Introduction to Learning Disabilities

Definition of Learning Disabilities

Learning disability (LD) is a general term that describes specific kinds of learning problems. A learning disability can cause a person to have trouble learning and using certain skills. The skills most often affected are reading, writing, listening, speaking, reasoning, and doing math. Learning disabilities vary from person to person. One person with LD may not have the same kind of learning problems as another person with LD. One person may have trouble with reading and writing. Another person with LD may have problems understanding math. Still another person may have trouble in each of these areas, as well as with understanding what people are saying (National Dissemination Center for Children and Youth with Disabilities [NICHCY], 2004).

LD is a group of disorders that affects people's ability to either interpret what they see and hear or to link information from different parts of the brain. These limitations can show up in many ways: as specific difficulties with spoken and written language, coordination, self-control, or attention. Such difficulties extend to schoolwork and can impede learning to read, write, or do math.

A learning disability is a neurological disorder that affects the brain's ability to receive, process, store, and respond to information. The term learning disability is used to describe the seemingly unexplained difficulty a person of at least average intelligence has in acquiring basic academic skills. These skills are essential for success at school and work, and for coping with life in general. "LD" does not stand for a single disorder. It is a term that refers to a group of disorders.

Interestingly, there is no clear and widely accepted definition of learning disabilities. Because of the multidisciplinary nature of the field, there is ongoing debate on the issue of definition, and currently at least twelve definitions appear in the professional literature. There are several technical definitions offered by various health and education sources. Overall, most experts agree on the following descriptions:

- Individuals with LD have difficulties with academic achievement and progress.
- Discrepancies exist between a person's potential for learning and what that person actually learns.
- Individuals with LD show an uneven pattern of development (language development, physical development, academic development, and/or perceptual development).
- Learning problems are not due to environmental disadvantage.
- Learning problems are not due to mental retardation or emotional disturbance.
- Learning disabilities can affect one's ability to read, write, speak, spell, compute math, and reason. They also can affect a person's attention, memory, coordination, social skills, and emotional maturity.
- Individuals with LD have normal intelligence, or are sometimes even intellectually gifted.
- Individuals with LD have differing capabilities, with difficulties in certain academic areas but not in others.

- Learning disabilities have an effect on either input (the brain's ability to process incoming information) or output (the person's ability to use information in practical skills, such as reading, math, spelling, etc.).

Research suggests that learning disabilities are caused by differences in how a person's brain works and how it processes information. Children with LD are not stupid or lazy. In fact, they usually have average or above average intelligence, but their brains process information differently. \ A learning disability affects the way kids of average to above average intelligence receive, process, or express information. Even if the person learns to compensate and, in effect, overcomes the disorder, the difference in brain processing lasts throughout life.

Important Point to Note

Knowing that a child has a learning disability tells you only that the child is experiencing some difficulty processing information. You must learn much more about the child before you can determine how much difficulty, the type of difficulties, and/or the impact the disability has on specific academic subjects or tasks.

Myth vs. Reality about Learning Disabilities

Myth 1. ***People with LD are not very smart.***
Reality. Kids with learning disabilities are just as smart as other kids. Intelligence has nothing to do with LD. In fact, people with LD have average to above average intelligence. Many have intellectual, artistic, or other abilities that permit them to be defined as gifted. Studies indicate that as many as 33% of students with LD are gifted.

Myth 2. ***LD is just an excuse for irre-sponsible, unmotivated, or lazy people.***
Reality. LD is caused by neurological impairments, not character flaws. For some people with LD, the effort required to get through a day can be exhausting in and of itself. The motivation required to do what others take for granted is enormous. Learning disabilities are problems in processing words or information, causing otherwise bright and capable children to have difficulty learning. The disabilities involve language—reading, writing, speaking, and/or listening.

Myth 3. ***LD only affects children. Adults grow out of the disorders.***
Reality. It is now known that the effects of LD continue throughout the individual's lifespan and "may even intensify in adulthood as tasks and environmental demands change" (Michaels, 1994). Sadly, many adults, especially older adults, have never been formally diagnosed with LD. Learning disabilities cannot be outgrown, but they can be identified reliably in kindergarten or first-grade children, or even earlier. Research clearly demonstrates that the earlier a child is given appropriate help for a learning disability, the more successful the outcome.

Myth 4. ***The terms dyslexia and learning disability are the same thing.***
Reality. Dyslexia is a type of learning disability. It is not another term for learning disability. It is a specific language-based disorder affecting a person's ability to read, write, and verbally express him or herself. Unfortunately, careless use of the term dyslexia has expanded so that it has become, for some people, an equivalent for LD. Four out of five children identified with a learning disability are diagnosed with a reading disability (or dyslexia). They have trouble learning how spoken language translates into written text. Since every subject—including

math—requires reading and writing, a reading disability affects all of a person's school-based learning.

