

## Technology—Lending a Hand and Leveling the Playing Field

By Carrie Smoot

Fairfax County parent Debbie Anderson watches her son Stephen benefit each year from using classroom computer technology. Stephen has Williams syndrome, a congenital genetic disorder characterized by developmental delays. Stephen attends ninth grade at his neighborhood high school in self-contained and inclusive settings.

"We noticed in late elementary school that he was having trouble keyboarding. It was a struggle for him to write and organize his thoughts," Anderson says. "His teachers recognized this also, and suggested some computer programs and devices to try." Professionals from the Integrated Technology Services (ITS) office evaluated Stephen's work area and needs, noting the way he processed information and worked during class. One immediate and helpful change was color-coding the computer keyboard to follow the position of the letters. He uses earphones that filter out distracting noise and allow him to hear auditory feedback clearly. Over the years, computer programs have helped him complete writing assignments. **WriteOutLoud** and **Co:Writer** have auditory spell-check. **Inspiration** uses visual mapping and outlining to help students organize thoughts. **Intellikeys** offers an oversize keyboard, and **BoardMaker** is a communication system with words and pictures. "ITS was wonderful," Anderson says. "Teachers fill out a form requesting evaluation and equipment. ITS visited the classroom and ordered equipment quickly. The process took several weeks. Each time Stephen changed schools we worked with his teachers to keep them in the loop about the most useful technology and methods. ITS training sessions and the Parent Resource Center provided information."

### Gizmos & Gadgets

Assistive technology is any piece of equipment increasing independence—anything from a wheelchair all the way to sophisticated computer devices. With the 1997 reauthorization of the Individuals with Disabilities Education Act (IDEA), assistive technology was required under the Individualized Education Plan (IEP). IDEA requires school systems to provide appropriate assistive devices to students with disabilities.

Technology doesn't have to be high tech. Michele Herrington is the executive director for the Washington area branch of Recording for the Blind & Dyslexic, a national nonprofit organization headquartered in Princeton, N.J. Unlike the Library of Congress Talking Books program offering popular reading materials, this nonprofit organization records textbooks for student use on cassette and CD-ROM using special players. For a small yearly fee, students may use the headquarters library, requesting materials in advance when possible.

"Fairfax County Public Schools is one of the first school systems to offer Recording for the Blind & Dyslexic services," Herrington says. "For many young people, it's like a light has been turned on."

While traditional learning is emphasized as much as possible, parents and teachers see this as a viable alternative. Students who are blind are encouraged to learn Braille first, and then concentrate on recorded books.

Children's Hospital in Richmond, Va. treats children and adolescents with temporary and permanent disabilities. By summer 2003, the hospital's assistive technology lab will have moved to bigger quarters. In the lab, children and



parents work with an array of computer software programs, dictation programs, switch and button technology, and augmentative and alternative communication devices to find out what best meets their needs.

"We're fortunate to have combined our skills with more than 60 doctors,

occupational therapists, physical therapists, speech-language pathologists, teachers, recreational therapists and other professionals. It takes a team approach to evaluate someone for assistive technology, and to help a person learn to use it effectively in daily life," says Ann Deaton, Ph.D., a licensed clinical psychologist and director of program development and research.

Melissa Kates, CCC-SLP is the team leader for assistive technology and audiology at Children's. She recently helped a girl with cerebral palsy adjust to her new DynaVox communication device mounted on her wheelchair. "No matter what we did to improve positioning, she wasn't able to access the device consistently and accurately. Finally, Botox injections relaxed her muscles. After another attempt to place the device where she could reach it, she managed well."

Kates says using augmentative communication to successfully increase a child's ability to communicate often involves combining low-tech options, such as paper communication boards and one-message switches, and high-tech options, such as a communication device that allows the child to access a keyboard to type answers as well as symbol-based preprogrammed options for quick responses.

"Designing a system that will allow the child to communicate

successfully is much more complicated than programming a few buttons," Kates says. "That's why it's important to work with a speech-language pathologist. It takes training, and the child has to use it every day to be comfortable. Abandonment is high if kids, parents and teachers don't work as a team to make it a successful way for the child to communicate." In addition to providing a person's voice, some augmentative communication devices can be programmed to control environmental features like the lights and radio.

