It's Our Responsibility to Teach Everyone

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“It’s Our Responsibility to Teach Everyone”

An Interview Barbara Wollak, SLP,
AT Specialist, AT Team Member, Saint Paul, MN Public Schools

Barbara Wollak has been a believer in the benefits of assistive technology since the concept took shape in the 1980s and, since the 1990s, in the companion conviction that all students can communicate and benefit from reading and writing instruction. “There is so much really cool technology out there but the question I ask is, ‘How does this apply to my kids? How can it improve their learning?’”

Two days each week, Ms. Wollak works directly with students at Highland Park Junior High as a speech and language pathologist. “We feel it’s our responsibility to teach everyone who comes to us how to read, write and communicate,” she says. Ms. Wollak’s speech and language students are 12-14 years old and in the Inclusion Program. These students have educational labels of developmental cognitive disability, autism, health impairment, or physical impairment. For some, their cognitive abilities have been categorized as moderately to severely impaired. Others who have gone through the program possessed normal intelligence but were non-verbal due to cerebral palsy and communicated via high-tech AT devices. Most of her students, she says, receive special instruction for literacy and math but otherwise participate in regular education classes.” The regular education teachers at Highland are terrific! They welcome all our students into their classrooms and work hard to teach them,” she exclaims.

Another day each week, Ms. Wollak works at Bridge View, a self-contained school for students with significant disabilities where she provides support for literacy and AT. Most of the students at Bridge View are emergent readers and writers. Teachers there work hard to provide their students with experiences with oral language, including AAC, concepts about print such as book orientation, turning pages from left to right, and the alphabetic principle. All students participate daily in shared reading, writing, and self-selected reading. “Typical children experience 1,000 hours of emergent literacy experiences before kindergarten. These students need those experiences,
too. The challenge is to make sure that EVERY student has a means to communicate and a means to write. That’s where AT comes in,” explains Wollak. Students use a variety of low- to high-tech augmentative and alternative communication (AAC) systems. For writing many use AT “pencils” to write, including alphabet flip charts using partner assisted scanning, alphabet eye gaze frames, Intellikeys (an alternative keyboard), or writing with a high-tech AAC device that has been connected to a computer. The students use many of the “pencils” that were developed by Dr. Gretchen Hanser and the Deaf Blind Project at the Center for Literacy and Disability Studies.  http://www.med.unc.edu/ahs/clgs.

According to Ms. Wollak, all students, including those with the most severe disabilities require – and are entitled to – the following:

- A means to communicate
- Access to text
- Good instruction
- Access to a means to write

For the other two days a week, Ms. Wollak works on her district’s AT Team. For more than 20 years, she says, her AT team’s mission has been to help children with disabilities obtain assistive technology in order to help students achieve their IEP goals and objectives as well as to achieve independence. Today, however, that mission is more difficult than ever. Funding issues, of course, dominate, as they can impact many AT-related decisions. Saint Paul’s diverse student demographics also influence AT use.

**Teammates Since 1989: “We’ve Bridged the Entire Technology Revolution”**

As difficult as the current environment can be, she says, the long experience of her AT team members helps provide historical context and hope for the present and future.

“Our team was formed in 1989 with the specific goal of learning more about augmentative and alternative communications. Rebecca Tetlie and I were chosen that year as the team’s speech-language pathologists (SLPs) along with a special education teacher and an occupational therapist, Frank Kurkowski, OTR, who has wide experience in adaptions and is expert at creating AT solutions. Our teacher
moved to a different position and we were soon joined by Lois Beck, another occupational therapist. “We’ve bridged the entire technology revolution,” Ms. Wollak remarks.

“AAC kick-started assistive technology in the beginning,” she recalls, “before the field expanded to include many more AT devices. Since the team’s inception we’ve expended a tremendous amount of effort making sure that our knowledge base encompasses the entire range of assistive technology.”

“Our strategy has been to divide and conquer.” For example, she continues, “if an individual desires help with AAC in terms of finding the most appropriate device or obtaining funding or information, Rebecca and I, as the team’s SLPs, handle those referrals. Lois’s expertise is in speech recognition and computer access. Rebecca’s specialty is Universal Design for Learning and collaboration. Mine is assistive technology-supported literacy.”

In addition to working with students, Ms. Wollak and her teammates provide all the AT training for the district and try to coordinate with the instructional technology found in general education classrooms.