Myth 5. ***Learning disabilities are only academic in nature. They do not affect other areas of a person's life.***
Reality. Some people with learning disabilities have isolated difficulties in reading, writing, or mathematics. However, most people with learning disabilities have more than one area of difficulty. Dr. Larry Silver asserts that "learning disabilities are life disabilities." He writes, "the same disabilities that interfere with reading, writing, and arithmetic also will interfere with sports and other activities, family life, and getting along with friends." (Silver, 1998) Some children have good verbal (language) skills but weaknesses in visual and spatial perception, motor skills and, most significantly, social skills—affecting their ability to grasp the main idea, "see the whole picture," or understand cause-and-effect relationships.

Many children with LD struggle with organization, attention, and memory. One-third of them may also have an attention deficit disorder—difficulty in regulating attention effectively, paying attention as needed, and shifting attention to another task, when required. Children with LD are creative and resourceful, and can frequently be characterized as gifted and as alternative thinkers. They are often very smart, and typically have strengths and talents that differ from the skills emphasized in school. With recognition of their difficulties, appropriate help, and the development of their interests and talents, children with LD can learn to succeed both in school and beyond.

Myth 6. ***Adults with LD cannot succeed in higher education.***
Reality. More and more adults with LD are going to college or university and succeeding. With the proper accommodations and support, adults with learning disabilities can be successful at higher education.

Myth 7. ***Children with LD are identified in kindergarten and first grade.***
Reality. Learning disabilities often go unrecognized for years; most are not identified until third grade. Bright children can "mask" their difficulties, and some kinds of learning problems may not surface until middle school, high school, or even college.

Myth 8. ***More boys than girls have learning disabilities.***
Reality. Although three times more boys than girls are identified by schools as having learning disabilities, research studies show that, in fact, equal numbers of boys and girls have the most common form of learning problem—difficulty with reading. Many girls'learning difficulties are neither identified nor treated.

History of the Field

Definitions of learning disabilities have evolved over time. These definitions have been attempts at describing a condition that had been labeled, among other terms, aphasia, neurologically impaired, Strauss Syndrome, and minimal brain dysfunction.

History suggests that the term learning disabilities originated with and became popularized by Dr. Samuel Kirk based on his writings in the early 1960s and comments that were made at the April 6, 1963 Conference on Exploration into Problems of the Perceptually Handicapped Child. His proposed label was "enthusiastically received and helped to unite the participants into an

organization known as the Association for Children with Learning Disabilities, the forerunner of today's Learning Disabilities Association" (Lerner, 2000).

I have used the term "learning disabilities" 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, p. 2)

During the latter part of the 1960s, there became greater awareness about learning disabilities, both from the general public and Congress. In response, the U.S. Office of Education was charged with creating a federal definition for what constituted a learning disability. Samuel Kirk chaired this committee. In 1968, the first annual report of the National Advisory Committee on Handicapped Children, headed by Dr. Kirk, wrote:

Children with special learning disabilities exhibit a disorder in one or more of the basic, psychological processes involved in understanding or in using spoken or written languages. 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 which are due primarily to visual, hearing, or motor handicaps, to mental retardation, emotional disturbance, or to environmental disadvantage. (Special Education for Handicapped Children, 1968)

By the end of 1968, "specific learning disability" (abbreviated SLD or LD) became a federally designated category of special education (U.S. Office of Education, 1968), and in 1969, the Specific Learning Disabilities Act was enacted, Public Law 91-230. In 1975, Congress enacted P.L. 94-142, the Education for All Handicapped Children's Act. Here, the definition of a learning disability was formalized for children in special education. Under P.L. 94-142, a specific learning disability was defined as follows.

. . . a disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in an imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations, including conditions such as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia. However, learning disabilities do not include, ". . . learning problems that are primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

The continuance of the P.L. 94-142 definition in federal law prompted further analysis. In the 1980s, a coalition of parent and professional organizations, described as the National Joint Committee on Learning Disabilities (NJCLD), criticized the definition under P.L. 94-142 for including concepts that were unclear or difficult to use to identify children with learning disabilities. In response to the criticisms, the NJCLD proposed an alternative definition.

Learning disabilities is a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing, reasoning, or mathematical abilities. These disorders are intrinsic to the individual and

presumed to be due to central nervous system dysfunction, and may occur across the lifespan. Problems in self-regulatory behaviors, social perception, and social interaction may exist with learning disabilities but do not by themselves constitute a learning disability. Although learning disabilities may occur concomitantly with other handicapping conditions or with extrinsic influences, they are not the direct result of those conditions or influences (NJCLD, 1994).

