



Teaching Tech-Hungry Parents: an SLP's Take on Technology

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Famed Irish author George Bernard Shaw (1865-1950) once wrote, "Some see things as they are and ask, 'Why?' Others see things that never were and ask, 'Why not?'" In the past, some speech-language pathologists (SLPs) were slow to take up the cause of technology as a way to provide education support to young clients. Increasingly, however, SLPs are seeing technology not as a threat, a crutch or as a passing fad that lacks substance, but instead as an education equalizer for children with disabilities. Such technology is most beneficial when used not only in a classroom setting but also at home under the guidance of parents made knowledgeable by tech-savvy SLPs.

Those SLPs who have embraced technology have learned to utilize the Internet to administer training for busy parents, therapists and special educators via videos, webinars and email. They use these tools to efficiently track a child's at-home and classroom progress, cutting down on expensive, time-consuming travel and allowing them to participate in IEP team decision-making. This issue examines the role of SLPs in improving the education opportunities for all students, especially those with disabilities, by capitalizing on the convergence of assistive and educational technology and by sharing their technology knowl-

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hungry for it.

Joan Green, MA, CCC-SLP, Speaks

"I've always loved technology," declares speech-language pathologist Joan Green. "I love discovering it, learning how to use it, figuring out which resources will help the children and adults I work with, and passing on what I learn to those who also want tap its potential and their own."

"Most therapists now realize that using technology in addition to other forms of treatment has the ability to improve the effectiveness of what we do," Green adds, "but without guided help from people experienced in this area, it takes quite a lot of time and energy to learn about what is available and how to use it to maximize progress."

Now working in Potomac, MD, Ms. Green for the past 15 years has spread the word about technology's benefits to fellow therapists, special educators and families. Ironically, this SLP missionary for technology possessed almost no formal training in its use. "The only formal training I ever received using technology in therapy was in the 1980s in a Masters program at Northwestern University," she recalls. That training, she explains, consisted of one class. "It was a class in augmentative and alternative communication (AAC) devices, and it was optional because technology was not regarded as an integral part of speech therapy. The products we were exposed to in the class were primarily dedicated communication devices. There was also some exposure to very expensive forms of technology which could be used for voice therapy or research. "

She spent the first decade of her SLP career working with stroke survivors and those suffering from various forms of brain trauma in acute care and rehabilitation hospital settings. She eventually became disillusioned with the medical model because many of her clients were cut off from therapy with untapped potential when their insurance ran out. In the early 90's she formed her own private practice and named it, "Innovative Speech Therapy." She developed unique short-term intensive therapy programs for clients with an emphasis on empowering them with the ability to help themselves. She coined this program "TWIST- Technology with Innovative Speech Therapy." Her practice continued to evolve and after several more years in addition to providing intensive treatment programs for clients, she began applying her technology expertise to training professionals, teachers and families in the selection and use of AT and instructional technology with a particular focus on educational software to help both children and adults improve communication, cognition, literacy and learning.

Webinars and tailored online coaching sessions, she states, are becoming increasingly popular. The near-universality of high-speed Internet access has helped this effort, she notes. In addition to fostering distance learning, cutting edge technologies have become great tools to use in therapy. The increasing acceptability of texting, free video conferencing and networking social sites such as Facebook, "have opened new avenues for social connections among kids who have social and language disorders and who sometimes are reluctant to approach other kids to start a conversation. It was my kids who got me inter-

ested in texting and Facebook."

She admits that she still prefers conducting client consultations and treatment in person, "but it has proven so much more efficient for everyone to have at least a portion of these sessions online." A combination of email and online training, she notes, "are an ideal way to establish a network of individuals who become skilled at being able to support the client follow-through with suggested activities. Not everyone is able to come in person to observe therapy sessions."

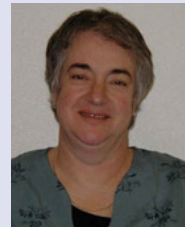
Ms. Green is the author of Technology for Communication and Cognitive Treatment: a Clinician's Guide and co-author of a video ebook, Technology Supports for Writing, both of which are now available at www.ittsguides.com. Both of these products have been very well received. After downloading the video ebook, readers can view integrated videos which highlight how some of the software can be used to improve writing.

Green says that she has found that families and professionals appreciate the flexibility of learning at times that are convenient for them and in a way that allows them to focus on only the information they need. This targeted "just in time" learning approach has prompted her to tackle yet another project – the development of an online video training library with 30 minute video sessions focusing on how to use affordable technology to help a wide variety of people with a wide variety of products. "Most people learn best in small chunks of time. They like to see products in action that are targeted for them and their needs."

Supporting our interview with Ms. Green are

resources related to the use of technology in speech-language pathology. We also feature members of our Knowledge Network. The members spotlighted this month focus on speech-language pathology and assistive and instructional technology. We invite you to contact these members for further information. Please share this newsletter with other organizations, families and professionals who may benefit from it. We invite you to visit us at <http://www.fctd.info>. We welcome feedback, new members and all who contribute to our growing knowledge base.