**Training in the SETT Process**

Support to schools is provided on a request basis, she explains. “We’re also trying to achieve AT competencies for special education teachers, starting with new hires, who lack tenure and thus must attend training. All new hires receive training in the SETT (Student, Environment, Tasks, Tools) framework ([http://www2.edc.org/ncip/workshops/sett/SETT_Framework.html](http://www2.edc.org/ncip/workshops/sett/SETT_Framework.html)), a guideline for gathering data in order to make effective AT decisions, which is very popular in Minnesota, as well as in many other states.

This training, she adds, “enables our new hires to achieve competence in basic AT programs and solutions, such as word prediction programs and graphic organizers.” Her team’s hope, she says, “is to eventually include all special education teachers in the program, but new hires are a good start toward that destination.”
She had assumed that most new hires would arrive with vast technology experience. That assumption, she says, was far from correct. In fact, she notes, there was little difference in technology expertise between new hires and veteran teachers. “That was a big surprise and not nearly what I’d hoped for. I’m in my eighth year of collaboration with [AT-supported literacy expert] Dr. David Koppenhaver and I am constantly amazed at how technology savvy many of these new teachers are not.”

Pre-Service AT Training: “We’ve Got a Long Way to Go”
For Barbara Wollak, AT training for pre-service teachers remains “an issue.” She says. “I co-teach a graduate-level course for teachers at the University of St. Thomas here in Saint Paul. We have at least a couple of sessions on how to use AT to teach literacy. The university made it clear that it wanted more technology training in all of its programs.” For many teachers, she adds, “every AT topic and much of the literacy information is new to them.”

Nevertheless, she insists, AT training for pre-service and in-service special education and general education teachers is improving “but there is a long way to go.”

What she has learned through the years is something she hopes all teachers eventually learn: Teachers must keep up with changes in technology, not just AT, but all technology that is – or could be – related to education. “I audit all of Dr. Koppenhaver’s technology-supported literacy classes to remain up to speed.”

Dr. Koppenhaver’s classes, she says, appear to be increasingly attractive to teachers. “He’s now teaching an online course that focuses on ways to use various technologies to support literacy learning.”

Ms. Wollak terms her mentor’s new online concept a work in progress in that he is utilizing virtual means to instruct students in the operation of technology instead of a conventional hands-on classroom approach.

“He has a Skype account that he uses to counsel students who are experiencing difficulty.” Skype is a software application enabling users to make voice calls via the Internet. “He also has desktop sharing capability so that he can assist students who are struggling with the various technology applications. This amounts to a virtual hands-on approach to teaching use of technology.”
The Koppenhaver-Erickson Connection: a Life Changer

Barbara Wollak declares, “the work of Dr. Koppenhaver [http://www.litdis.com/] and Karen Erickson [http://www.med.unc.edu/ahs/clds] has changed my thinking and, professionally, has been a life-changer.”

“When I was working with kids who were nonverbal and used AAC systems I believed we had accomplished our goal; these AAC students were all proficient communicators and could communicate effectively with anyone.” However, she notes, when these students graduated they were often unable to find jobs because they could not read or write. “I had no idea how to teach these students who were nonverbal how to read.”

She read some of Dr. Koppenhaver’s research in the 1990s and met him when he moved to Minnesota. Through Dr. Koppenhaver she met Dr. Erickson. “Both say that language is the root of all literacy learning and that ‘good teaching is good teaching.’”

“Because of Dave and Karen I have changed how I deliver speech and language services and now try to incorporate literacy into everything I do. Dave and Karen have also taught me about the importance of writing. They say that reading, writing, speaking – including AAC -- and listening are related and that improvement in one area will affect the others. I have witnessed the truth of that concept many times. After I work with children on question-asking and responding with writing I typically see gains in those skills in my students’ oral speech.”

Dr. Koppenhaver taught her that in a digital environment the ability to read and write and to use both skills to compose emails, contribute to a blog or social network and create text messages are critical components in the quest for independence as well as providing authentic and motivating opportunities for reading and writing.

Most of her AT team’s referrals are for AAC and literacy improvement. “Reading consists of three components according to the research of Dr. James Cunningham: children need to be able to read words,
understand language and process print beyond word identification. How a student performs in each of these components helps me determine the area of a child’s greatest need which, in turn, guides the AT decision. For example, she adds, many teachers and parents desire computer-read text, “but if the assessment indicates that language comprehension is also a problem, grade-level computerized text won’t help because the child does not understand language.” On the other hand, she adds, “if a student has difficulty decoding words, but the student’s language is intact, computerized text would be a good feature match.”

