

## Most learning disabilities do not go away when children grow up.

by Robert L. Mapou, Ph.D., ABPP-CN

**S**usan had such severe reading problems in elementary school that the public school system agreed to fund her placement at a school that specialized in teaching students with language-based learning disabilities. Although Susan was bright and showed strengths in her visual skills, she was unable to read very well, despite the efforts of her teachers and special educators in her regular school. Susan had been found to have dyslexia, which is a disorder that affects a person's ability to read individual words easily. Her reading of text was halting and slow, making it difficult for her to keep in mind what she was reading. These difficulties, in turn, affected her reading comprehension. She also had difficulty with spelling and writing.

Susan's spoken language skills were far stronger than her reading and writing skills. She thrived at the special school she attended, where students learned through acting out history and other subjects dramatically. She used audio books from *Recording for the Blind and Dyslexic* (Web: [www.rfbd.org](http://www.rfbd.org)) for her textbooks and, when she took tests, someone read the test to her or she listened to a recorded version of the test. She had other accommodations in school for her disability that helped her to succeed.

After graduating from high school, with excellent grades but mediocre SAT scores, Susan attended a state university with a highly regarded support program for students with learning disabilities. She had strong interpersonal skills and decided to major in education. She again received accommodations in college. Although reading remained difficult, she excelled in student teaching and was nominated for a student teaching award. Like many students with learning disabilities, however, her grades varied, and she took six years to complete college because she had to repeat a few classes that she failed. To manage her workload, Susan often took fewer credits than most students. Nonetheless, Susan finished college with respectable grades.

After college, Susan began teaching at a private elementary school but wanted to teach public school. This required taking a certification test, the Praxis, administered by the Educational Testing Service (ETS). The ETS required an updated evaluation, so Susan came to me for a reevaluation of her skills. My reevaluation showed average to above average skills in many areas,

with especially strong visual skills, normal learning and memory skills, and normal spoken language skills, but deficits in reading and writing skills. These findings supported the need for accommodations on the Praxis (See the section on Documenting Learning Disabilities on the ETS Web site: [www.ets.org](http://www.ets.org)).

**J**ane, unlike Susan did very well in school. She was viewed as verbally gifted and had strong reading and writing skills. Yet, peer relationships were difficult, and school was not always a pleasant experience for her. She did well in college and entered a joint master's degree program in library science and art history. Although she excelled in humanities classes, math and science classes were more difficult for her, and she avoided these. She ultimately dropped art history, in part because of its visual demands, and finished her library science degree.

Jane held librarian positions over the years but typically stayed in these jobs for no more than two years. Interpersonal difficulties sometimes arose, and, as the library field became more computer-oriented, Jane struggled to master the associated software. She had great difficulty working with multiple windows, because of the visual complexity. She was referred to me for evaluation after failing at a job that placed demands on computer skills.

Jane also reported difficulty driving on expressways and preferred to drive on roads where traffic moved more slowly. In addition, she reported spatial perception problems on escalators, which had led to injuries. My evaluation found that Jane, unlike Susan, had very strong verbal, reading, and writing skills, but far weaker visual and mathematics skills. She had a nonverbal learning disability, which affects processing of visual information. It also affects one's ability to accurately perceive the nonverbal aspects of communication, including body language and voice tone. Like many adults with nonverbal learning disabilities, Jane had a history of anxiety and depression, which stemmed from her struggles on the job and with people. Based on my evaluation, we discussed work environments that might better fit her strengths and weaknesses and accommodations that could help her at work. I also encouraged her to consider medication for her anxiety and depression, since many years of psychotherapy had not totally alleviated these symptoms.