**If you're an experienced AT professional,
you know Gayl Bowser
If you're not, you'll want to know her**



**We invite you to participate in the
Family Center on Technology
& Disability's
April online discussion**

**Assistive Technology and Transition:
AT Skills, Transition Plans and
Self Determination**

April 13 – May 7, 2009

**It's free, fascinating, and full of facts!
(and a few opinions)**

<http://www.fctd.info/webboard/index.php>

Technology Training for Families and Professionals: The Best Help Is Self-Help

*An Interview with Joan Green,
Speech-Language Pathologist and
Technology Consultant*

She is a speech-language pathologist and one of a growing number of SLPs who include technology in their practices. Joan Green is an avid proponent of technology use for two reasons: it works, especially among K-12 students with and without disabilities and it helps her clients – children, parents and professionals – help themselves.



Joan Green

“Research has shown that the brain has neuroplastic qualities- it is capable of making changes when properly stimulated,” Ms. Green declares. “It has also been demonstrated that when the intensity of the stimulation is increased improvement is more rapid. Studies also reveal that multimedia treatment is an effective way to learn and assistive technology may actually improve skills such as reading and writing rather than just compensate for them.” For example, she adds, “if an individual is learning to read and views text while hearing the computer read them aloud, the material sinks in more efficiently and effectively than if the reader only reads the text and multimedia is not employed.”

Ms. Green adds that “Recent advances in technology such as distance screen sharing

and voice over IP provide the ideal way for professionals and families to learn from seasoned educators and therapists how to use the tools of technology to help people with challenges.”

Self-Help Is Her Focus

Considering the research, she notes, “the reality that children are receiving less and less specialized aid in schools, the expense of therapy, and the need for individuals to be empowered to help themselves, to me technology is a critical part of the solution.”

Joan Green's client base is nationwide. She consults with education and rehabilitation professionals who work in hospitals, schools, graduate training programs and private practices. Each setting differs in the populations they serve, their budget, their level of computer expertise and their program development goals. Joan provides the information to help them efficiently develop and improve their service delivery to help children with literacy challenges with the help of technology. She also helps families from a distance, but can only legally assist families in states in which she is licensed.

Fortunately she is beginning to see more technology proficiency among graduate school instructors in SLP programs. “Technology courses are now becoming more prominent in my profession and other related professions as well. I also work with occupational therapists and special educators and I can see that a more technology-oriented approach is slowly but steadily catching on.” Joan hopes that with the recent stimulus package which places an emphasis on promoting technology use in the

schools, more therapists and special educators will receive assistance with training and program development so that students with learning and literacy challenges will be able to better access the curriculum.

“It Is Difficult Being a Teacher”

There is much skill involved in software selection and usage, she insists. “One piece of software can be used in many different ways with different individuals to meet different goals.” However, she says, acquiring that skill requires effort. “There is general agreement that technology is in fact the way to go. School systems therefore are committing funds to purchase computers and software.” The problem, though, “is that everyone is so busy and stressed out, including teachers, and there is little time to learn how to best utilize their technology purchases.”

“It is difficult being a teacher,” Ms. Green remarks. “Each teacher has a large number of students, intense testing responsibilities, tight time requirements and constraints. The result is that there is not much time for individual teachers to figure out how to use the computers in their classroom.”

Teachers, she asserts, need to be shown how the software works and how it can be used to best help their students. “If teachers are simply given the software and left to figure out how to use it on their own, too much time is required. Teachers do not have time to spare.”

Some teachers shy away from technology because they fear it, she alleges. “They ask, ‘What if a computer crashes?’ ‘What if it doesn’t work?’ ‘Where do I start?’ Even some of the

media specialists in the schools are unfamiliar with the programs and are unable to provide the appropriate support. It’s a big problem.”

Fortunately, she concedes, the influx of techno-proficient teachers and therapists into the field may soon alleviate her current concerns and overcome today’s obstacles.

“Families Are Helping to Drive the Technology Evolution”

“The situation is evolving,” Green continues. “The ultimate result is that my type of practice which uses technology as an integral component to enhance more traditional therapy approaches will become



much more mainstream.” Families, she says, are helping to drive that evolution. “Families are searching for better ways to help their children. They learn about these resources online, [then try to determine] how best to acquire the software and devices they need, on their own or through their children’s school.”

Families for whom technology has always played an important role at home are often confronted with a sharply contrasting reality when their children enter school, where too frequently technology is all but absent.

“I have four children of my own, all in public school, 16, 14, 12 and 10 years old,” Ms. Green says. “When my 10 year-old was in kindergarten he was installing programs for his teacher and teaching the teacher how to use them. Nationwide that’s probably not an unusual scenario.”

Many parents, especially in communities such as Joan Green's, that are dominated by professional parents who spend every work day on a computer, find that their children's schools operate in a technology void. Is there a timely solution? Yes, says Ms. Green.

"There's a lot of funding via the stimulus package which will add impetus to the move toward technology. This is a good sign, but the changeover to a technology-rich school environment will remain extremely slow. "

Still, she admits, signs of progress are evident, even during the sharp economic downturn currently impacting every U.S. community. This year whiteboards offering interactive lessons, resources and support were procured for her community's local high school and middle school. The next step is for teachers to be given more training and support so that they can use them effectively.

No Longer Perceived as a Crutch

Given the disparity between the level of technology use in many homes and that in most public schools, does she encounter individuals in her profession and among teachers and professors who continue to regard the use of technology by students as a crutch?