**Perhaps a “Small” World after All**

Her team’s mandate includes consumer-type electronics often touted as the future of AT, such as cellphones, PDAs (personal digital assistants), iPods and other MP3 players.

Says Ms. Wollak: “Rebecca and Lois wrote a great iPod initiative. Teachers who signed up for this program -- primarily those who teach students with learning disabilities – were provided with iPods so that their students have access to text. Special education departments received these complimentary i-Pods when they purchased Macintosh computers. This was a great way to use them.

Although cellphones are banned from schools nationwide, Ms. Wollak acknowledges their potential for use as AT vehicles.

“There are now applications for the iPhone that can turn the iPhone into an AAC device,” she says.” There are wonderful AAC devices made by companies such as DynaVox, Prentke Romich and Tobii ATI. Because of the high cost of development and technical support, these devices are expensive. Duplication of some of the capabilities on an AAC device on an iPhone would reduce the price of AAC equipment from thousands of dollars to hundreds of dollars.” For example, she points out, the Proloquo2 (http://www.assistiveware.com/product/proloquo2go) provides natural sounding text-to-speech voices, up-to-date symbols, automatic conjugations, a default vocabulary of more than 7,000 items, full expandability and ease of use to the iPod and iPod Touch.

The major benefit from iPod Touch and cellphone technology, she notes, is that it is common and is available at much lower cost than specialized AAC devices, which
supply-demand issues make extremely expensive. The sound without speakers is very limited, but with advances in technology, she believes there is a bright future for this type of technology. “How good would it be to have a device that enables a child to communicate, call home in case of emergency, and also have GPS?”

Her advice to fellow educators, AT specialists and parents: “[We need to] keep our eyes open. If we blink, we might miss a major breakthrough.”

**Supporting Access to the General Curriculum: Teaching Them How to Fish**

Whether the assistive equipment is specialized or derivative, it supports access to the general curriculum, Ms. Wollak states.

“AT provides our students with the scaffolding and support they need to be successful. Our goal is to help make these kids as independent as possible. We don’t want paraprofessionals doing the work for the children.” AT, she adds, is a far preferable classroom solution and provides the impetus beyond the K-12 experience. “After all, they can’t take their paras with them to post-secondary school or to work. This approach supports the old adage, ‘You can teach someone how to fish or you can give him a fish.’ Teaching children to use their AT teaches them how to fish.”

Perhaps just as important as having AT in the classroom is the act of learning to use the equipment independently, she says. “The temptation exists to have a para help these kids through the curriculum. But unless the children are actually learning the material, we need to reconsider that arrangement.”

She insists that progress has been made in this area but concedes that “we still have a long way to go to dislodge ways of doing things that have been entrenched for so long.”

Her concern is best illustrated by an ongoing debate at the junior high school where she works with 17 inclusion students. “Our seventh grade science text is geared for students with a 10th grade reading level. There are children who are beginning readers, as well as those in general education, whose reading proficiency is regarded as acceptable. Yet this science textbook is a struggle for them because they are reading at a seventh grade level, which is where they should be!”
“Trying to make kids read text that is way too difficult goes way beyond any reasonable concept of academic rigor. I know when I’m trying to read tax forms or similar documents it is not a pleasant experience. I’ll encounter a section that I don’t understand and then decide I’ll return to it later. That’s difficult for me as an adult. It’s much more difficult for children.”

“I’ve looked at the Minnesota state standards, obtained books through grants that matched those standards with the same content as our seventh and eighth grade classes, but with lower-level reading. I have students who have been unable to read or write at all before coming to our program. Now they can learn about frogs when they are doing dissections because I have science text that enables them to learn content and improve their reading skills.”

AT and IEP Teams: Some Teachers Are Unaware
Ms. Wollak and her team consider themselves very fortunate that their state strongly supports their efforts and AT in general.

“In Minnesota, thanks to the efforts of [Supervisor of Special Education Policy] Joan Breslin Larson, we have very strong AT support at the state level. Joan has produced many AT DVDs that have been widely disseminated around the state. Each DVD highlights the SETT process.”

Thanks in part to Ms. Breslin Larson’s ongoing efforts, consideration of AT in the IEP process, as mandated by IDEA, is more than just a check box in Minnesota, Ms. Wollak emphasizes.

Locally, in Saint Paul, “our goal is to have all teams understand the SETT process.” A barrier to the realization of that goal, she adds, “is that many teachers are unaware of what is available to help them.”