Today, children in special education are protected under Public Law 108-446, The Individuals with Disabilities Education Improvement Act (IDEA 2004). The defi¬nition under IDEA has not changed in its criteria and guidelines for what constitutes a learning disability. Under current federal law the following language was established.

IN GENERAL: The term "specific learning disability" means a disorder in 1 or more of the basic psychological processes involved in understanding or in using language, spoken or written, which disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

DISORDERS INCLUDED. Such term includes such conditions as perceptual disabilities, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia.

DISORDERS NOT INCLUDED. Such term does not include a learning problem that is primarily the result of visual, hearing, or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage.

As can be seen when comparing the definitions set forth by P.L. 94-142 (now IDEA) and the NJCLD, both view central nervous system dysfunction as a potential cause; both specify that speaking, listening, reading, writing, and math can be affected; and both exclude learning problems due primarily to other conditions, such as mental retardation, emotional disturbance, and cultural differences (Hallahan & Kauffman, 2003).

The key differences between the definition set forth by IDEA and the definition established by the NJCLD are listed below:

- The federal definition is older and has a medical orientation.
- The NJCLD definition allows for coexisting disabilities (e.g., learning disabilities and visual disabilities).
- The NJCLD definition acknowledges problems many of these individuals have with social skills (Smith, 2004).
- The NJCLD does not use the phrase "basic psychological processes," which has been so controversial, and does not mention perceptual handicaps, dyslexia, or minimal brain dysfunction, which have been so difficult to define.
- The NJCLD definition clearly states that a learning disability may be a lifelong condition.

As noted above, the current IDEA definition of LD remains the same as that incorporated in P.L. 94-142. The focus of IDEA is on student-age recipients of public education. However, nonacademic services to persons with developmental disabilities are provided by the Department of Developmental Disabilities (DDD) after high school. Because of DDD's requirement that a person demonstrate a "substantial disability" to qualify for services, caseworkers need to determine a substantial level of severity affecting daily living. Without a separate definition of learning disabilities, caseworkers must qualify adults for DDD services based on some criterion.

Bender (1992) advises, "A practitioner in the developmental disabilities is well advised to use the definition provided by the state in which he or she practices. Generally, the state's Department of Education can provide a set of rules and regulations for special education services that includes the state definition of learning disability" (p. 82).

Finally, IDEA was reauthorized in 2004 (IDEA 2004), and its official name is the Individuals with Disabilities Education Improvement Act (Public Law 108-446). As stated by Bowe (2004),

. . . IDEA will no longer require local education agencies (school districts) to use discrepancy in determining whether or not a given child has a learning disability. You should check with your state's department of education to see if a discrepancy requirement continues to be in effect. The new amendments to IDEA also call for a process that determines if a child responds to "scientific, research-based intervention." If a student does, the school district may rule that there is no specific learning disability, but rather a prior failure to provide adequate instruction. (p. 69)"Discrepancy" in Diagnosing a Learning Disability
According to Ortiz (2004).

Perhaps the most controversial aspect of the definition of LD is that the observed academic problems are greater than what might be expected based on the child's intellectual ability. This would appear to be an assumption that would be rarely questioned because it seems to make the most sense. As noted previously, LD is generally not diagnosed in individuals who have mental retardation because it is expected that people with low cognitive ability will have problems learning to read, write, or do math. On the other hand, there is an assumption implicit in most def¬ initions of LD that a child would be able to perform at a normal or average level consistent with his/her ability level were it not for the presence of LD. That is, children with LD are performing below their ability, intelligence, or potential.

Under the provisions of IDEA, decisions regarding the presence or absence of any disability, as well as the provision of special education services, are determined by a multidisciplinary team which, by law, must include the parents, a regular education teacher, an administrator, and all professional staff who have evaluated the child. The notion of discrepancy is reflected in IDEA, which states that "a team may determine that a child has a specific learning disability" if two conditions are met: (1) "the child does not achieve commensurate with his or her age and ability levels . . . if provided with learning experiences appropriate for the child's age and ability levels"; and (2) "the team finds that a child has a severe discrepancy between achievement and intellectual ability" in one or more areas of academic skills. The real problem in using this approach involves defining exactly what it means to be below one's expected level of performance.