"It's rarer now, thankfully," she replies. "It used to be a controversial concept to give children who were unable to talk a dedicated communication device. Now it's not feared that these devices which can speak will inhibit verbal language development. Research has shown that with using devices to communicate, expressive communication skills are actually enhanced. These devices promote interaction

among kids. Eventually, hopefully, as these children age they won't need these devices anymore."

Some controversy remains regarding text-readers, however. "Text readers are great for kids who need this help to have the computer talk as they type, which aids in maintaining attention, improving processing and proofreading. There are individuals, though, who believe text-readers might be a crutch." However, she notes, research has demonstrated that their use has improved students' levels of reading and writing. "Research supporting text reading software is emerging. More is needed."

She is convinced that if the appropriate AT were provided and then gradually withdrawn as needed, it would benefit certain individuals. For example, she says, "if a person is twice exceptional – or GTLD, gifted and talented with a learning disability -- and very smart but has a written expression disability it is very beneficial if she is permitted to develop a PowerPoint or type a report using a graphic organizer such as Inspiration rather than write an essay in long-hand." Such an approach, Ms. Green notes, "is a way for her to show what she knows rather than be held back by her disability."

Technology Supports Differentiated Classroom Instruction

According to Ms. Green there are different ways educators can teach children, to enhance each individual student's effectiveness. Dif-



ifferentiated instruction enables students and teachers to proceed at their own rate with the appropriate supports in place. "If the teacher gives an initial presentation and the students are doing various activities, there can be different levels of guidance provided within the activities in which each child is involved. Some children may need more cues embedded in the task than others. Differentiated instruction enables [those cues] to be provided with differing levels of support."

The most effective technology to be used in differentiated classroom instruction depends on what is being taught, she explains, "As a speech pathologist, I help students talk, read, write, think and remember. Some kids need help focusing on what is being taught. Others need help remembering what is being taught. Interactive whiteboards are great for helping children remember what's being taught."

As these whiteboards become more commonplace at schools they will prove to be the most effective modes of differentiated instruction, she predicts. "For children who have trouble remembering, a whiteboard will record word for word everything that occurs in a classroom. The file of everything a student sees and hears can be sent to the child for review. This is also helpful for a student who misses a class. It enhances interactivity because kids can answer questions with their own little remotes and show what they know."

Software programs also aid in implementing differentiated instruction, she points out. She recommends picture-based word processing software as being especially effective with younger children. "There's more software com-

ing out that's more geared toward the curriculum, such as the Solo Literacy Suite [<http://www.donjohnston.com/products/solo/index.html>] and Clicker 5 [<http://www.cricksoft.com/us/products/clicker/default.aspx>].

"There are a number of products available that make it easier for teachers to work on science, math or social studies projects, for example, using multimedia treatments. They can use sound or graphics and then kids can practice on their own computers answering questions, filling in the blanks. If they struggle with text there is picture support."

For children experiencing difficulty organizing written narrative, she recommends graphic organizers such as Inspiration [<http://www.inspiration.com/>] and Kidspiration [<http://www.inspiration.com/Kidspiration>]. "If kids have trouble organizing and attending to the task, they can take the rapid-fire free thought approach to get their ideas out before using links in the program that organize and convert their thoughts into an outline and a word document."

Such software, she believes, provides significant assistance in reinforcing ideas and in reading and writing. "This is instructional technology which benefits kids with and without disabilities. It's good for everybody. The kids with special needs who use this equipment won't feel so different because they can now be provided with a little more support within the task rather than being pulled out of the classroom."

The software is also beneficial for budgeting reasons, she emphasizes. "Equipment acqui-

sition becomes less contentious during the budgeting process because this software can benefit all students, not just those with special needs."

"Families and Professionals Want to See Software in Action"

The accelerating convergence of AT and instructional technology and the emergence of hybrid technology is illustrated, Ms. Green notes, by the formation of Premier Literacy, a division of Premier Assistive Technology. The AT aspect of the company's products was once highlighted. That emphasis has now shifted to the company's divisions, including Premier Literacy at <http://www.readingmadeez.com>, which produce tools for all students.



She has found that the most affordable software and devices are those that are made for the public. The challenge, she declares, is to find ways to use these products to help students with special needs. "The Livescribe pulse pen, for example, is not too expensive. Text readers can be obtained via free downloads."

Much of the software she utilizes is created to help teach English as a second language (ESL). "This software is also very beneficial for kids with autism or delayed language or for adults with aphasia."

There are websites that are helpful to kids and families, whether the children are in general or special education, she says, citing a free site,

SpellingCity.com [<http://www.spellingcity.com/>], an online spelling practice site; and a subscription based site Time4Learning.com [<http://www.time4learning.com/>] which, she explains, was created for parents who are home schooling their children or who want to supplement the school curriculum with literacy programs.

Her new book, *Technology for Communication and Cognitive Treatment: A Clinician's Guide* [<http://www.ittsguides.com/>] focuses on the information she has gathered about the software, devices and other helpful resources she has researched. "My first target audience was speech-language pathologists who work with adults, then speech-language pathologists who work with adults and kids and then, finally, I expanded the scope of the books to include professionals in the education/rehab field who help individuals of any age to cope with cognitive and communication issues." Family members, she says, "have found the book useful as well but the content may be somewhat overwhelming for them." After the book appeared she says she received numerous requests from professionals who wanted her to help them zero in on tools that were most pertinent to them. "They wanted to see the software in action," she comments.

