the criteria for determining who is eligible for special education because of learning disabilities have led some people to criticize learning disabilities as a manufactured crisis, an illusion. According to this view, learning disabilities is a social construct, a consequence of our social system.

**Learning Disability as a Construct**

Many critics have asked whether learning disabilities is a real phenomenon or whether it is instead socially constructed, an outgrowth of the demands, perceptions, values, and judgments of those who are involved with these students (Carrier, 1986; Coles, 1987; Finlan, 1994). One view is that students with learning disabilities are different from most people in ways that are relatively constant across social contexts. In this view, the assumption is that the primary causes of learning disabilities are biological, or neurological. We examine neurological and other possible causes of learning disability in Chapter 2. Another view is that learning disabilities are largely created by social demands and expectations—in other words, constructed by social contexts. In this view the assumption is that the primary causes of learning disabilities are social circumstances, including the demands of schooling and employment.

Few would suggest that the problems we call learning disabilities are entirely a function of either neurological dysfunction or environmental structure and expectations. Virtually all would acknowledge that learning disability is a concept constructed in the social context of the expectations and demands of school, employment, and other aspects of community life and that this concept serves important social and political purposes.

In an extreme view, the act of testing or measuring students’ performance brings into existence the problem of learning disabilities. If we did not measure students’ performance in such areas as spelling, we would never have to confront the fact that some students spell more accurately—and thus obtain higher scores—than others. If we did not know that some had especially low scores, we would never need to provide them remedial help. Further, if we did not set cutoff points on measures of performance, we would not have to designate students who need help, who have learning disabilities.

People differ substantially in their attitudes about the social criteria chosen for defining learning disabilities. Some think that because the criteria for the definitions
are arbitrary and can be changed at will, the social construction of the category is indefensible. Others point out that the arbitrary nature of the criteria by which many categories (e.g., citizen, person of voting age, poor, at-risk) are socially constructed cannot be avoided (Kauffman, 1989).

The fact that social and cultural expectations and purposes help shape the definition of learning disabilities has led some to see learning disabilities as an “imaginary disease” (Finlan, 1994) or as a category designed to maintain school programs stratified by race and class (e.g., Sleeter, 1986; see Kavale & Forness, 1987a, for a critique). Although acknowledging that social and political forces are important in defining learning disabilities, others see the social construction of this special education category as overwhelmingly beneficial to the children who are identified, because they can receive important special services with minimal stigma (e.g., Kavale & Forness, 1985; Moats & Lyon, 1993; Singer, 1988; Singer & Butler, 1987). As Moats and Lyon noted, “LD in the United States appears to be a systemic problem: It is an educational category into which children are channeled when the learning-teaching interaction is no longer productive or rewarding for one or both parties” (1993, p. 284). Still others argue that using teacher requests for help with a specific child as the criteria for the need for special education is both reasonable and humane (e.g., Gerber & Semmel, 1984). No doubt controversy will continue to surround the question of how much learning disabilities are a function of social demands and expectations and the social, political, and educational interests that are at play.

How Many People Have Learning Disabilities?

According to the most recent reports by the U.S. federal government, public schools have identified nearly three million (2,887,217) students ages 6 through 21 as having learning disabilities. Approximately 5.5% of students in the school years (ages 6 to 17) need special education due to learning disabilities (U.S. Department of Education, 2002b). Actually, this percentage is likely a slight underestimate of all cases of learning disabilities, because the numerator consists of the number of students identified by public schools, whereas the denominator includes all persons in the United States, including those in private schools. Because there are undoubtedly students in private schools who have learning disabilities but are not identified as such by the public schools, we can assume that the number in the numerator does not represent all students with learning disabilities.

Since 1976/1977, when the federal government started keeping data on students served in special education, the number of students ages 6 to 21 years identified as having learning disabilities has more than tripled. In addition, those with learning disabilities now represent over half of all students identified as disabled. Figure 1.2 shows the phenomenal growth in the proportion of students with learning disabilities relative to all students with disabilities.

Many authorities have expressed alarm at the rapid growth of students identified as having learning disabilities. Critics claim that learning disabilities is an ill-defined category and includes many students who only need better instruction from
general education teachers (Algozzine & Ysseldyke, 1983; Lyon et al., 2001). Even defenders are concerned that much of this growth is unwarranted and indicative of confusion over definition and diagnostic criteria, especially within the area of mental retardation (Macmillan, Siperstein, & Gresham, 1996). They fear that many children are being misdiagnosed and that the resulting increase in those identified as learning disabled has provided ammunition for critics, thereby jeopardizing services for students who do need help.