There are numerous criticisms of using discrepancy formulas. Here are some from Smith (2004):

- IQ tests are not reliable and are unfair to many groups of children.
- Results have little utility in planning a student's educational program.
- The process is not helpful in determining which interventions might be successful.
- The outcomes are not related to performance in the classroom, in the general education curriculum, or on district- or statewide assessments.
- Children must fail before they qualify for needed services. (p. 114)

The Exclusionary Clause

The definition of learning disability under IDEA also has what is referred to as an "exclusionary clause." The exclusionary clause states that a learning disability "does not include a learning problem that is primarily the result of visual, hearing or motor disabilities, of mental retardation, of emotional disturbance, or of environmental, cultural, or economic disadvantage." The purpose of this exclusionary clause is to help prevent the improper labeling of children, especially those from distinct cultures who have acquired learning styles, language, or behaviors that are not compatible with academic requirements of schools in the dominant culture. However, the exclusionary clause has generated tremendous debate and controversy by experts in the field.

The wording of the exclusion clause in the federal definition of learning disabilities lends itself to the misinterpretation that individuals with LD cannot also have other disabilities or be from different cultural and linguistic backgrounds. It is essential to understand and recognize the LD as they might occur within the varying disability categories as well as different cultural and linguistic groups. Individuals within these groups frequently have received inappropriate educational assessment, planning, and instruction because they could not be identified as learning disabled.

The NJCLD supports the idea that learning disabilities are not the primary and direct result of other disabilities and should not be so confused. However, the NJCLD notes specifically that learning disabilities may occur concomitantly with other disabilities. Although these individuals may be served educationally through different service modes, a denial of the existence of significant learning disabilities will result in inappropriate assessment and educational instruction and can result in the denial of direct or indirect professional services. According to Mercer (1997; cited in Gargiulio, 2004), the word "primarily" suggests that a learning disability can exist with other exceptionalities.

Classification Criteria

Consistent with the IDEA and NJCLD definitions, most states and local school districts require that students meet three criteria for classification as having a learning disability (Mercer, Jordan, Allsopp, & Mercer, 1996; cited in Turnbull, Turnbull, Shank, & Smith, 2004, p. 105):

1. Inclusionary criterion - The student must demonstrate a severe discrepancy (a statistically significant difference) between perceived potential and actual achievement as measured by formal and informal assessments.

2. Exclusionary criterion - The student's learning disability may not result primarily from visual or hearing impairment, mental retardation, serious emotional disturbance, or cultural differences.

3. Need criterion - The student manifests a demonstrated need for special education services. Without specialized support, the student's disability will prevent him or her from learning.

Prevalence of Learning Disabilities

Your chances of knowing someone with learning disabilities are very good. Currently, almost 2.9 million school-aged children in the United States are classified as having specific learning disabilities and receive some kind of special education support. In fact, over half of all children who receive special education have a learning disability (24th Annual Report to Congress, 2002). They are approximately 5% of all school-aged children in public schools. (These numbers do not include children in private and religious schools or home-schooled children.) Learning disabilities is by far the largest category of special education.

It should be noted that prevalence figures can vary widely between states and within a state, depending on the stringency of the method used to determine eligibility. For example:

- Kentucky reports the lowest prevalence figure (2.9%) and Massachusetts the highest (7.35%). A study completed in Michigan compared the learning disabilities eligibility criteria and procedures for identification across the 57 regional education service agencies in the state (RESA). The results indicated that 21% of the RESAs had no written eligibility criteria or policies, the length of the written policies varied from one sentence to 112 pages, and the severe discrepancy formula score varied from 15 to 30 standard score points! It is possible for a student to move a few miles to the next school district and no longer be considered to have a learning disability. (Smith, Pollaway, Patton, & Dowdy, 2004, p. 164).

Studies show that learning disabilities do not fall evenly across racial and ethnic groups. For instance, in 2001, 1% of white children and 2.6% of non-Hispanic black children were receiving LD-related special education services. The same studies suggest that this has to do with economic status and not ethnic background. Learning disabilities are not caused by economic disadvantage, but in low-income communities there is increased risk of exposure to harmful toxins (lead, tobacco, alcohol, etc.) at early stages of development.

Boys outnumber girls by about three to one in the LD category. Some researchers have suggested that the prevalence of learning disabilities among males is due to their biological vulnerability. However, others have suggested that "the higher prevalence of learning disabilities among males may be due to referral bias." They suggest that "academic difficulties are no more prevalent among boys than girls, but that boys are more likely to be referred for special education when they do have academic problems because of other behaviors, such as hyperactivity. Research on this issue is mixed" (Hallahan & Kauffman, 2003, p. 155).

The prevalence of LD also varies by age. Not surprisingly, the number of students receiving special education services increases steadily between the ages of 6 and 9. The bulk of students served (42%), however, are between the ages of 10 and 13, with a sharp decrease observed for individuals between 16 and 21 years of age (U.S. Department of Education, 2000; cited in Gargiulio, 2004, p. 210).