Like professionals, families also prefer to see software in action, she remarks. "I have found that the best way for people to learn, either professionals or families, is in small chunks of time, seeing products in action that are targeted for them and their needs."

Long and Detailed Reports

Ms. Green does not conduct comprehensive

evaluations. For that, she advises, families need a specialist with the diagnostic tools to prepare long and detailed reports. "I am not set up to do that.



When I am helping a child I read the reports that have already been prepared, look at the big picture and see how the child is actually performing." Those reports, she notes, may include neuropsychology reports, IEPs, and other speech pathology reports. "Then I might also talk to the teacher and family members and brainstorm."

Ms. Green attempts to determine what the child prefers in terms of appropriate software and devices and what would be a good match. "I generally work with the teacher and the parent online. They sit at their computer; I am on my computer in my office. On their monitor they see my software. I explain to them how to make the software more difficult or easier in order to fit the needs of the child. I teach them how to use it in their setting. This method of introduction and training is so much more efficient and streamlines the learning process. They don't have to figure out what software is most appropriate and how to use it."

Technology at Home: For Parents, Help Is on the Way

Technology use at home by children with disabilities has two purposes: education and



fun. Joan Green weighs in on the side of edu-

cation while acknowledging a place for fun. Parents, she urges, should separate one purpose from the other. "My kids know that they have a 'junk' computer time and 'educational' computer time. That works for us."

When parents ask her how they can use technology tools at home to support their children's development, academic and otherwise, Ms. Green asks them questions about daily routines, behavior issues, and academic as well as social likes, dislikes, challenges and strengths. "Based on the responses to my questions I try to help the parents understand which software programs are best. I remind them that there are many free online programs and others that can be accessed for minimal cost. There are also some very expensive programs."

She also attempts to determine what software initiatives the school has undertaken. "For instance, is the child doing type-to-learn at school? If so it would be advantageous for the child to work on the home version of that program. Or do the parents want a Sponge Bob typing program, for example?"

The idea, she adds, is to determine goals family by family. "Everything I do is completely individualized. However, I do conduct webinars in which I review topics that many people are interested in such as my top 10 free online interactive programs and "Top tools and strategies to improve attention, auditory comprehension, thinking, organization and memory."

"I also provide professional training in which I can talk to a school or hospital or rehab center and provide them detailed instruction. The institution tells me what its budget is and what

software and devices are being utilized. The institution describes the level of staff expertise and the goals for program development. I can then select the program and teach it to them."

She says she is unable to take the same approach with families "because I am not licensed in every state and there is an ongoing debate on a state-by-state basis about the exact definition of speech therapy." Can she tailor an online program where she teaches parents how to help their child?" The answer, she explains, often depends on legal interpretation.

"I have asked the American Speech-Language and Hearing Association what the definition of speech therapy is. This is a legal netherworld that can be treacherous for a practitioner like me." Therefore she will not provide long-distance consultation for family members who live in states in which she is not licensed on how they can help their children.

Instead she offers webinars, writes books and video ebooks and is working on producing an online video training tutorial library. "I can help parents in a generic sense in which there is no liability. Professional training I can do in any state, but that falls into the category of continuing education, not speech therapy."

Accountability Is the Objective

When she works with families and schools "I try to arrive at the most practical solutions," she declares. "Say a middle school student is going to have to lug a computer from room to room that is so heavy she is unable to carry it. That won't work. Children may benefit from mobile

assistive technology tools that are contained on a flash drive that can be inserted into the USB port of any computer and have all the accommodations there. That would be ideal. However, computers are not always available for students to use in all classrooms."

According to Ms. Green, "My job is to look at the reality of each individual situation and then try to figure out realistically what supports might work. Usually we can come up with good solutions when everyone involved focuses on that one child during a phone conference or online brainstorming session."

She does not attend meetings in person. "I generally do not follow a student for the long haul. I am more of a short-term resource who provides solutions that might not have been thought of. If we come up with solutions I can then train the professionals and family members in the ways to implement those solutions. I recommend software, equipment and vendor.

For professionals who wish to jump-start their exposure to software programs and devices, she says she will set up online training sessions. "We can record the session in order to help those who cannot attend and they can view the session at their convenience. All that's needed to view the session is online access and a speaker."

Experience has demonstrated to her that if individuals are shown how to use software or equipment they will readily implement the solution. "I get them started," she says. "Sometimes I'll make a follow-up appointment for a month later to touch base about any problems

that might have arisen. I can talk to a teacher or parents or a school instructional technology specialist. Often what happens is that things get lost and there is no one coordinating that aspect of a child's care." Extensive use of email, she says, helps her stay on top of the process.

After every phone meeting or online conference she collects each participant's email address – parents, teachers, administrators and counselors. "I email each of them to confirm the plan for who will do what when. Accountability is what I seek. All of this information is in writing. Then we can have a follow-up meeting that is productive. Otherwise, information is misplaced and months can pass in inactivity."

