



Special Topics in Disability Service

The Many Faces of “Learning Disabilities”

The term “**learning disability**” does not refer to a single, specific disorder but to a group of disorders. Neurobiological in origin, learning disabilities affect the brain's ability to receive, process, store, express, and respond to information.

There is lack of consensus on how to define and measure specific learning disabilities; currently at least 12 definitions appear in the professional literature. There is consensus that learning disabilities can't be “fixed” or outgrown; learning disabilities are persistent and pervasive throughout an individual's life. Furthermore, the manifestations of the learning disability can be expected to change throughout the life.

A proven biological basis exists, including emerging data that document genetic links for learning disabilities within families. Learning disabilities may occur in combination with other disabling conditions, but they are not due

to other conditions, such as mental retardation, behavioral disturbance, lack of opportunities to learn, primary sensory deficits, or multilingualism.

Most of the available data about individuals with learning disabilities pertains to children and young adults in the public school system; the U.S. Department of Education collects an array of data as a way to track progress and identify areas where schools need to enhance instruction and general support. No such reliable data trail exists for adults with disabilities, including learning disabilities.

This issue of **Special Topics in Disability Services** updates the very first issue in this newsletter series. Included in the issue is a brief primer on learning disabilities and instructional strategies and tips for the various types of learning disabilities. The resources section provides links that were reviewed in preparing this issue.

Learning Disability

The term “**learning disability**” was coined in the early 1960s to describe children who, despite normal or above average intelligence, experienced significant problems with learning. The difficulties the children experienced were unexpected

and could not be explained or attributed to other conditions such as mental retardation, vision or hearing impairments, motor disorders or medical conditions. In 1969, the federal government recognized “*specific learning disabilities*” as a category

within special education, and in 1975, the **Individuals with Disabilities Education Act (IDEA)** was authorized. More than 30 years later, educators and the general public are still struggling to understand the complexities of learning disabilities.

This information is intended for information and general guidance only, NOT as a substitute for professional diagnosis, intervention or treatment.

Points of Interest

- ⇒ Research suggests that learning disabilities affect the way individuals of average to above average intelligence receive, process, or express information.
- ⇒ The number of students identified as having LD and receiving special education services has more than doubled since IDEA was enacted in 1975.
- ⇒ More than 50 percent of the students receiving special education services in the United States have LD.

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Learning Disability Defined—IDEA 2004

Just as the ADA applies to individuals in the post-secondary environment, there is legislation that applies to children and youth with disabilities in the public schools.

As mentioned in the introduction, there are as many as a dozen definitions for “learning disabilities.” The definition to pay attention to is found in U. S. special education law, IDEA 2004.

Both the law itself and the implementing regulations use the term “**specific learning disability**” (SLD) and have retained the same definition of SLD as previous versions of the law and regulations.

"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 disorder may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.

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

IDEA applies to children and youth in the public school system and had its beginnings as the Education for All Handicapped Children Act (EHA), or Public Law 94-142, in 1975.

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." (**United States Code, 20 U.S.C. §1401 [30]**).

While the definition of SLD remains unchanged in IDEA 2004, changes to the ways that schools can determine whether a student has an SLD are sure to have significant impact on school identification practices and procedures.

(For more information on the changes, see: www.ldinfo.com/rti.htm).

What the Experts Do Agree On...

Most experts agree on the following characteristics for individuals with learning disabilities:

- ⇒ Individuals have difficulties with academic achievement and progress.
- ⇒ Discrepancies exist between a person's potential for learning and what that person actually learns.
- ⇒ Individuals show an uneven pattern of development (e.g., language, physical, academic, and/or perceptual development).
- ⇒ Learning problems are not due to environmental disadvantage, 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 have normal intelligence, or are sometimes even intellectually gifted.
- ⇒ Individuals have differing capabilities, with difficulties in certain academic areas but not in others.
- ⇒ Learning disabilities have an effect on either the brain's ability to process incoming information or the ability to use information in practical skills, such as reading, math, spelling, etc.

Learning Disabilities, Genetics and Heredity

The effects of learning disabilities on an individual's academic and personal life are different for different people, even if they have the same type of learning disability. Each individual's experience will be distinctive, and the severity of the learning disability will vary. As a result, students may not realize that they have a learning disability until they are placed in a situation where their coping strategies are no longer effective.