Some researchers have indicated that the fact that it is virtually impossible to differentiate between low-achieving students and those classified as having learning disabilities shows that the definition is too loose (e.g., Algozzine & Ysseldyke, 1983; Ysseldyke, Algozzine, Shinn, & McGue, 1982). Others have analyzed the same data and concluded that this is a serious misstatement (Kavale, Fuchs, & Scruggs, 1994). They point out that much of the critics’ case is based on the idea that the ability-achievement discrepancy should be used as the most important criterion for classification as learning disabled.

Although it is logical to suspect misdiagnosis as the main cause of the growth of learning disabilities, there is a paucity of research support. Some have noted that the increase in learning disabilities has occurred in almost direct proportion to the decrease in the number of students identified as mentally retarded (Macmillan et al., 1996; see Figure 1.2). These researchers have hypothesized that political and social forces have led to a greater reluctance to identify children as mentally retarded; those children who would formerly have been so labeled are now identified

![Figure 1.2: Proportion of Students with Learning Disabilities to Students with Disabilities](image-url)
as learning disabled. Helping to bring about this shift in diagnosis was the American Association on Mental Retardation’s 1973 decision to change its definition of mental retardation to include an IQ cutoff of about 70 to 75 rather than 85.

Not all professionals consider the increase in prevalence unwarranted. There may be valid reasons for some of the growth (Hallahan, 1992). First, because the field of learning disabilities was relatively new when the federal government started keeping prevalence data in 1976, it may have taken professionals a few years to decide how to place children in this new category. Second, the social-cultural changes that have occurred since 1968 may have heightened children’s vulnerability to developing learning disabilities. For example, an increase in poverty has placed more children at risk for biomedical problems, including central nervous system dysfunction (Baumeister, Kupstas, & Klindworth, 1990).

Social and cultural risks exist in addition to biological risks. Families, whether or not in poverty, are experiencing greater degrees of psychological stress. For example, a study of leisure arrived at the following conclusions:

Americans are starved for time. Since 1969, the annual hours of work of employed Americans have risen markedly—by approximately 140 hours, or more than an additional three weeks. This increase includes both hours on the job and time spent working at home. As a result, leisure, or free time, has declined as well. Increasing numbers of people are finding themselves overworked, stressed out, and heavily taxed by the joint demands of work and family life. (Leete-Guy & Schor, 1992, p. 1)

Stress on parents may result in their being less able to provide the social support necessary to help their children, who themselves are living under an increasing amount of stress. The result may be that children who in a previous time would have gotten by in their schoolwork with a less stressful lifestyle and more support are now experiencing failure.

In addition to the rapid growth in the percentage of students identified as having learning disabilities, there is substantial variation from jurisdiction to jurisdiction in the percentage of students so identified. For example, as shown in Figure 1.3, some states identify about 2% of their students but others identify over 9% of their students as having learning disabilities. One explanation for this variation is that states and localities use different criteria for determining eligibility. Another explanation is that the variation may reflect true differences based, perhaps, on differences in risk factors (environmental toxins, socio-economic status) or quality of preventative services available to families and schools. Probably neither explanation fully accounts for the differences; both factors in combination with other explanations probably are responsible.

Both the growth and variation in the percentage of students identified as having learning disabilities have given fuel to the controversial nature of learning disabilities as an educational category. Another factor that has caused concern is the possibility that some groups—particularly males and children of African American heritage—may be overrepresented among the children identified as having learning disabilities.

CEC Knowledge Check
What factors have caused an increase in the number of students with learning disabilities over the last 30 years?
CC1K1, CC1K3
Learning disabilities occur across a wide spectrum of the population—among people of both genders, all ethnic groups, young and old, rich and poor, the socially prominent and the obscure, the socially successful and unsuccessful, those who are admired and those who are reviled, and among those of nearly every conceivable category of human being. As we have already discussed, individuals with learning disabilities are also a very diverse group in terms of the types and degrees of abilities and disabilities they have.