Part of the problem, she notes, “is that we hold our trainings in a central location. The reality is that there are just three of us administering these trainings and none of us do this fulltime. The teachers attending our trainings are those who embrace the information. But we have many other teachers who, for whatever reasons, decide
not to attend. How do we reach those teachers? We don’t have the total answer yet.

Time and money, of course, will solve many training problems, Ms. Wollak insists, while acknowledging that both may be in short supply for years. “We think we know what teachers require in terms of AT training, but freeing up our time is difficult because we are spread so thin.” Teachers, too, are chronically short on time “because they are busier every year.” Her hope is that current conditions allow for more than one-time trainings. “Some teachers need more support than others,” she asserts. “Some are quick studies while others require much more nurturing. There must be a means of follow-up support, so that the AT isn’t shelved after training and therefore benefits no one.”

On a short-term basis only, infusion of federal stimulus money tempers the AT funding shortage somewhat for some school districts, but it’s up to individual districts to decide how to use those stimulus funds.

Over the longer term, however, she fears that the logical drop-off in demand for assistive technology due to funding shortages may slow technological advances in AT given that there may be little impetus among manufacturers to continue pushing forward.

“I hope that scenario does not play out,” she declares, “but the reality is that it might. Some AT companies are merging, which is worrying because the result will be fewer vendors and perhaps even higher costs for AT devices.”

On the plus side, she adds, “our district’s technology integration program is reaching some of the teachers who have not previously attended trainings. We’re reaching them because the technology carrot we dangle -- the ‘gift’ of state-of-the-art equipment -- is too enticing for them to ignore.”

The Role of Parents: “This Scenario Was Unheard of”
Ms. Wollak’s district is urban and more diverse than many others in the U.S. In such a district, language and other issues can dilute parental effectiveness when it comes to obtaining assistive technology for their children, she asserts.
“In Saint Paul many of our parents lack cars or telephones, so it’s difficult for them to visit their children’s school or even communicate with staff. In many households, she adds, parents require interpreters. “Those parents have limited knowledge of AT. When they are told about AT their response usually is happiness that we are helping their child.”

Her district, she notes, has the second largest Hmong population in the U.S. The Hmong, whose ancestral homeland is in mountainous areas of Southeast Asia, were U.S. allies during the Vietnam War. Thousands fled to the U.S. and other Western nations where the uniqueness of their language often places them in social isolation.

Ms. Wollak explains the Hmong AT dilemma: “The Hmong language and English have almost no commonality - and the higher-tech AAC devices have speech generation that is English or Spanish.” For example, she says, “We have a non-verbal Hmong child who uses an AAC device that is effective in school. When he takes it home, however, the device has little value - because the device speaks in English and his parents speak limited English. Years ago when I began recommending AAC devices, this sort of scenario would never have occurred to me. It was unheard of.”

She began using a symbol-based system to avoid the language issue. “One child’s mother was learning English as her child showed her how the AAC device worked,” Ms. Wollak recalls. Speech can be programmed into some of the lower-tech and high-tech devices, but their utility is limited by students’ inability to generate unique language.

One of her Hmong students, she says, is very competent at using a Dynavox. “I asked him if he used the device at church. He said, no. He attends a Hmong Lutheran church. I asked him if he wanted me to attend church with him to demonstrate how to use the device. He said, yes, he did. At the service I could understand nothing. It opened my eyes as to how dramatically different the Hmong language is from English.” Hmong, she explains, is a language based largely on intonation.

The boy’s device accommodates the input of digitized speech. “I sought out a peer who spoke Hmong to program his voice and some very basic language into the
device. My student was bright and our ability to input language into that device did not match his capabilities.”

Ms. Wollak hopes that a device will be created that can accommodate unique languages but their relatively small population bases may not justify the expense, she concedes.

However, she notes, “There’s been much talk on the QIATlistserv (Quality Indicators for Assistive Technology http://indicators.knowbility.org/) about Chinese, which represents a potentially huge market for AAC devices. The numbers support a Chinese-language device. Maybe the inclusion of Chinese language AAC devices will help the Hmong, because their language is much closer to Chinese than English.”

Already, she notes, there is hope for speakers of unique languages who require AT. Mayer-Johnson, the Dynavox manufacturer, has created symbols for other languages. Hmong, Chinese and other languages are available on BoardMaker.