True learning disabilities are believed to be an organic type of disability resulting from neurological processing problems.

Evidence suggest that a child's chances of having a learning disability increase when parents or other relatives also have learning disabilities. Some evidence suggests that as many as 50 percent of all learning disabilities appear to be inherited. This suggests that genetics may play a role in some cases. It also

means there is a high probability that there were many children a generation ago who had learning disabilities who were never diagnosed and who never received appropriate treatment.

Even if the person learns to compensate and, in effect, overcomes the disorder, the difference in brain processing lasts throughout life.

What Do Oral Language Learning Disabilities Look Like?

Oral language disabilities affect both expressive and receptive language and cause difficulties in processing language and making the connection between words and the ideas they represent.

Generally oral language difficulties become apparent during the preschool years. For proper diagnosis, a speech-language pathologist should be consulted.

An individual with oral language disabilities may experience the following:

- ⇒ Difficulty comprehending spoken language, and/or responding appropriately. Comprehending oral language presented rapidly can be

problematic *e.g., difficulty in following someone who lectures at a rapid rate*

- ⇒ Difficulty in following oral directions
- ⇒ Poor or weak vocabulary skills
- ⇒ Difficulty in paying attention to long lectures
- ⇒ Difficulty in expressing ideas succinctly
- ⇒ Difficulty expressing a series of events in correct sequence
- ⇒ Usage errors, e.g., subject/verb agreement or use of inappropriate prepositions
- ⇒ Difficulty speaking grammatically

correct English

- ⇒ Difficulty finding the “right” word. *e.g., affect for effect; capitol for capital; accelerated for exhilarated*
- ⇒ Difficulty pronouncing words (*particularly multi-syllabic words*) or speech sounds, *e.g., aluminum*
- ⇒ Slightly slurred speech, especially when fatigued
- ⇒ Difficulty learning to speak a foreign language

Oral contributions are generally far superior to in-class essays and exams, especially when written under timed conditions.

What Do Reading Disabilities Look Like?

Individuals who have learning disabilities in reading have difficulties decoding or recognizing words (e.g., letter/sound omissions, insertions, substitutions, reversals) or comprehending them (e.g., recalling or discerning basic facts, main ideas, sequences, or themes). They also may lose their places while reading or read in a choppy manner.

An individual with reading disabilities may experience the following:

- ⇒ Inaccurate or incomplete comprehension of the written word
- ⇒ Poor retention
- ⇒ Difficulty finding the important points or main idea
- ⇒ Difficulty in integrating reading material and lecture content
- ⇒ Slow reading rate with inability to adapt reading speed to a variety of purposes

- ⇒ Incomplete mastery of phonics

“Learning Disability is an umbrella term that is used to identify a wide range and degree of difficulties.

What Do Writing Disabilities Look Like?

Disabilities in writing (dysgraphia) affect the ability to write words with correct spelling and appropriate word choice. Writing mechanics (*letter formation, grammar, and punctuation*) also are affected.

Individuals may not understand the relationship between letters and the sounds they represent and often cannot distinguish the correct written word from the incorrect word.

An individual with writing disabilities may experience the following:

- ⇒ Reasoning deficits
- ⇒ Poorly formed or illegible letters
- ⇒ Poor penmanship, especially in cursive writing *e.g., overly large or cramped.*
- ⇒ Preference for manuscript (printing) rather than cursive when writing in long-hand

- ⇒ Occasional use of manuscript (printed) letters when writing in cursive, even in the middle of a word
- ⇒ Overuse of printed uppercase letters, even in the middle of a sentence
- ⇒ Frequent spelling errors, including transposition of letters, omissions, additions
- ⇒ Substitutions of sounds and/or syllables, and/or attempts at phonetic spelling for non-phonetic words

What Do Math Disabilities Look Like?

As with other types of learning disabilities, math disabilities are believed to affect the language and visual processing centers of the brain.

Dyscalculia is a broad term for severe difficulties in math. It includes all types of math problems, ranging from the inability to understand the meaning of numbers to the inability to apply math principles to solve problems.