If she is invited to continue providing assistance, she says, periodic meetings are advisable. "A parent might contact me a month later and I'll ask, 'Is the student frustrated?' 'Is she learning?' 'Should we increase support or pull it back a little?' Support can be for literacy or for organization. Are students forgetful? Are they not paying sufficient attention? Is the work interesting and challenging? I look at the entire scope. I base my judgments on teacher and parent reports."

IEP Meetings: the Value of the Outsider's Perspective

Laws mandate that IEP meetings occur at set intervals, which, she says, provides a certain structure to the IEP/504 Plan process. "Sometimes families or school systems hire me to be part of those meetings.



At those meetings I try to establish responsibilities and accountability. The team makes the assignments and I email the assignment list to everyone so that we are all on the same page."

"I am an outsider looking in, therefore I do not become involved in any of the politics. Sometimes a teacher might feel threatened because he or she is assigned a responsibility that might not fall within his expertise. My role is that of an objective outsider looking at the big picture."

Occasionally, she admits, she used her outsider status to float ideas that might appear confrontational. "Some of those ideas may not be new. The participants might have thought of them earlier but were reluctant to voice their opinions. But because I express them in a certain way and by phone or online – and because I'm an outsider – those opinions, when I express them, cannot be dismissed."

Often, she says, "one school system will have one collective mentality and another will have one that is different." Take use of the Livescribe pulse pen, for example. Although the pen is becoming popular in some private schools, several public schools have legal reservations about its use. "A public school in New Jersey thought that use of the pen might constitute a breach of confidentiality on the part of the other students in the class."

"I subscribe to quite a few AT, neuropsychology, special education and speech pathology listservs," she points out. "I've posted some of these concerns about whether or not a device is appropriate on these various listservs. I've

found that others have encountered similar dilemmas.” Attorneys have been consulted on the product confidentiality issue, she explains. However, their legal evaluations are conflicting, she adds.

“The parents think that this dilemma is awful, but I can say, to defuse the tension in an IEP meeting when these issues are addressed, ‘Other school systems are also concerned about this issue. There is no clear answer. It depends on which lawyer is consulted as to how the law is interpreted.’ Is the classroom considered to be a public forum? A public forum is a venue in which recording can take place. In a public forum there is no pretense of confidentiality.”

“Don’t Wait For the School to Take the Lead”

Families, she says, often operate in the dark when it comes to accessing needed services or technology for their children. Some schools, she alleges, will not tell a family that speech therapy will help clear up a child’s articulation which the family may not realize is not developing normally. “Schools are now focused on literacy. As a consequence, children are growing up these days not receiving services that we all assume they receive. Children may not be able to pronounce their L’s, R’s or S’s or they might stutter or they might have other issues that a speech pathologist could help them to correct at a young age when it is better to correct them.”

Typically no one advises parents to access private speech therapy, Ms. Green claims,



“because if the school recommends that something is needed, then the school apparently needs to provide it. So the parents are unaware that this will help their child. It is a very difficult situation for families and uncomfortable for schools as well whose budgets are squeezed tight and who are hemmed in by legal constraints.”

She unhesitatingly provides parents with recommendations, she says, “But I then caution parents not to waste time waiting for the school to provide all needed services because while arguing about who should provide the needed help, a child’s opportunity to learn may be lost.” Instead, she says, “Whenever possible, I focus on low-cost solutions that are easy to implement so that families do not have to depend on the school. I don’t get involved in any of the litigation. I would rather help parents decide what they can do best at home. When possible, I suggest that families hire professional help outside of the school and develop a working relationship with a skilled therapist as the process unfolds with the school system.”

“Stay Positive”

Should parents provide technology tools to pre-school children? Parents should keep everything in perspective, she advises. “My kids have been on the computer since they were two years old. As a parent I’ve learned that spending excessive time on the computer is detrimental to their development. They should be exercising and socializing.”

That said, she adds, “there are programs that teach children while they are having fun without the kids realizing that they are learning.” Many of the Knowledge Adventure programs

such as the Jump Start series, [<http://www.jumpstart.com/?pid=googpd&cid=jump%20start%20software&gclid=CLaRo4ySqJkCFQG7GgodDiv5pg>] , Freddi Fish and Bailey's Book House [http://www.k12software.com/view_details.php?&ID=4&gclid=CN_i8iWqJkCFQw9GgodyDBRpw] fit into that category, she explains. There are also many great free online websites such as www.webkins.com, www.spellingcity.com, and www.starfall.com which have activities to promote literacy and learning.

She also recommends a site called Children's Software Online [<http://www.childrensoftwareonline.com/Default.aspx?m=item&pID=1695>] as well as other sites that evaluate children's software. "Parents do not want these sites to be boring drill-and-practice. They want sites that help build memory, sequencing and reasoning. Today many children enter kindergarten as readers." For the youngest children who are gaining computer exposure, she advises, parents can Google 'pediatric software' to access websites that review that software online.

"When I watched what my children were doing on the computer I realized that their activities required a lot of thought, problem-solving and trial-and-error. My son, for example, didn't even realize he was learning. This computer stimulation is good for them, but should nevertheless be limited to one hour a day."