# Learning Disabilities in Adults

## What Are Learning Disabilities?

*Learning disabilities are developmental disorders that arise in childhood and that typically affect an academic skill—reading, writing, or mathematics. They can also affect specific cognitive skills, such as visuospatial skills (nonverbal learning disability) and attention, planning, and organization. Most learning disabilities are due to brain dysfunction with which people are born, although this is not the type of dysfunction that can be detected on a brain MRI scan or an EEG. Learning disabilities are estimated to affect between 3 and 20 percent of adults. They are more common in adults who are in GED or similar programs (20-89 percent), but less frequent in those attending college or post-graduate education (2-4 percent).*

## Research on Learning Disabilities: The Brain and Cognition

Research on learning disabilities in adults is far less extensive than that on children. Much of the research on the underlying brain and cognitive basis for learning disabilities in adults has only been done in the last 10-15 years. Before that, most of the research focused on educational and occupational outcomes for adults diagnosed with learning disabilities as children. Nonetheless, research has shown very similar profiles in children and adults with learning disabilities, both in terms of brain functioning and cognitive weaknesses. For example, adults with dyslexia, which is the most common learning disability, have shown abnormalities in the areas of the left hemisphere of the brain that are specialized for spoken language, reading, and writing. Sally Shaywitz, a world-renowned dyslexia researcher, summarized much of this research in her book, *Overcoming Dyslexia* (2003).

Although there is much less research on nonverbal learning disabilities, there is some research showing that adults with nonverbal learning disabilities have abnormalities on the right side of the brain. This side of the brain is more specialized for processing visuospatial information, such as perception of complex pictures and diagrams, as well as the nonverbal aspects of communication. The genetic basis for learning disabilities has been established for dyslexia, although the relationship between genes and specific learning disabilities is complex. Other learning disabilities are also believed to be genetic, and learning disabilities often run in families.

Neuropsychologists have shown that adults with learning disabilities have deficits in specific cognitive skills. For example, adults with dyslexia typically have difficulty with phonological awareness, attention to auditory-verbal information, spoken language comprehension, and word retrieval. Adults with mathematics disorders, on the other hand, have problems with visuospatial skills; nonverbal reasoning and problem-solving; and judgment of number magnitude. The

research on mathematics disabilities in adults, however, is far more limited than that on dyslexia and other reading disabilities, for which there is the most research. For those with learning disabilities affecting written expression, deficits in handwriting speed, spelling, vocabulary complexity, and verbosity (length of writing), have been found. Finally, adults with nonverbal learning have shown deficits in visuospatial skills; abstract and conceptual thinking; planning and problem-solving; motor skills; mathematics; and interpersonal skills. Other areas of research have focused on the emotional impact of learning disabilities; academic and occupational outcome; and demographic factors that predict outcome.

## Evaluation for a Learning Disability

Adults seek assessment of a learning disability for two main reasons. Some may have been diagnosed with a learning disability in childhood and need updated documentation for college, graduate, or professional school; entrance examinations; or licensing examinations. They may also want additional information on intervention. Other adults have managed to get by over the years and have never been evaluated, but have always struggled with reading, writing, and/or math. They seek assessment to determine whether they have a learning disability; what cognitive strengths and weaknesses they have; and what they might do to improve their skills or to compensate for their difficulties.

The most common professionals who evaluate adults with learning disabilities are clinical psychologists, school psychologists, and clinical neuropsychologists. These evaluations require experience in assessment of intellectual, academic, and cognitive skills, and an understanding of contributing emotional factors. Neuropsychologists bring additional skills in understanding the cognitive effects of different brain disorders and are familiar with the underlying neurological and neuropsychological basis for learning disabilities. A good evaluation should include a clinical interview, in which information on childhood history and ongoing problems is collected; completion of behavioral rating scales to look at the possibility of attention-deficit/hyperactivity disorder (ADHD), which commonly co-occurs with learning disabilities; and completion of a battery of intellectual, academic, and cognitive (neuropsychological) tests.

Comprehensive assessment is best for an adult, because of the range of problems that adults can experience and the need to understand whether a learning disability, ADHD, neurological condition, or psychiatric disorder is the primary cause of the reported problems. Whenever possible, the client's academic records, including report cards, standardized test scores, and transcripts, should be reviewed, as these provide valuable information that clients may not always remember accurately. This is especially important when someone is seeking evaluation for the first time. For those who have been evaluated previously, reviewing prior reports can provide information on their history and level of functioning in the past. When assessment is being completed for a standardized testing agency, it is very

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important to have a detailed history and to show that 1) *the problem dates to childhood*, and 2) *the problem is having a substantial impact on the person's functioning at the present time*. This is necessary to establish that the adult is disabled under the Americans with Disabilities Act (ADA), which is required by standardized testing agencies before they will provide accommodations.