Individuals with dyscalculia cannot understand basic operations of addition and subtraction. They may not understand complex problems such as multiplication, division and more abstract problems. Because they do not under-

stand math concepts, they don't remember and can't build on them to master more complex problems.

An individual with math disabilities may experience the following:

- ⇒ Computational skill difficulties
- ⇒ Difficulties with initiating and sustaining consistent effort on a task.
- ⇒ Incomplete mastery of basic facts – in particular multiplication tables
- ⇒ Difficulty in recalling a formula or the sequence of steps in a mathematical operation
- ⇒ Difficulty in understanding and retaining terms representing quan-

titative concepts

- ⇒ Number reversals and/or transpositions in the order of numbers in a sequence, such as when copying numbers or taking dictation (*e.g., when taking a phone message*)
- ⇒ Difficulty in copying problems and in alignment of numbers in columns
- ⇒ Associated non-verbal disorders such as problems in left-right and spatial orientation

What Do Organizational Disabilities Look Like?

The ability to perform tasks that are necessary to think, act, and solve problems of everyday life is described by psychologists as **“executive functioning.”**

Individuals with learning disabilities often have executive functioning disorders as well and are unable to perform these tasks intuitively. They have difficulty with planning, organizing and managing time and space. They also show weakness with short-term memory.

An individual with organizational disabilities may experience the following:

- ⇒ Difficulty in organizing and budgeting time wisely
- ⇒ Difficulty in taking notes and in outlining. (*These tasks involve multiple skill sets, e.g., auditory, manual/motor, memory, and perceptual*)
- ⇒ Initiation and sustaining of consistent effort on a task

- ⇒ Difficulty in integrating information from different sources
- ⇒ Poor test-taking strategies
- ⇒ Poor memorization and self-rehearsal strategies
- ⇒ Poor skills in using the dictionary, thesaurus, and other self-help resources
- ⇒ Poor library and research skills

Learning Disabilities and Intelligence

INTELLIGENCE IS NOT THE ISSUE:

Individuals with learning disabilities typically are of 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 percent of students with learning disabilities are gifted

The manner in which the individual is able to process or express information

is impaired. Depending on the severity, despite possessing average to above-average intelligence, an individual may be “functionally illiterate” in one or more areas or only mildly impaired.

For a person with a learning disability, there is frequently a marked discrepancy between intellectual potential and academic achievement, with uneven abilities within the same individual. The effects may change

depending on the environment and learning or expressive demands.

According to Dr. Larry Silver *“learning disabilities are life disabilities; 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.”*

What Faculty Can Do in the Lecture & Discussion Settings

- ⇒ Speak facing the class
- ⇒ Don't speak in a monotone
- ⇒ Slow the rate of presentation
- ⇒ Begin class with a review of the previous lecture
- ⇒ Use the board/overhead to record/outline key concepts, terms, or main ideas of material covered that day
- ⇒ Write page numbers and key content on the board or overhead; highlight key terms, etc. with colored markers
- ⇒ Write legibly!
- ⇒ Use handouts to supplement lecture content
- ⇒ Voice what you write on the board or overhead
- ⇒ Where appropriate, incorporate multimedia approaches into teaching repertoire
- ⇒ Make lectures interactive
- ⇒ When necessary, provide copies of your lecture notes
- ⇒ Repeat and rephrase directions, varying the order
- ⇒ Keep lectures to 45 minutes
- ⇒ Limit oral directions and lectures in the range of 8-10 word sentences
- ⇒ Leave time for Q&A

LDs are identified by processing problems in one or more of four areas.

- ⇒ Getting information into the brain (**Input**),
- ⇒ Making sense of information (**Organization**),
- ⇒ Storing and retrieving information (**Memory**),
- ⇒ Getting information back out (**Output**).