A persistent question about the diversity of students identified as having learning disabilities is whether certain groups are disproportionately represented. For example, are certain groups—students of color, those who are poor, or those of some other group—over- or underrepresented in the population of students with learning disabilities? Likewise, are students of one gender more likely to be identified as learning disabled? And if there is disproportionate representation by ethnicity or gender, is this due to bias or discrimination, or are there reasonable explanations for the disproportionate representation? These questions are not trivial, for if disproportional representation is found to be the result of reprehensible practices that reflect bias or discrimination, then students are being mistreated, and these practices must be corrected. However, if disproportional representation is due to causal factors external to the school, such as poverty and its attendant disadvantages (in the case of ethnic disproportionality) or biological causes (in the case of gender disproportionality), then insisting on strictly proportional representation would be
discriminatory in that it would deny appropriate services to students who would otherwise be qualified to receive them, which is another form of mistreatment (see Hallahan & Kauffman, 2003, for further discussion).

**Ethnicity**

Educators in the United States do not have conclusive evidence about whether there is disproportional representation of ethnic groups among students with learning disabilities. Whereas there is strong evidence of overrepresentation of African American students in other categories of special education (e.g., mental retardation), the evidence of overrepresentation of certain groups is not strong in learning disabilities (Donovan & Cross, 2002; MacMillan & Reschly, 1998; Oswald, Coutinho, Best, & Singh, 1999). A U.S. government report showed roughly equivalent representation of African Americans and Hispanics in the learning disabilities category. This survey found that the prevalence of learning disabilities in white students, African American students, and Hispanic students was 5.3%, 5.8%, and 5.3%, respectively (U.S. Department of Education, 1996). More recently, the President’s Commission on Excellence in Special Education (2002) found no clear evidence for overrepresentation of students from minority groups among those who have learning disabilities. Although U.S. society’s concerns often reflect greater concern about other ethnic groups, it is important to note that there is evidence suggesting that Native Americans may be overrepresented in learning disabilities (Donovan & Cross, 2002).

The U.S. federal government provides data about the ethnicity of children receiving special education services. Table 1.4 shows the proportion of children of various ethnic groups according to type of disability. Using for comparison the overall percentage shown in the right-most column, the proportions of children from different ethnic groups who are identified as learning disabled are close to what one would expect. However the proportion of Hispanic children who are identified as learning disabled is about 10% higher than expected.

If educators found clear overrepresentation of some ethnic groups and underrepresentation of other ethnic groups in learning disabilities, they would surely want to know why this occurred. This was the issue examined in an earlier report by the U.S. government on ethnic representation in special education:

> Some have argued that racial discrimination is the culprit. Others have pointed out that professionals, such as school psychologists, are inadequately prepared to assess the capabilities of minority students. These may indeed be factors, but why would Hispanic students be underrepresented in the learning disability category? Furthermore, if racial bias were the sole explanation, how could it account for the fact that African Americans are also overrepresented in categories such as visual impairment and hearing impairment? “[I]t is possible that black youth were more likely than their white counterparts to have experienced poor prenatal, perinatal, or postnatal health care and early childhood nutrition which may have resulted in actual disabilities” (U.S. Department of Education, 1992, p. 15).

Determining whether there is disproportional representation of various ethnic groups among students with learning disabilities is related to the matter of identifi-
cation of students as having learning disabilities. One might suspect that changing the criteria for eligibility might alter the ratio of students from different ethnic groups who are identified, but changes in the criteria for eligibility apparently do not equalize the proportion of white and African American students identified (Colarusso, Keel, & Dangel, 2001).

Even though students from different ethnic groups may not be disproportionally identified as having learning disabilities, there is also the possibility that they may be treated differently within the system of special education. It might be that children with Hispanic heritage might have IEPs that are systematically different than children of African American or European American heritage. As shown in the Multicultural Considerations box on page 34, the measurement practices of school psychologists may not take into account children’s ethnic backgrounds. Or, perhaps, students with learning disabilities who have one ethnic background are more likely to receive most of their schooling in the educational mainstream than other students with learning disabilities. We have only preliminary evidence on this

tabular_data

### TABLE 1.4 Percentage of Students Ages 6 through 21 Served under IDEA by Disability and Race/Ethnicity, during the 2000–2001 School Year