### Making the Transition from Teenager to Young Adult

For young adults preparing for college (and adult life), reevaluation, particularly if this has not been done for several years, is very helpful when planning for college. An updated evaluation can provide information on the current status of their learning disability. Why? A person's profile can change over time, due to schooling and practice with reading, writing, and math; intervention to improve skills; and development of compensatory strategies. In fact, some young adults whom I have evaluated have showed a progressive improvement in their skills and a progressive reduction in the impact of the learning disability.

An updated evaluation can determine what accommodations, supports, and interventions are needed for college, as well as suggesting how strengths may be used to select a major in which the student might succeed. An evaluation can also help determine if the young adult is ready for college, whether a gap year is a good idea, whether a highly structured college for students with learning disabilities should be considered, or whether an alternative to college should be considered. For those with more profound learning disabilities, an updated evaluation can help determine what supports are needed to make the transition to independence as a young adult. A skilled clinician can help parents and their young adult children determine the best course of action to ensure their success.

### Interventions and Accommodations

The best interventions for learning disabilities are those that occur in childhood. As Jack Fletcher, Reid Lyon, and others have shown, early identification of learning disabilities in children, followed by intervention, is the best way to prevent problems from having an increasing impact over time. Although adults with learning disabilities can improve their skills and compensate for their weaknesses, this is more difficult the longer the problem has been present. Interventions and treatments for adults also are less well established and researched than those for children. The only interventions that have research support are those used to improve phonological awareness, fluency, and aspects of comprehension in adults with dyslexia. Again, Shaywitz, in her book *Overcoming Dyslexia*, has an excellent chapter on intervention for adults.

Accommodations are available for those in school and help "level the playing field." Common academic accommodations include extended time on tests (typically 50 percent additional time or double time), use of a computer for writing tests, use of a calculator for math tests, access to a reader for severe reading disabilities, access to a scribe for severe writing disabilities, access to a note-taker in class, seating at the front of the classroom, and the opportunity to register for classes ahead of everyone else (priority registration), and to take a reduced course load. These are obtained by submitting written documentation to the testing agency or the university disability support service. Documentation requirements are typically posted on the agency's or university's website, although most are similar to those established by the ETS.

Obtaining accommodations on the job can be trickier. Although the ADA and its 2008 Amendments require employers to provide reasonable accommodations, disclosing a "silent" disability and requesting accommodations during an interview may cause an employer to find a reason to reject an applicant. Rather, I recommend to my clients that they do not initially disclose a disability and, if hired, "tough it out," get past the initial evaluation period, and show their value to the company. Often, this can be done by working longer hours and making use of computer technology to compensate for a learning disability (e.g., word processors with spelling and grammar checking, dictation software, screen readers).

At that point, if formal accommodations would make the job easier, then the person may consider disclosing that he/she has a disability. The employee can then work collaboratively with the employer, sometimes with the assistance of a job coach, to determine what accommodations would be helpful and reasonable. Possible accommodations for the workplace include computer-based assistive technology that is paid for by the employer; books and printed material in auditory format; dictation services; providing assignments in writing rather than orally; having a co-worker or secretary take notes during meetings, breaking assignments into smaller more manageable pieces with deadlines for each piece; having only one project assigned at a time; and having an individual office (unlikely for junior employees in this era of cubicles). Sometimes, more extensive job modifications may be necessary, and some individuals may need to consider changing to a different job that is more consistent with their strengths and weaknesses.

### Conclusion

Most learning disabilities do not go away when children grow up. Through comprehensive assessment, an adult with a learning disability can be helped to achieve success in college, post-graduate education, on the job, and in his/her life. ▼

**The names in this article are pseudonyms to protect the privacy of the specific clients.**

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