What Faculty Can Do With Class Activities

- ⇒ Make sure you give students called on in class sufficient time to answer.
- ⇒ *(This benefits all students but particularly those who have slow speech, a speech impediment or slower mental/verbal processing speed, because the element of pressure is minimized.)*
- ⇒ If you have students read papers or other material aloud in class, it may be appropriate to allow students with slower speech or reading problems to have a designated reader. *(Other alternatives may also be appropriate.)*
- ⇒ Consider permitting students who have great difficulty with the act of writing to take in-class writing to the computer lab for completion or permit them to take the assignment home.
- ⇒ *(For some, the act of writing is so laborious that the ability to express ideas is impaired.)*

What Faculty Can Do With Assignments

- ⇒ Allow plenty of time for long reading assignments
 - ★*The use of Books on Tape and other alternative formats lengthens reading time.*
 - ★*Some students are slow readers.*
- ⇒ Provide written directions for assignments, in addition to presenting them orally.
- ⇒ *This also benefits all students*
- ⇒ *This also is helpful to tutors and writing center personnel who may appreciate knowing exactly the assignment and expectations for the assignment..*
- ⇒ Allow extra time for out-of-class assignments when necessary
- ⇒ Break down long assignments into more manageable parts

If the syllabus is available at the time of registration, students with learning disabilities can start the process with DSS for ordering alternative texts if needed and also better balance their course load.

What Faculty Can Do When Evaluating Student Work

Periodically rethink your grading criteria to ensure that you are grading the essential elements and skills mastery

The place to start *before* evaluating student work is with a review of what the essential skills or task mastery objectives are for the particular course as-

ignment or activity being evaluated.

⇒ If spelling/grammar or other mechanical elements are not essential to the course, it may be appropriate to de-emphasize their importance .

- ⇒ Phrase evaluation comments in a positive way
- ⇒ Use other testing formats, (e.g., *oral or taped tests. Use a computerized form; the student completes it using a computer*)
- ⇒ Provide alternatives to Scantron sheets. (*e.g., permit student to write answers on exam*)
- ⇒ Allow alternative testing formats if appropriate to subject matter (*e.g. objective instead of essay.*)
- ⇒ Permit use of extended time/distracted-free/reduced environment

- ⇒ Permit the use, where appropriate, of a calculator or spell checker
- ⇒ MATH & SCIENCE: Analyze both the process used by the student and as the solutions to determine if the student understands the principles, concepts and processes
- ⇒ For students with overly large, cramped, or laborious handwriting, provide scratch paper; permit the use of lined paper or use of a computer during exams

What Faculty Can Do With In-Class Assignments

Students with learning disabilities generally are not masters of vicarious learning and may have difficulty grasping concepts or skills that are not specifically taught through instruction or demonstration.

Not all instructors use in-class assignments but for those who do, students (and faculty) benefit from a periodic review of in-

class assignments and their use.

- ⇒ What purpose does the in-class assignment serve?
 - ⇒ What essential skill or knowledge does the tool help you assess?
- If you do use in-class assignments, these tips may benefit students with learning disabilities:
- ⇒ Where appropriate, permit oral presentations or

demonstrations in lieu of in-class written work

- ⇒ Allow plenty of time for the assignment or permit the student to have extended time

Other Best Practices in the Classroom

- ⇒ Be CONSISTENT: No student likes unexpected changes to policies or assignments, but these are particularly difficult for those with learning disabilities
- ⇒ Be patient, available
- ⇒ Be flexible
- ⇒ When in doubt, listen to what the student says will help him/her
- ⇒ If you have questions or concerns about the accommodations provided a student, contact the Ca-

reer Advising staff person working with the student

- ⇒ REMEMBER: individuals with learning disabilities are a heterogeneous group
- ⇒ However, research suggests that there is a characteristic common to individuals with learning disabilities – persistence
- ⇒ Students with learning disabilities must work harder than their non-disabled peers and be persistent to

achieve similar goals

Executive functioning includes tasks that help us learn new information, remember and retrieve information learned in the past, and use this information to solve problems of everyday life

Learning Disabilities and the Online Learning Environment

It would be disingenuous to suggest that all students with learning disabilities face the same challenges in learning or can be expected to perform in the same way. Still, there are some commonalities that affect the experience of learning online for students with learning disabilities.

Need for Cross-over Skills: In the online learning environment, students are expected to have certain skills that may not be as well-ingrained for the student with learning disabilities as for others. **In short, much of what is needed to just be part of the online experience is assumed knowledge, or relies on cross-over skills that may not come easily for these students.** (e.g., knowing how to upload/download information on the computer; and how to navigate through the course management system)

More Reading Required: For some LD students, their processing problems lie in their ability to read and comprehend the written word. If this is a problem for them in a traditional class, it is going to be doubly problematic online, because there is so much more to be read.