<table>
<thead>
<tr>
<th>DISABILITY</th>
<th>AMERICAN INDIAN/ALASKA NATIVE</th>
<th>ASIAN/PACIFIC ISLANDER</th>
<th>BLACK (NON-HISPANIC)</th>
<th>HISPANIC</th>
<th>WHITE (NON-HISPANIC)</th>
<th>ALL STUDENTS SERVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific learning disabilities</td>
<td>56.3</td>
<td>43.2</td>
<td>45.2</td>
<td>60.3</td>
<td>48.9</td>
<td>50.0</td>
</tr>
<tr>
<td>Speech or language impairments</td>
<td>17.1</td>
<td>25.2</td>
<td>15.1</td>
<td>17.3</td>
<td>20.8</td>
<td>18.9</td>
</tr>
<tr>
<td>Mental retardation</td>
<td>8.5</td>
<td>10.1</td>
<td>18.9</td>
<td>8.6</td>
<td>9.3</td>
<td>10.6</td>
</tr>
<tr>
<td>Emotional disturbance</td>
<td>7.5</td>
<td>5.3</td>
<td>10.7</td>
<td>4.5</td>
<td>8.0</td>
<td>8.2</td>
</tr>
<tr>
<td>Multiple disabilities</td>
<td>2.5</td>
<td>2.3</td>
<td>1.9</td>
<td>1.8</td>
<td>1.8</td>
<td>2.1</td>
</tr>
<tr>
<td>Hearing impairments</td>
<td>1.1</td>
<td>2.9</td>
<td>1.0</td>
<td>1.5</td>
<td>1.2</td>
<td>1.2</td>
</tr>
<tr>
<td>Orthopedic impairments</td>
<td>0.8</td>
<td>2.0</td>
<td>0.9</td>
<td>1.4</td>
<td>1.4</td>
<td>1.3</td>
</tr>
<tr>
<td>Other health impairments</td>
<td>4.1</td>
<td>3.9</td>
<td>3.7</td>
<td>2.8</td>
<td>5.9</td>
<td>5.1</td>
</tr>
<tr>
<td>Visual impairments</td>
<td>0.4</td>
<td>0.8</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Autism</td>
<td>0.6</td>
<td>3.4</td>
<td>1.2</td>
<td>0.9</td>
<td>1.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Deaf-blindness</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Traumatic brain injury</td>
<td>0.3</td>
<td>0.3</td>
<td>0.2</td>
<td>0.2</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Developmental delay</td>
<td>0.7</td>
<td>0.6</td>
<td>0.7</td>
<td>0.2</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>All disabilities</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Note:* Does not include data for New York State

Are School Psychologists Adequately Trained to Assess Ethnically Diverse Students?

The school psychologist often plays a critical role on the team of professionals determining the eligibility of students for special education services. Scores obtained on standardized achievement and ability tests, administered and interpreted by a school psychologist, can often make the difference between a student being identified as having a learning disability or not. Unfortunately, some school psychologists are not prepared to make valid assessments in the case of children from ethnically diverse backgrounds. For example, 83% of school psychologists surveyed described their training as less than adequate to assess culturally and linguistically diverse students (Ochoa, Rivera, & Ford, 1997).

There is additional evidence that this lack of training leaves school psychologists at a loss considering cultural and linguistic issues in their testing. Researchers asked 671 school psychologists who had conducted assessments of bilingual children and children with limited English proficiency (LEP) the following open-ended question: “As a school psychologist, what criteria/standards do you use to rule out environmental, cultural, economic disadvantaged factors when determining LD eligibility when a LEP or bilingual student displays a severe discrepancy between intelligence and achievement or between grade levels?” (Ochoa, Rivera, & Powell, 1997). The results were extremely disappointing from a multicultural perspective. Few school psychologists said they considered the length of time or the number of years the student had lived in the United States, the home language of the student, or the student’s performance in comparison with other bilingual and LEP students. None took into account the educational level of the parents or the level of literacy in the home.

The open-ended nature of the questionnaire may have underestimated the actual degree to which school psychologists take into account cultural and linguistic factors when doing their assessments. Perhaps they were not able to recall all the variables they consider when interpreting their tests. If given a questionnaire listing a variety of factors, perhaps more of them would have stated that they use the factors listed. Nonetheless, it is perplexing that so few school psychologists readily identified what should be obvious mitigating cultural and linguistic factors.