Her advice to parents: "Stay positive with children. Do not give them tasks that create frustration or boredom. Learning about technology and using technology ought to be fun and exciting. A high degree of difficulty or

boredom can turn the experience negative. Ideally technology use should be regarded by children as a reward because it is fun. I have never met a child who does not enjoy using technology. Limit a child's computer time but make that time fun and productive."

Technology Training: Countering Inertia"

According to Ms. Green, there is often a sense of inertia in educational practices that needs to be addressed in technology training programs. "Most individuals are happy doing what they have been doing and have to be shown how their life will be made easier with the help of technology."



Learning how to implement technology within their setting should not be a struggle for trainees, she advises. "Someone who is very knowledgeable about the various resources needs to get them started, show them the software and make suggestions about how they can integrate the software." In addition, she says, educators "should spend time observing, either in person or via videos, how other teachers or other professionals in settings similar to theirs are currently using the technology."

What is certain, she declares, is that trainees "can't just be given the software and told to go home and study it for two hours and start using it. That approach does not work." The result is that software or equipment is quickly abandoned or not used at all, she cautions.

While writing her books, Ms. Green unearthed resources she believes are helpful for families

ands professionals gaining their first intense exposure to AT and instructional technology and who want to access more information on their own. She has included those resources, under the "helpful resources" section on her website www.innovativespeech.com. She has also posted special reports at www.theymaynotknow.com. Titles there currently include, "The benefits of using technology to help children and adults who have communication, cognitive and literacy challenges," "10 Top Picks for Free Online Interactive Programs to Stimulate your Brain," and "5 Potential Solutions to Ease Homework Stress and Enhance Academic Success for Students of all Ages."

AT and IT Convergence: A Trend with Significant Implications

The convergence of AT and instructional technology is a trend with significant – and positive – implications for accelerated technology use by families and professionals, Ms. Green predicts. "It is generally realized that everyone can benefit from the use of these technologies. There are many definitions of AT but it can best be defined as technology that helps people become more efficient and effective at tasks. Once it was perceived as a tool for individuals with disabilities. Today it is understood that all technology increases human efficiency, so why leave students who may have special needs out of the larger definition?"

When she evaluates the benefits of technology tools she does not stop to categorize a



given tool as AT or instructional technology. "I look at all the mainstream technologies and determine how those technologies can help all kids."

For kids with and without disabilities she sometimes recommends a website called Remember the Milk.com [<http://www.rememberthemilk.com/>] that helps children manage a to-do list and tasks while remaining on focus. "Many online organizational tools that are aimed at a mainstream audience can be a great help for children with disabilities." Microsoft Word, with all of its accessibility options, is a mainstream tool that can be utilized by kids with special needs, she points out. She also encourages all children to keep track of activities and assignments on their own calendar, rather than relying on their parents. A web based calendar such as calendar.google.com is often advised because parents and therapists can share it with them to provide support as needed and it can be accessed from any computer.

Technology which helps children think of words, she advises, can assist all children with writing. "There is a new thesaurus site called WordWeb.com [<http://wordweb.info/free/>] that is a free download. WordWeb is a mainstream tool that resembles Microsoft Word's dictionary and thesaurus except that WordWeb works in any program and also provides related words, pronunciations, usage examples, and has helpful spelling and sounds-like links.. A child can be online or in a PowerPoint and if she does not understand or think of an appropriate word to use, she can tap 'Control,' then right-click on the highlighted word and she will receive a definition, aloud if necessary, as well as synonyms and words that are associated with it."

This is similar to semantic webbing that many therapists use to help children add to their vocabularies and write more creatively."

Parents should also look into products that are developed for one purpose, but can be used for another, she advises. "I use the LiveScribe Pulse Pen to help children with speech, which is not why it was developed; it was developed to help with memory. Kids who have difficulty talking can try to read out loud and then listen to what was recorded and use it for speech." Franklin.com [<http://www.franklin.com/>], she notes, offers talking dictionaries and planners that are aimed at mainstream students but are very beneficial for children with disabilities.

As for her practice, Joan Green says it will continue to evolve based on the needs expressed by families and professionals. "I don't answer to anyone except for my clients," she states firmly, "and that's the way it ought to be."

RESOURCES

Articles

Technology: Everywhere, Everyone, Everyday

By Judith Geppert
e-bility.com (2004)

This article is authored by a woman with athetoid quadriplegia who has used assistive technology since she was four years old. Ms. Geppert discusses how her use of a range of technologies has allowed her to accomplish daily tasks at home, work and in the community. Anecdotes illustrate her frustrations and successes with emphasis on the need for innovative approaches when matching technology with users.

<http://e-bility.com/articles/technology.shtml>

Unheard Voices and the Right to Communicate: Augmentative Communication

By Patrick Brune
PBS (2005)

This short article, written by the Augmentative Communication Coordinator of the Parkside School in New York City, is appropriate for families in need of basic information on ways to help a child who is not developing speech and language skills as expected. Mr. Brune recommends the use of augmentative and alternative communication (AAC) devices when early delays have been identified and speech therapy initiated. He describes basic devices such as communication boards as well as more complex computer generated programs. He encourages parents to ask their child's teacher, therapist or other health professional to help obtain an evaluation through their local school district or university-based program as soon as a delay in acquiring

and using speech becomes evident. <http://www.pbs.org/parents/inclusivecommunities/augmentative.html>

Publications

Advance: for Speech Language Pathologists and Audiologists

This weekly publication reports on current developments, technology and trends in audiology and speech-language pathology. Content includes practical tips and strategies for a range of settings and patient populations as well as ground-breaking developments in technology and treatment. Features include coverage of new technology, in-depth articles, business news, research findings, campus events, book reviews and convention coverage. Special-issue topics include new technology, AT, cochlear implant technology, AAC technology and in-clinic computers.