“Most of the progress so far in this area is in the lower-tech speech devices because you can program in anything you want.”

The Literacy Camp at Camp Courage

Wollak is the coordinator of the Literacy Camp at Camp Courage http://truefriends.org/. This is a joint venture between Camp Courage, which is part of Courage Center, the Minnesota Department of Education, and the Center for Literacy and Disabilities Studies. The camp description reads, “This unique session is for struggling readers (all disabilities), ages 12-18, who would like a positive literacy experience. Educators under the direction of Dr. David Koppenhaver and Dr. Karen Erickson, national literacy experts, [work] with campers to determine literacy needs and intervention strategies to begin to address those needs. Informal descriptive reports of the assessments and interventions [are] provided to families and campers to take back to their home schools. Campers have the opportunity to participate in the full range of fun camp activities.”

“It’s an amazing experience for everyone involved,” states Wollak. “Camp Courage provides the facilities and counselors for the campers. Dave Koppenhaver and Karen Erickson teach at camp as a graduate level course on ‘Literacy in Disabilities’ to 20
educators. What is unique about this course is that educators are able to apply what they learn directly to work with campers. Each educator is paired with 2 campers. While the educators are in class, the campers are experiencing many fun camp activities such as horseback riding and tubing behind a boat. The Minnesota Department of Education, under the original guidance of Joan Breslin-Larson and Jan Manchester, purchases all the adult slots and awards them as scholarships to Minnesota educators."

Last summer was the 5th year of the Literacy Camp session. Participants rated their level of knowledge for 6 areas of literacy before and after the session. Participants indicated a 166% increase in their knowledge of assessment of literacy. That is significant since it is difficult to know what to instruct unless you know where each student is. Participants also indicated a 59% increase in their knowledge of assistive technology.

**How Tech Savvy Enhances Practitioner Effectiveness: “I Don’t Stop Trying New Technologies”**

Barbara Wollak may be among the nation’s most tech savvy SLPs, teachers and administrators. Not only is she an observer of the technology revolution and a gatherer of information, she is an exuberant participant. She blogs, tweets and networks.

“My blog is Virtual Authors (http://hpjh.blogspot.com/). I’ve set this blog up for my students to improve their reading, writing and communications skills. I use only free technologies. I’ve tried to create motivating and exciting ways for kids to get more opportunities to read and write. Many kids who come to junior high here in the inclusion program have not been able to read or write yet. All they know about writing is how to copy. I also invite parents to make comments as well as Dr. Koppenhaver and his college students who provide good language models for our kids.” She posts once weekly and strives to relate her weekly post to school activities or to a unit the children are studying in a classroom subject.

To make the blog posts her students employ technologies like Animoto (http://animoto.com/), which produces video pieces from existing media and is free. Photoshow (http://www.photoshow.com/home/start?qclid=CIcB8sK86IdwCFUdM5QodGyZ3F
w), she says, is another free program that enables children to securely share photos and videos as well as slide show programs. “I encourage the kids to create their slide show and then formulate a question to which others can respond.” She uses other technologies, like StatCounter (http://www.statcounter.com/), which provides bloggers with statistics about who has looked at their blog and their location. “The kids can then use Google Maps (http://maps.google.com/) to zero in on the visitor’s location. This is an effective way to tie geography and math to the reading and writing piece.”

Ms. Wollak has spent much of her lengthy association with Dr. Koppenhaver deeply involved in the e-pal collaboration they created involving her students and his college undergrads. “The kids we work with haven’t wanted to write previously. Many of the children have problems asking and answering questions. But the writing technology is so motivating for these kids.” The problem, she explains, is that many of the children in the e-pal project have never before been successful. Nevertheless, she adds, “they become very excited about their e-pal correspondence and are constantly requesting permission to check their inbox, to write and to read.”

All emails in the e-pal program are printed out to encourage repeated readings. “The kids’ parents say that these email print outs are the first item out of their child’s backpack. The children read the emails to family and friends.”

Her SLP background has encouraged her to teach email correspondence as she would teach a conversation. “The kids start with a greeting and then respond to the e-pal’s question, follow with a question and end with a salutation. Many times I’ve seen these writing skills reflected in a child’s speech.”