Multicultural Considerations

Gender

Since the earliest days of the field of learning disabilities, researchers and practitioners have noted a disproportionate number of boys identified as having learning disabilities. Some studies have found that boys so identified outnumber girls by about 3 or 4 to 1. Data collected by the federal government are only for ages 13 to 21 years, but they are essentially in agreement with other studies in finding that 73% of students identified as having learning disabilities are males (U.S. Department of Education, 1992). However, recent data from the Special Education Elementary Longitudinal Study show that in first through eighth grade, boys outnumber girls about 2 to 1 in learning disabilities (Wagner, Marder, Blackorby, & Cardoso, 2002).
The evidence showing overrepresentation of boys has prompted authorities to seek explanations for the apparent difference. Some authorities have pointed to the possibility of greater biological vulnerability for boys as an explanation for this gender difference. Boys are at greater risk than girls for a variety of biological abnormalities, and their infant mortality rate is higher than that of girls.

Other authorities have raised the issue of possible bias in referral and assessment procedures, suggesting that boys might be more likely to be referred because they are more likely to exhibit behaviors that are bothersome to teachers, such as hyperactivity. Research results on gender bias are mixed. One team of investigators found no evidence of gender bias (Clarizio & Phillips, 1986). But researchers in two other studies concluded that their data showed a bias toward identifying more males as having learning disabilities (Leinhardt, Seewald, & Zigmond, 1982; Shaywitz, Shaywitz, Fletcher, & Escobar, 1990). However, more boys than girls are identified as having disabilities even among infants and toddlers and across most categories of disabilities, so the high proportion of boys among students with learning disabilities cannot be solely the result of bias in identification (Hebbeler et al., 2001; Wagner et al., 2002).

Shaywitz et al. (1990) compared a sample of students identified by schools as reading disabled to an epidemiological sample on the discrepancies between IQ and reading achievement. The children in the latter sample were part of a longitudinal study in which virtually all children entering kindergarten in target schools were identified for testing. The ratio of boys to girls was about 4 to 1 in the school-identified sample, but it was about 1 to 1 in the epidemiological sample. Shaywitz et al. also found that, in contrast to the epidemiological sample, the school-identified group exhibited more behavior problems than a control group of nondisabled students. One possible criticism of this study is that the researchers relied solely on a discrepancy between ability and achievement to arrive at a diagnosis of “true” reading disability.

More research is needed about whether the greater number of males identified for learning disabilities is due to bias. The findings of Shaywitz et al. (1990) are provocative, especially the data showing that school-identified students with reading disabilities show a greater degree of behavioral problems that might prompt teachers to refer them for testing in order to get them out of their classrooms. Our best guess at this point is that some bias does exist, but that the biological vulnerability of males also plays a role. For example, the federal government’s figures indicate that all disabilities are more prevalent in males, including conditions that are difficult to imagine as resulting from referral or assessment bias, such as hearing impairment (53% are males), orthopedic impairment (54% are males), and visual impairment (56% are males) (U.S. Department of Education, 1992).

**Association with Other Disabilities**

Once an individual is said to have a particular disability, the great temptation is to assume that the label we have chosen summarizes all of the difficulties or tells us what the problem really is. In fact, it is possible for people to have a combination of disabilities and special talents. Historically, every field of disability has sought
diagnostic purity—clear distinctions between a particular disability and all other categories. But that diagnostic purity has routinely proven elusive.

Research on disabilities of all kinds, including learning disabilities, has shown that they often come in multiples; that is, some involve more than one disability. Some authorities have estimated, for example, that about half of children who meet the criteria for one disability diagnosis also meet those for one or more other disorders (de Mesquita & Gilliam, 1994; Rosenberg, 1997). When one or more disabilities occur in the same person, they are referred to as **comorbid conditions**.

Comorbidity is often due to at least two factors. First, causal agents are frequently not particular about what part of the human organism they attack. For example, if a fetus does not have enough oxygen during birth (if the umbilical cord becomes wrapped around the neck and cuts off the oxygen supply), the result can be brain damage. It is virtually impossible to predict whether this damage will be localized or widespread. The more widespread, the more likely the child will have more than one disability. Second, the human organism is extremely complex and is made up of a seemingly infinite number of interrelated functions. When one function is affected, others are also likely to be altered. For example, when there is a hearing impairment, speech is likely to be affected. When there is attention deficit hyperactivity disorder, off-task behavior during instruction may result in a learning disability.