The true prevalence of learning disabilities is subject to much dispute because of the lack of a standard definition of LD and the absence of objective diagnostic criteria. Some researchers have argued that the currently recognized 5% prevalence rate is excessive and is based on vague definitions, leading to inaccurate identification. On the other hand, research efforts to identify objective early indicators of LD in basic reading skills have concluded that virtually all children

scoring below the 25th percentile on standardized reading tests can meet the criteria for having a reading disorder. While less is known about LD in written expression, researchers estimate its true prevalence at between 8% and 15% of the school population. Research also indicates that approximately 6% of the school population has difficulties in mathematics which cannot be attributed to low intelligence, sensory deficits, or economic deprivation.

Finally, the dramatic increase in the number of students identified with LD is getting mixed reviews from learning professionals. For some, the increase is alarming, raising concerns that students are being overidentified. By contrast, other experts believe that the increased prevalence is reasonable, considering the newness of the field (Fuchs et al., 2001; cited in Turnbull et al., 2004).

Growth in the Identification of Students with Learning Disabilities
Since 1975, when the category of LD was first included in public law, the number of students identified as having a learning disability has grown by almost 250%, from approximately 800,000 students to almost 3,000,000 students (U.S. Department of Education, 2002).

A number of reasons have been suggested for the enormous growth in the identification of students with learning disabilities. According to Hunt and Marshall (2002, p. 119), these reasons include:

1. Children who are underachieving are incorrectly identified as individuals with learning disabilities. The evaluation and identification criteria are too subjective and unreliable, and there are few, if any, alternative programs for these students.

2. The diagnosis of LD is more socially acceptable than many other special education classifications, particularly mild mental retardation and behavior disorders. Consequently, teachers and parents prefer this classification and "push" for it.

3. Greater general awareness of learning disabilities has resulted in more appropriate referrals and diagnoses. Teachers and parents are more aware of the types of services that are available.

4. The number of students identified with learning disabilities parallels the increased social and cultural risks that have arisen during the past two decades. Biological and psychosocial stressors may place more children at risk for acquiring learning disabilities, and therefore more children are identified.

Warning Signs of a Learning Disability

There is no single sign that shows a person has a learning disability. Experts look for a noticeable difference between how well a child does in school and how well he or she could do, given his or her intelligence or ability. There are also certain clues that may mean a child has a learning disability. We've listed a few below. Most relate to elementary school tasks, because learning disabilities tend to be identified in elementary school. A child probably won't show all of these signs, or even most of them. However, if a child shows a number of these problems, then parents and the teacher should consider the possibility that the child has a learning disability.

When a child has a learning disability, he or she may exhibit the following characteristics:

- Have trouble learning the alphabet, rhyming words, or matching letters to their sounds
- Make many mistakes when reading aloud, and repeat and pause often
- Not understand what he or she reads
- Have real trouble with spelling
- Have very messy handwriting or hold a pencil awkwardly
- Struggle to express ideas in writing
- Learn language late and have a limited vocabulary
- Have trouble remembering the sounds that letters make, or in hearing slight differences between words
- Have trouble understanding jokes, comic strips, and sarcasm
- Have trouble following directions
- Mispronounce words or use a wrong word that sounds similar
- Have trouble organizing what he or she wants to say or not be able to think of the word needed for writing or conversation
- Not follow the social rules of conversation, such as taking turns, and may stand too close to the listener
- Confuse math symbols and misread numbers
- Not be able to retell a story in order (what happened first, second, third)
- Not know where to begin a task or how to go on from there

Conclusion

As should be evident, the debate surrounding what constitutes a learning disability continues on as strong as ever. Remember, this is a multidisciplinary field that embraces sometimes competing viewpoints as the very nature of the construct and its causes. It is perhaps best to envision LD as "a family or syndrome of disabilities affecting a wide range of academic and/or behavioral performance (Gargiulio, 2004, p. 206). In particular, regardless of the definition used, children with learning disabilities have intellectual functioning within the normal range, there is a discrepancy between potential and achievement, the learning disability is not due to other causes, there is difficulty in learning, and there is a presumption of central nervous system dysfunction.

The field of special education is subject to the dynamic forces found in political and scientific arenas, as well as to the capacity of the special education workforce to be responsive to current and future changes. To the extent that the identification of individuals with learning disabilities serves those purposes, changes in definition and criteria are and should be part of the constant evolution in this field. To the consumer of information, a careful examination of the definition and criteria used to identify populations will allow the application of research to practice.