<http://speech-language-pathology-audiology.advanceweb.com/Editorial/Content/Editorial.aspx?CTIID=902>

Guides

Technology for Communication and Cognitive Treatment: a Clinician's Guide

By Joan Green, MA, CCC-SLP

Innovative Technology Treatment Solutions (2009)
This guide is aimed at education and rehabilitation professionals who help provide AT solutions for individuals of all ages with speech, language, cognitive and learning disabilities. The author notes that despite its professional focus the guide is also helpful for family members. Content is cross-referenced according to goal area, target populations and school/work settings. Cost: \$89.95.

<http://www.ittsguides.com/>

AAC Resources for Families

By Pam Harris

National Assistive Technology in Education Network (2005)

This resource guide explains augmentative and alternative communication (AAC) and its importance to children and families. The guide includes a list of companies and organizations that produce AAC-oriented websites, catalogs, journals, newsletters, and magazines. Ms. Harris includes useful textbooks as well as a comprehensive listing of international, national and regional technology or disability conferences. Also included are ideas for introducing augmentative communication along with child-centered activities aimed at increasing children's interest in literacy. There is information on advocacy, professional organizations, ways to increase community awareness, tips for communicating with and teaching children, definitions of basic language systems, using photos to foster communication and ways to use AAC at home and in the community. The websites of three AAC users are included.

<http://natetwork.buffalo.edu/AACResources.pdf>

Books

Technology Supports for Writing

By Joan Green, MA, CCC-SLP

Innovative Technology Treatment Solutions (2009)

Ms. Green, a speech-language pathologist and technology expert, intends this ebook as a resource for information about software and hardware tools for improving writing. Topics include: software with customizable drill-and-practice exercises to improve writing

and spelling; pictures of text- and picture-based word processors and assistive writing technology; graphic organizers; technology to help with physical aspects of writing; and speech-to-text voice recognition. She also includes information on more than 50 writing-related products and resources. The book includes 12 brief video tutorials showing products in action. Cost: \$24.95.

<http://www.ittsguides.com/techsupport.html>

Websites

Children's Software Online.com

This site offers educational software that features self-paced learning combined with graphics and animation. The site's software emphasizes education and fun.

<http://www.childrensoftwareonline.com/>

Remember the Milk.com

The Gmail "gadget" offered on this site enables users to review the week's upcoming tasks; add new tasks and edit existing tasks; complete and postpone tasks; optionally show tasks with no due date; display tasks from a specific list or from a Smart List. A "quick add" feature allows users to add tasks and optionally include a due date and/or tag. Access to the gadget requires Gmail Labs.

<http://www.rememberthemilk.com/services/gmail/gadget/>

Office 2007 Accessibility Resources

Microsoft (2008)

This Microsoft website offers resources to acquaint users with the accessibility features available in Microsoft® Office 2007 as well as

in Windows Vista, Internet Explorer 8, plus AT products for Windows. Features for display and readability, keyboard and mouse sounds and speech are presented on the Microsoft Office 2007 home page. Users can access step-by-step tutorials introducing the most commonly used accessibility features. Case studies showcase organizations that have integrated accessible technology solutions into their technology.

<http://www.microsoft.com/enable/>

Technology at Home

Royal Institute of the Blind (2008)

This site, hosted by the Royal National Institute of the Blind in the United Kingdom, presents an article emphasizing the importance of home and school AT for K-12 children. A link leads to brief case studies describing how children employ technology in a home setting. http://www.rnib.org.uk/xpedio/groups/public/documents/PublicWebsite/public_rnib003081.hcsp

KNOWLEDGE NETWORK MEMBERS

Innovative Speech Therapy (IST)

Founded and administered by speech-language pathologist (SLP) and technology expert Joan Green, IST offers professional training and support, individual therapy and coaching to professionals, families and children and comprehensive information about AT devices and education software. Technology training sessions and workshop participants include SLPs, therapists, technology coordinators, university professors, educational consultants, teachers, special educators, school counselors, researchers and others.