Learning disabilities can co-occur with virtually any other disability as well as with giftedness. Two of the most common conditions that occur concomitantly with learning disabilities are attention deficit hyperactivity disorder and serious emotional disturbance, or behavior disorders. In each case, it is often difficult to determine whether one condition is causing the other or whether each occurs independently. Researchers are just beginning to address the many issues of comorbidity and learning disabilities. (A special issue of *Journal of Learning Disabilities* was devoted to this topic. See Rosenberg, 1997.)

**Who Works with People Who Have Learning Disabilities?**

There are over 350,000 special education teachers in the United States, and a significant portion of them work with students who have learning disabilities (U.S. Department of Education, 2002b). Because most students with learning disabilities spend a significant portion of their school time in general education classrooms, they also are of concern to teachers in the elementary grades as well as secondary school teachers who specialize in specific subject areas.

Although it is easy to think of learning disabilities as the domain of educators, a diverse array of professionals is concerned with learning disabilities. For this reason, it is often the case that teachers and parents have contact with people from many disciplines outside of education.

In their day-to-day work, teachers are likely to see not just other teachers and administrators, but also speech-language pathologists and even occupational or physical therapists. From time to time, they may have contact with psychologists, attorneys, pediatricians, social workers, and many others.
Researchers concerned with learning disabilities also come from a similarly diverse group of professions. Studies and articles about learning disabilities appear in the journals of educators of many stripes (special, general, reading, physical, preschool, and postsecondary). In addition, physicians, speech pathologists, audiologists, psychologists, and others also conduct and report research about students with learning disabilities.

Because learning disabilities are primarily apparent in educational settings, we consider educators’ roles to be the most important professional roles in the field. Nevertheless, it is important for educators, especially special educators, to know at least foundational concepts in other areas so that they can draw relevant concepts from those disciplines, help parents understand those concepts, and communicate clearly with representatives of those other disciplines. Our concern about understanding relevant concepts is manifested in our discussion in later chapters, such as those on the causes of learning disabilities, the problems of learning disabilities outside the K–12 grades, and so forth.

Can Learning Disabilities Be Overcome?

People naturally want to prevent disabilities, hope for a cure for any disability, or at least an intervention that will minimize it so they are not handicapped in ordinary life activities. These are core concepts in prevention (see the Current Trends and Issues box on page 38). If the disability involves academic learning and social behavior—things that seem to be under voluntary control and to the average person seem easily learned—then hope is redoubled that proper remedial training can make these difficulties disappear. Of all the various disabilities, therefore, learning disabilities are most vulnerable to the often-mistaken assumption that they can be cured, that they will not last a lifetime.

The early years of research and intervention in nearly every category of disability have been characterized by a search for and claims of a cure or something very near it. In fact, promoters of numerous interventions for almost every disability have claimed that their approach produces nearly miraculous effects, but these claims cannot be substantiated by careful scientific research. The strength of the appeal of these claims is in large measure a result of people’s desire to avoid confronting a developmental disability that will persist over the individual’s life span. The field of learning disabilities has had its share of excessive claims and quack treatments (Worrall, 1990). Students with disabilities should not be subjected to untested and potentially harmful practices.

A Critical Need for Effective Teaching

Although learning disabilities cannot be overcome in the sense of being cured, persons with learning disabilities can learn strategies that greatly diminish their disabilities’ negative impact—perhaps as exemplified by the renowned individuals discussed earlier. And great strides have been made in developing instructional methods since, for example, the pioneering efforts of Cruickshank, Strauss, and
One of the first questions many people ask about learning disabilities, as with other conditions including medical and psychological disorders, is whether the problems students experience could have been prevented. Prevention is an attractive concept because it holds the promise of benefits, not just for the individuals who experience the disorders, but also for others close to the individual (e.g., family members) and society in general (e.g., a reduction of costs for later services). Thus, few people would oppose efforts to prevent learning disabilities. As attractive as it is, however, prevention is difficult to accomplish and uncommon in special education (Kauffman, 1997; Pianta, 1990).

Authorities in most areas discuss three different levels of prevention: primary, secondary, and tertiary.

Primary Prevention: Keep It from Happening.

Primary prevention efforts are usually aimed at promoting desirable future outcomes in virtually all of the population of individuals who may or may not develop the problem or disorder. For example, in hopes of preventing disease and early death, physicians encourage people to lead healthy lifestyles—to eat healthy foods, exercise, avoid risky behaviors such as smoking, wear seat belts, and so forth. Similarly, public health officials recommend that communities add fluoride to drinking water supplies in hopes of preventing or lessening tooth decay. By analogy, education should apply the most effective instructional practices available in hopes of preventing learning disabilities.

