

## Learning Disabilities

Specific learning disabilities are conditions in which information is somehow "messed up" in the brain. People with specific learning disabilities hear what teachers say, and see what authors write, but by the time the data are perceived, or interpreted, in the brain, something happens. In dyslexia, printed letters and symbols may seem to turn upside down or even to float across the page. In other kinds of learning disabilities, words the teacher says are not understood with certainty. The student may ask himself, "Was that 'draw' I just heard? Or was it 'raw'? Or 'flaw'?" In yet other instances, students may not be able to separate "signal" from "field" (or, to use different terms, "figure" from "ground"); these individuals have difficulty isolating the information that is of educational interest from surrounding but largely irrelevant information.

There are a number of things educators can do. Unfortunately for teachers, students with learning disabilities vary tremendously one from another. For one student, providing information on disk suffices; this student listens to material rather than (or in addition to) reading it. He or she uses speech synthesis software and hardware that is installed on a personal PC. The same technologies help students who are blind or have low vision. The synthesizer's hardware provides the voice; the software tells that voice what to read, how to read it, how fast to read it, etc. A phenomenal amount of digitized material that can be read using speech synthesizers is now available. One source is [www.rfbd.org](http://www.rfbd.org) (Recording for the Blind and Dyslexic), which offers digitized versions of thousands of publications and materials. Increasingly, mainstream publishers also offer disk-based versions of textbooks. (The Resources section that follows Chapter 9 contains a list of many online sources of digitized texts.)

For other students, however, advance organizers are needed; these students benefit from having scaffolding that helps them to make sense out of large amounts of information. Yet other students with learning disabilities need extra time to complete assignments or to take tests. I suggest you ask the student: "What can I do?" In addition to taking the steps the student requests (extra time on tests, etc.), teachers should repeat key points and give examples. All of this helps students who have difficulty processing rapidly presented auditory information. The pace of instruction should also be slowed down, but in a specific way: try for rapidly spoken but short sentences, and pause between them. Do not slow down within a sentence, or within a concept or idea; that actually diminishes comprehension by many students having learning disabilities or mental retardation. (I also avoid displaying certain words on an overhead, or with Powerpointtm, while speaking different words. This can cause consternation among some students with learning disabilities, who must decide whether to read the displayed words or to listen to my spoken words).