

# Using Speech

## Compensating for the Challenge

by Robin E. Springer

If an American goes to Paris and cannot speak French, is the American disabled? She is challenged at the very least. Put her on a telephone in the foreign country, needing to communicate without the benefit of hand gestures or facial expressions, and her handicap becomes greater.

For the millions of Americans with learning disabilities or first-generation Americans who speak English as a second language, this frustration with communicating is experienced repeatedly on a daily basis.

The United States Department of Education reports that 2.8 million students in public schools are currently receiving special education services for learning disabilities in the U.S. This equates to 52% of all students receiving special education services through the public schools as being identified as having learning disabilities.

Learning disabilities include dyslexia (difficulty with language processing as it relates to reading, writing and spelling), dysgraphia (difficulty with writing), Attention Deficit Disorder (ADD or "Hyperactivity Disorder") and Auditory Discrimination (difficulty in the perception of the differences between speech sounds and the ability to sequence sounds into meaningful words). These disabilities, among others, are neurological disorders that interfere with one's ability to store, process or produce information. They affect one's ability to read, write and compute math, possibly interfering with the development of social skills, and they may put children at higher risk of substance abuse.

Not easily recognized and often misdiagnosed, learning disabilities are real, as evi-

denced by objective testing. For example, brain-imaging studies have shown brain activity in subjects with dyslexia to be markedly different than control subjects during specific testing. While there is no "cure" for learning disabilities there are treatments, which range from drug therapy, counseling and support groups, to alternative treatments including homeopathy.

Now there is a product designed specifically for the learning disabled, but also appropriate for those who, because of language difficulties, require visual and/or auditory assistance to recognize words. The Reading Pen II, with TTS technology provided by ScanSoft, is a second-generation product from WizCom Technologies Inc. It is a fully-portable handheld scanner weighing only three ounces. Shaped like an oversized writing implement with an LCD display on the top, it enables the user to scan text in font sizes six through 22 and see the word or words on the display. One can hear the selection read back through a small, integrated speaker or by using discreet earphones. Further programming can specify whether the unit will read the words automatically or only upon manual instruction.

The prevalence of reading difficulties in those with learning disabilities is significant. The National Institute of Child Health and Human Development classifies approximately 85% of all individuals with learning disabilities as having difficulties in the area of reading.

Assisting in compensating for this challenge, the Reading Pen II, adjustable for left- and right-handed users, allows one to obtain word definitions and syllabic structure based

on the 200,000 entries of the American Heritage College Dictionary, Third Edition. If a user does not understand a word in the definition, he can see and hear the meaning of the additional words with the press of a button.

If a student gets stuck while reading she can scan the questionable text and create a solution independently, without reliance on others. The same can be said for an individual in a situation where it may be embarrassing or impossible to request assistance; perhaps filling out paperwork for a job interview, driver's license or other government form.

The manufacturer also offers The Quicktionary II Translation Pen, which recognizes more than 300,000 words and expressions, for translation into English of languages including French, German, Italian, Spanish and Hebrew, among others. This product is specifically designed for individuals learning English as a second language, travelers and others requiring additional language skills.

We often see well-educated individuals from other countries come to the United States without being able to speak fluent English. Surgeons and lawyers, no longer able to work in their fields of expertise, come to America only to find they must work in entry-level positions, receiving minimum wage or little more.

Not that the Reading Pen II or the Quicktionary II Translation Pen will put a foreign doctor back into the operating room or alleviate millions of learning disabilities, but the product may assist in putting self-confidence and self-reliance back into the psyche of its users.



*Robin E. Springer is president of Computer Talk, a consulting firm specializing in the design and implementation of speech recognition and other hands-free technology services. She can be reached at (888) 999-9161 or by e-mail at [info@comptalk.com](mailto:info@comptalk.com).*