Such reasoning was part of the driving force behind the U.S. federal government’s funding of the Reading First program (http://www.ed.gov/offices/OESE/readingfirst/). The Reading First program (and Early Reading First, too) aimed to provide support to state education agencies for making grants to local education agencies so that the LEAs could obtain instructional materials and supplies as well as inservice for teachers so that they could teach reading based on high-quality research about effective reading instruction.

Primary prevention does not always work, however. Sometimes the preventive measures are not applied faithfully or sufficiently. Or sometimes some people respond to the preventive measures but others are disposed to the condition and they will “get it” no matter what is done. This does not mean that we should not attempt primary prevention efforts, as they may still keep many from suffering the consequences of the condition. Later chapters in this book describe the most effective methods of teaching in general education that can help prevent many students’ learning disabilities.

Secondary Prevention: Catch It Early and Stop It Right Away.

Secondary prevention efforts focus on early detection of problems and then on stopping or slowing the progress of the condition. In medicine, routine screenings for prostate or breast cancer are examples of early detection efforts. Physicians believe that if they catch the cancer early, they can treat it and prevent subsequent problems.

In education, schools often test students with simple screening measures to identify those learners who may have problems. For example, the state of Virginia has a Phonological Awareness and Literacy Screening program in which teachers assess nearly all children in the primary grades to identify those who are most at risk of failing in the early stages of reading; schools receive extra funds to provide supplemental instruction in hopes of preventing later reading problems (Invernizzi, Meier, Juel, & Swank, 1997). In this book we shall introduce you to powerful methods of screening and early intervention for learning disabilities.

Tertiary Prevention: Treat It Aggressively and Minimize the Consequences.

Tertiary prevention aims to reduce or stop an existing problem or condition from getting worse. When people have diabetes, for example, they must control their diet, exercise, and administer insulin (either as a pill or injection). If people with diabetes do not take such steps, they may have periods of shock or even have limbs amputated. Tertiary prevention is equivalent to treatment or intervention. When students have learning disabilities, they already have clearly established problems. If they have been in schools providing primary or secondary prevention (or both), they probably have very serious problems. They must receive instruction that corrects for the imbalance in their skills and that uses the most effective intervention methods available. In this book, you will learn about those methods.
their colleagues (cf. Cruickshank, Bentsen, Ratzeburg, & Tannhauser, 1961; Werner & Strauss, 1941; see Weiss & Lloyd, 2001), whose interventions consisted largely of controlling extraneous stimuli and providing a reliable structure of routines.

Researchers have been devising and refining instructional procedures that are more effective than earlier strategies. Among the major approaches we discuss in subsequent chapters are cognitive training (which includes procedures such as self-monitoring or self-instruction), mnemonics (which includes the use of key words and other ways of assisting memory), Direct Instruction (which includes careful sequences of instruction, rapid and frequent responding, and immediate feedback and correction of errors), metacomprehension training (which provides students with strategies for thinking about remembering the major points in the material being read), and scaffolded instruction (which includes gradual reduction of assistance and reciprocal teaching). Although they vary in the specific skills taught and how they are related to the curriculum areas being taught, these approaches are all systematic procedures for teaching task-approach skills to students with learning disabilities so they can apply these skills in their actual academic situations.

Still, special education for students with learning disabilities will need to have certain features. As Zigmond described it,

[It] is, first and foremost, instruction focused on individual need. It is carefully planned. It is intensive, urgent, relentless, and goal directed. It is empirically supported practice, drawn from research. To provide special education means to set priorities and select carefully what needs to be taught. It means teaching something special and teaching it in a special way. To provide special education means using the techniques and procedures described by Howell and Davidson [1997] for defining the special education curriculum appropriate for each student that will be designated on the annual IEP. To provide special education means monitoring each student’s progress in the manner described by Deno [1997], and taking responsibility for changing instruction when the monitoring data indicate that sufficient progress is not being made. (1997, pp. 384–385)

We believe that special educators must provide instruction based on the very best research available. The instruction that special educators provide must be adapted to meet the individual needs of their students. In this book, we do not advocate a “learning disabilities program.” We recommend an approach to serving individuals with learning disabilities that is based on making sure that students initially receive the most effective instruction available and that those who are not progressing according to reasonably accepted criteria under those conditions are then eligible for additional services—possibly prereferral services and, at least, special education services that are “intensive, urgent, relentless, and goal directed” (Zigmond, 1997, p. 384).