IST services benefit individuals experiencing poor school performance, unintelligible speech, dysfluent speech, developmental delays, developmental apraxia of speech, intellectual impairments, learning disabilities, voice disorders, hearing impairment and low vision. Individual speech therapy includes intensive outpatient and residential therapy options. Trainings include in-person and online coaching and training for professionals and families in ways to integrate technology into rehabilitation and education settings in order to improve communication, cognition and literacy. For more information on IST contact:

Innovative Speech Therapy
7731 Tuckerman Lane #206
Potomac, MD 20854
Phone: (301) 602-2899; (800) IST-2550 toll free)
Fax: (301) 610-9234
Contact: Joan Green, MA, CCC-SLP
Email: Joan@innovativespeech.com
<http://www.innovativespeech.com>

California Speech-Language-Hearing Association (CSHA)

CSHA is officially recognized as the professional association



for California SLPs and audiologists by the American Speech-Language Hearing Association (ASHA). The organization's website maintains an extensive resource center, publishes articles and position papers and supports a state legislative agenda. The CSHA Special Education Advocacy Leader (SEAL) Network aims to strengthen the advocacy and clinical management skills of school-based CSHA and ASHA members at the state level. For more information, contact:

California Speech-Language-Hearing Association
825 University Avenue
Sacramento, CA 95825
Phone: (916) 921-1568 Fax: (916) 921-0127
Email: csha@csha.org
<http://www.csha.org/>

Hearing Speech and Deafness Center (HSDC)

HSDC provides a range of services, including technology training, to Puget Sound, WA residents who are deaf, hard of hearing or have speech or learning disabilities. Founded in 1937, and with locations in Seattle, Tacoma and Bellingham, HSDC offers videophones to its deaf and hard of hearing clients that facilitate communication between sign language users. Videophone services include: Point-to-Point (P2P), when one individual uses a videophone to contact another who also possesses a videophone; Video Relay Service (VRS), an online interpreter service used



for conversations between a person who has a videophone and a hearing person using a traditional phone; Video Remote Interpreting (VRI), a pay-per-minute service employed for conversations between a non-signing hearing individual and a signing deaf person who are in the same room, using an online interpreter. VRI is utilized for brief, unplanned meetings or for emergency communication while service providers await the arrival of a live interpreter. HSDC provides videophone training for families and for children as young as six years old. For additional information on HSDC, contact: Hearing, Speech and Deafness Center
1625 19th Avenue
Seattle, WA 98122
Phone: (206) 323-5770; (206) 388-1275 (TTY); (800) 761-2821 (toll free); (888) 222-5036 (Voice); (206) 388-1275 (Videophone)
Fax: (206) 328-6871
<http://www.hsdc.org/>

Center for Speech and Language Disorders (CSLD)

CSLD provides individualized, research-based therapy plans for children with communication disorders. Started in 1979 by speech-language therapist Phyllis Kupperman, the organization was then a part-time operation housed in three small offices in Elmhurst, IL. Today, CSLD maintains two sites, in Elmhurst and Chicago and emphasizes easy community access to its services, especially among economically disadvantaged youth. The organization hosts parent support groups, workshops for professionals, free speech and language screenings and presentations and



trainings for school teams, parent groups and professional and community organizations. For additional information, contact: Center for Speech and Language Disorders
606 N. Michigan
Elmhurst, IL
Phone: (630) 530-8551 Fax: (630) 530-5909
Contact: Mary Moreno, MS, CCC-SLP
Email: marym@cslid.org
<http://www.cslid.org/>

Duke University School of Medicine, Division of Speech Pathology and Audiology: Assistive Technology Clinic

Duke's AT clinic aids families in finding appropriate technology options. The clinic maintains a multi-disciplinary staff, collaborates extensively with regional and national universities, clinics and AT organizations and leads state and federally funded AT research projects. Clinic services are accompanied by a comprehensive evaluation to determine the appropriate technology. Training and equipment modification are available as needed. Clinic services include:

- Communication access for individuals with limited verbal communication skills
- Computer access for individuals with limited access to written communication
- Environmental control for individuals with limited access to their environment due to physical disabilities
- Training to help individuals use their new technology in their daily lives

Other individual services include:

- An initial evaluation to assess needs and abilities
- Demonstration of and trials with an extensive collection of evaluation equipment

- A report featuring recommendations for appropriate technology
- Funding assistance
- Follow-up visits to help with device selection, training and modification

For further information on the Duke AT Clinic, contact:

Paula Haas - Administration
 Division of Speech Pathology & Audiology
 Duke Department of Surgery
 DUMC Box 3887
 Durham, NC 27710
 Phone: (919) 684-6271
 Email: Speech.Hearing@mc.duke.edu
http://speech.surgery.duke.edu/modules/div_spch_pc/index.php?id=3

Greater Atlanta Speech and Language Clinics

Founded in 1982 by current founder/director Joan Aronson, the clinics provide comprehensive therapeutic programs in speech and language pathology, occupational therapy, and physical therapy. A Frequently Asked Questions (FAQ) section on the organization's website provides definitions of terms pertaining to each discipline. Areas addressed by therapy include: articulation/phonology, language delay or disorder, oral motor, cleft palate, stuttering, tongue thrust, cerebral palsy, fine/gross motor skills, motor planning, muscle strength/endurance, auditory processing, voice, Down syndrome, autism/pervasive development disorder. Services include: intervention, language stimulation, preschool screenings, workshops for par-



ents and year-around and summer programs for school-age children. For more information, contact:

Greater Atlanta Speech and Language Clinics
 3725 Lawrenceville Suwanee Road, Suite B-3
 Suwanee, GA 30024
 Phone: (770) 831-2313
 Fax: (770) 831-2778
<http://www.greateratlantaspeech.com/index.html>

Funding provided by the US Department of Education under grant number H327F080003

- Project Officer:** Jo Ann McCann
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