## Beginning The Process

To work with Children's Hospital assistive technology lab staff, the family undergoes a three-hour intake and assessment. The team, typically a speech-language pathologist and an occupational therapist, looks at how the child communicates—by signing, pointing, or other means—to determine the best fit. The team reviews teacher comments, test reports from the past two years, parental observations and the IEP.

"It's especially important that children come to the evaluation with any adaptive equipment that they use during the day, such as wheelchairs, glasses, or hearing aids," Kates says. "That way, we can look at the child's strengths and limitations to determine the most appropriate communication system to meet their needs. It's often difficult to determine the most appropriate communication system in just three hours. Many times we'll recommend therapy once a week for one to three months to further evaluate the child's needs and abilities to make sure they get the system that will allow them to communicate successfully in a variety of settings.

## The Bottom Line

At the Virginia Assistive Technology System (VATS) in Richmond, policy analyst Joey Wallace answers questions about paying for assistive technology, fulfilling the same service for the Partnership for People with Disabilities at Virginia Commonwealth University.

"Parents always want to know where their children can be evaluated for assistive technology. They want to plan for

the future," Dr. Wallace says. The first step, he says, is finding out more about their personal situation. Then he guides them through traditional assistance options like the Department of Rehabilitative Services (DRS) personal insurance, Medicaid/Medicare, or their child's school. If these don't work, they investigate community funding sources, foundation or grant opportunities, the Assistive Technology Loan Fund, or the Consumer Services Fund.

"Never give up," Wallace tells parents and consumers. "Go after the funding. You may be turned down when you apply, but keep trying, and you'll eventually obtain the needed equipment." Wallace says families should think hard about the devices that would best meet the child's needs, asking about training, contacts with other customers, warranties, repairs, replacements and contingency plans. He can be reached at 800-552-5019.

Assistive technology can be expensive. Many families approach schools for assistance. Fairfax County Public Schools's Integrated Technology Services Office has three locations: Dunn Loring, Rocky Run Middle School, and West Potomac High School. "Any student with disabilities may be considered for an assistive technology evaluation," says William Reeder, ITS director.

Reeder discussed the **Alpha-Smart**, a durable, battery-powered laptop computer many classrooms use when the computer lab is unavailable. For students with learning disabilities, its file space and options make it easier to keep materials organized for different

subjects. Other students use dictation programs such as **Dragon Naturally Speaking**. For students having trouble with reading and writing, **Co:Writer** is a software program that suggests words, with the option of creating dictionaries. About 40 students use the **DynaVox**. ITS offers technology workshops for parents. "Parents are aware of what's available on the Web and at conferences. They are as eager to try things out as the kids are."

Phyllis Mondak is one of the special education coordinators for Albemarle County Schools in Charlottesville. The three-year-old assistive technology services branch is very up-to-date on technology conferences and company resources and products, but they want to provide more down the road. A speech therapist, occupational therapist, physical therapist or technology consultant visits the child's classroom to look at his or her cognitive and reading skills, seating position, computer setup, and the specific IEP objective or task that needs support.

"Always start with low tech. It may be that the student just needs a special pencil or pen grip or a wrist rest," she says. Mondak says the search for assistive technology often begins with parents, who are very knowledgeable about available technology. "They want to continue certain skills at home, such as typing. Or they might want their child to have a laptop. Or parents might push for an augmentative communication system. However, the child may not be ready for that yet. We help develop a workable timetable." ■

For more information on Assistive Technology in your community, see Assistive Technology section of the General Resources on p. 95. Also contact your local Parent Resource Center (see Special Education Directory on p.54).

### Special Assistive Technology Event

Closing the Gap - <http://www.closingthegap.com/>. This year's conference is in Bloomington, Minn. from October 16-18, 2003, with preconference sessions beginning October 14.

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### Assistive Technology Companies

DynaVox Systems - <http://www.dynavoxsys.com/>  
Microsoft Accessibility - <http://www.microsoft.com/enable/>  
Assistive Technology, Inc. - <http://www.assistivetech.com/>