How are her writers and college students matched up as e-pals? “Dr. Koppenhaver gives me a list of his students and I match them with mine. If I have a student who really needs a responsive pen pal I’ll ask Dave if he has a sense about which of his students might fit that need. Otherwise, it’s a random matching process. Blind carbon copies of all emails are sent to him and to me for monitoring purposes. Permission slips are signed. All emails are sent home to parents. Nothing inappropriate has ever happened.”
Ms. Wollak’s blog was initiated to serve as an additional motivator to engender excitement among her students for reading and writing. “I embed assistive technology. Most the children can use Co:Writer (http://donjohnston.com/cowriter/) to compose comments.” One of the most beneficial aspects of the e-pal program, she says, “is that our students’ college e-pals are unaware of the time required for kids to compose a message. This unawareness levels the playing field. Our kids might require 30 minutes to compose an email message but their pen pal doesn’t know that. Their college partners regard our writers as simply kids.”

Most of her writers have significant cognitive disabilities. Some have IQs of 40. “But the children have to be taught and be given opportunities to learn. Technology makes the process fun and the skills they learn are a lifelong benefit.”

Her children also produce online books. She uses the free educator account for Voicethread (http://ed.voicethread.com/products/k12/), an accountable web-based communications program to produce books. We read a book in our language/literacy class such as The Important Book by Bernard Waber (http://hpjh.blogspot.com/search?updated-max=2009-05-04T05%3A47%3A00-06%3A00) and use the text structure of that book to create a new book. We create the book using PowerPoint and upload that into Voicethread.

Using a web-cam the students can read their books, which aids reading fluency and speech articulation. “If I tell a student, ‘I want you to read this five times so that you’re better at reading it,’ how boring would that be? Knowing that their parents will hear what they produce because the students’ work will be posted on the Internet, the children ask, ‘Can I read what I wrote one more time to make sure it’s the way I want it?’”

This process, she explains “has a purpose that the kids understand. It’s not worksheets; this is authentic reading and writing. The technology makes this happen, and I keep trying new technologies to see what might help my kids improve their communication, reading and writing skills.”
On Martin Luther King Day, she recalls, “I was able to take a video from YouTube of Dr. King’s ‘I Have a Dream’ speech and use it as a source of background knowledge. Then I asked them to write an answer to the question, ‘What is your dream for America?’”

**Tweets and Nings**

Ms. Wollak has and uses a Twitter account, but has not used it much until this fall. “I just read an article about a university course based entirely on tweets. Dave Koppenhaver is experimenting with Twitter. I’ve used Twitter professionally and find it a quick and useful way to learn about good websites, books, videos or articles. Dave suggested that I set up a Twitter account for one of my struggling writers. It’s great, because a tweet is limited to 140 characters making the writing task seem not overwhelming for this student. I do have his account protected so that spammers can’t access it. This student’s tweets are currently being followed by Dave Koppenhaver, his mom, and myself. My other students found out about this student’s Twitter account and now they all want one too. But, as Wollak says, “How great that struggling readers and writers are asking for opportunities to do more writing and reading.”

She visits nings often. Nings are online platforms that enable users to create their own social networks.

“There’s a ning for AT. From there you can spin off to related nings, like one for web 2.0 technology, because that’s where I get many of my ideas for embedding free apps into my blog, and another for AAC.”

Such nings, she insists, have definite value. “I’ve been attending AT conferences for years and have found that much of the information I acquire there is for AT beginners. When I want access to expert advanced information, nings and listservs, like the QIAT listerv, are a rich source.”

**Trends and a Positive Bend in the Road**

Due to severe funding constraints which she expects to remain in place for some time, Ms. Wollak predicts an inevitable atrophy in assistive technology advances. “The trend is toward instructional technology because that’s where the development money is – for Smartboards, cellphones, iPods and all web-based technology that
can be used by kids with and without disabilities. I see these technologies expanding further faster.”

On the home front, in her Saint Paul district, her AT team glimpses the beginnings of substantial improvement in teacher technology savvy and AT knowledge. “We still have teachers – though not as many as just a few years ago – who have difficulty with many basic computer operations. Fortunately, so much of the special education paperwork is now computer-based. As a result, technophobia is becoming less of an issue. In order to survive teachers must use the computer. There is now a necessity to learn.”

Also on the plus side, she notes, heightened collaboration between the district’s general education and special education teachers is enabling special education teachers to introduce AT into general education classrooms.

In this era of dried up funding, she cautions, “many districts and administrators are seeking the silver bullet that will make everything better for everyone. The solution, though, isn’t just technology; it’s good teaching. AT is a tool, a very effective tool, but a tool. What matters is how effectively a tool is understood and put to use by a teacher who knows which tool will help the most.”