⇒ Students who use some form of reading software to help them manage their reading load will face many of the same problems students who are blind or visually impaired have in

accessing information online.

More Difficult to Obtain Instructor Feedback: Many LD students rely heavily on access to instructors for clarification of misunderstood points.

⇒ In general, in the online environment, receiving direct feedback from instructors is more difficult and rarely instantaneous.

Class Structure Affects How Feedback is Received: How the instructor has structured the class makes a significant difference in how students receive feedback. (e.g., replies to student queries are in an open forum or replies are posts sent just to the student who asked the question),

⇒ Consequently, students may miss out on the learning that comes from hearing responses to the questions of others – questions that the LD student did not think to ask!

Need for Good Time Management Skills For those LD students who struggle with time management and organization, these students may find the less structured nature of online classes difficult to master.

(Courtesy Jane E. Jarrow, PhD, ACCOMMODATIONS IN ONLINE LEARNING ONLINE TOOLKIT, 2010)

Adults & LD

We now know learning disabilities are life-long in nature. Today, many adults realize they have may have learning disabilities when their child struggles in school (just as they did) and is diagnosed with a learning disability.

Adults with LD may face challenges in several areas of life, including education, employment, daily routines, and social interactions.

Schools and workplaces can offer accommodations to help with academic and vocational issues. However, Telander (1994) found that less attention is paid to social and emotional functioning.

Cognitive processing difficulties such as learning disabilities can impair an individual's social skills — what psychologist call our “social competence” — the ability to deal with pressure, change, or criticism; hold conversations; use receptive and expressive language and appropriate humor. Social competence also means being able to make inferences; and being sensitive to others' feelings and moods. These social skills impairments may be

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Enhance Learning by Being a Role Model

Your conduct and attitude go a long way toward assisting the students in your classroom (disabled and non-disabled alike) in their efforts to be successful. Your students will notice the behaviors and values you model.

⇒ Have a positive attitude

⇒ Expect your students to do their best – irrespective of their academic abilities. Believe that all your students can learn

⇒ Be as enthusiastic about your subject matter

⇒ Communicate clearly and frequently the standards and expectations for the course

⇒ State course policies and expectations about absences, attendance, conduct and behavior and ethics. Mention occupational conduct/ethics codes that apply

⇒ State course objectives and goals simply and directly

⇒ Outline grading and evaluation methods

⇒ Specify exam and assignment dates

⇒ Detail assignments and papers for easy reference purposes

⇒ Adhere to the syllabus as much as possible; provide a revised copy if needed



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- ⇒ IDEA 2004. <http://www.ldonline.org/features/idea2004#components> (visited 5/28/10).
- ⇒ Adults with Learning Disabilities: an Overview. (2010) http://www.ldanatl.org/aboutld/adults/special_pop/adult_ld.asp (visited 5/28/10).
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- ⇒ Introduction to Learning Disabilities. NASET (2007). <http://www.naset.org/2522.0.html> (Visited 5/28/10).
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Enhance Learning by Being a Role Model

- ⇒ Be mindful of the different learning styles present in the classroom
- ⇒ Consider your own preferred teaching style
- ⇒ Identify the patterns of organization needed for learning material in each course
- ⇒ Try new methods of instruction/using different media
- ⇒ Periodically review syllabus and textbook choices
- ⇒ Prepare the syllabus early; include a complete textbook list
- ⇒ Try to select texts that include study guides/companion CD or multimedia
- ⇒ Include information about additional readings and the location of these additional materials
- ⇒ Include office location, office hours and other pertinent information

Students with learning disabilities (LD) are the single largest group of students with disabilities identified on most campuses today.

Adulthood...

(Continued from page 7)

reinforced by isolation and negative experiences.

Adults with LD may also experience frustration, anger and other emotions arising from academic and social failures, rejection, and the attitudes of others.

Assistive technology (*and patience and understanding*) has great potential for helping adults with LD achieve in the workplace. The Job Accommodation Network (JAN) is an excellent resource for employers and employees.

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