Learning Disabilities Are Life-Span Problems

There is increasing evidence that learning disabilities are truly developmental and not curable in the sense that a disease or unfortunate life circumstance might be.
There is diminishing support for the assumption that with proper intervention, learning disabilities can be reduced from a true developmental disability to a passing inconvenience. Nevertheless, the myth persists that most children with learning disabilities will outgrow these disabilities as adults. In fact, learning disabilities tend to endure into adulthood. Most successful adults who had learning disabilities as children continue to have specific difficulties, must learn strategies to cope with their problems, and must show extraordinary perseverance (Reiff et al., 1997).

This book is about how teachers and others concerned about students with learning disabilities can develop an understanding of learning disabilities as a field of study. Although they may not be readily recognized in the early years, learning disabilities extend across the life span. They are closely associated with bionerological differences among people, and they may manifest themselves in one or more areas of human endeavor, including cognition, attention, social behavior and related social factors such as self-concept, language, and—especially—academic learning. As the field has matured, researchers have built a strong body of evidence showing that effective methods can address these problems. Teachers and others can help individuals with learning disabilities achieve at levels that allow them to live satisfying and fulfilling lives.

PORTFOLIO-BUILDING ACTIVITY

Demonstrating Mastery of the CEC Standards

Applying the information you have learned in Chapter 1, you can begin to develop your own personal perspective of the special education/learning disabilities field. This perspective will grow and develop as you engage in further study. Compose an initial draft of your Personal Philosophy of Special Education paper that addresses the following:

- What are the historical theories, who are the major contributors, and what are the relevant federal laws underlying the field of learning disabilities?
- How do these theories interact with the dynamic development of the learning disabilities definitions over time?
- What has been and will be the impact of these definitions on legal, ethical, and education policies and procedures?
- What are the issues of definition relative to personal society, family, culture, and label bias?
- Do you understand and how do you respect the heterogeneity of label characteristics in terms of development and lifelong effects?
SUMMARY

Why is it important to understand learning disabilities?

- Most teachers will have students with learning disabilities.
- Understanding learning disabilities helps understand normal learning.
- Many individuals with learning disabilities can contribute valuably to society.

Why are learning disabilities controversial?

- Defining learning disabilities has been and continues to be difficult.
- Discrepancy between ability and achievement, a difference often used to characterize learning disabilities, has been controversial.
- The criteria used to identify students as eligible for special education because of learning disabilities have varied greatly and may have been applied inconsistently.
- Learning disability is a construct rather than a clear entity.

How many people have learning disabilities?

- More than 5% of the U.S. school-age population are identified as having learning disabilities, and this represents about half of all students who are identified as needing special education.
- Although males are more likely to be identified as having learning disabilities than females, students with learning disabilities come from all ethnic backgrounds, ages, and social groups.
- Learning disabilities sometimes co-occur with other problems and disabilities.

Who works with people who have learning disabilities?

- School personnel other than special education teachers work with students with learning disabilities. These people include general education teachers, psychologists, and other specialists.
- Professionals from outside the schools (e.g., pediatricians) are also concerned with learning disabilities.

Can learning disabilities be overcome?

- There are no simple remedies or easy cures for learning disabilities.
- Although their problems cannot be eliminated, given powerful instruction, students with learning disabilities can learn most skills and subjects.
- Learning disabilities are usually life-span problems. Most adults who had learning disabilities as children continue to experience some problems later in their lives.

REFLECTIONS ON THE CASES

1. Jamal’s mother remarked that she would have to learn a lot about learning disabilities. How much do you think people in the general public know about learning disabilities? What misconceptions might people in the general public have about learning disabilities?

2. Shannon’s mother said she gave “all the credit” to Shannon’s first special education teacher. How accountable do you think general education teachers should be for the progress of their students? Should there be different levels of accountability when teachers teach students who have learning disabilities?

3. Do you think it was wise for Ms. Hamilton, Jamal’s first-grade teacher, to advocate strongly for Jamal receiving special education services? Should she have done something else?

4. Shannon expressed concern about being able to use a calculator and to have extra time to complete tests on mathematics. Is it fair for some, but not all, students to have such accommodations?