

# VIBRATIONS

**NEWSLETTER OF COLORADO SERVICES FOR CHILDREN WHO ARE DEAFBLIND**  
**Serving Children with Combined Vision and Hearing Loss (Deafblindness),**  
**Their Families, and Service Providers**

**Modified Spring 2005 Edition: Focus on Technology**

*This is an edited version of the original newsletter. Only articles pertinent to assistive technology have been retained as resource information. If you copy any of the content of this modified newsletter, please credit the original source.*

## **TECHNOLOGY AND EQUAL ACCESS**

**By Tanni Anthony**

This issue is dedicated to the topic of assistive technology. We asked a parent, a teacher, and an individual with deafblindness to tell us about their experiences with technology. The conclusion seems to be that there is good news and bad news associated with certain types of technology tools and devices. What is constant, however, is that technology is getting better and better with assisting people with disabilities to access information. A combined vision and hearing loss always results in fragmented and/or missed information. Technology, whether high tech or low tech in nature, should be a link to getting and for giving back information. Our work is to ensure that every child has the tools in his or her life for connecting and communicating with others, learning new things, moving to places of interest, doing skills needed for life care and job preparation, and enjoying life with self control of choices and actions.

The devices used to produce braille, for example, have improved over the years to being more portable and more efficient. For those individuals using braille, there are more options for access to the print than ever before. For persons using assistive listening devices, there are more choices with higher quality results. For almost every child on our deafblind census, the use of a communication system, whether it is comprised of objects, symbols, words, and/or signs, makes a daily differences in the ability to express, learn, and enjoy life.

We encourage you to ensure that all children and youth with deafblindness have such tools. Guiding questions might be: Has everything been done to enhance visual, auditory, and tactile access to information? Does the child have a communication system that works for the child, that is known to other people, and that moves with the child across all daily environments? Are there tools needed for the child to move from one place to another in a safe and efficient manner? What tools need to be in place for the child to learn with his or her peers? Let's ensure that we are providing all of the necessary tools for our children to communicate, learn, move, recreate, socialize, and enjoy life.

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## Sharing the Journey

*Connecting families with combined vision and hearing loss in Colorado*

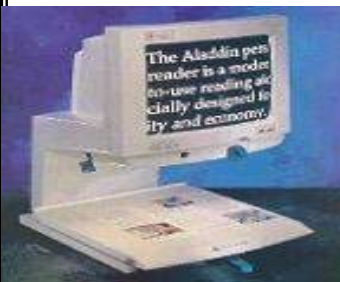
By Karen Roberts, Family Specialist

Technology is something I certainly have a love-hate relationship with. In its broadest definition we can't escape it and thank goodness for it—in the last half hour I've thrown Benjamin's soiled bedsheets in the wash, tube fed him and plunked him in front of the television as I ran upstairs to my computer to write some words on what it all means. Technology certainly makes my daily existence easier and for many of us—has kept and keeps our children alive.

But beyond survival what does it mean? How much and when? Is it productive or can it be counterproductive? How can we best use "assistive technology?" How can we make sense of the 29,000 assistive tech devices listed on the AbleData website alone? Is this another cause for guilt or an opportunity to make life for our child easier? Benjamin is in front of the television but he doesn't have his (hearing) aids in. There was a time when that would not have been acceptable in my mind. "Have those aids in ALL the time—then he isn't deaf, he's a hearing child." Through the years my standards have loosened. Benjamin has helped me learn that the feel of the bed sheets and his sisters touch and breath on his face are enough for him in the early morning. That being aided every waking moment isn't essential to his quality of life. We have an FM system sitting in a bag in the classroom and we are trying to tune it to Benjamin's needs. This is an alternative listening device that attaches to the hearing aid and should isolate the teacher or intervener's voice and block out much of the background noise. Unfortunately, after one trip back to the manufacturer it still seems to be amplifying the voices of 29 first graders directly into Benjamin's left ear. This is where the love-hate comes in...

I believe assistive technology has the greatest impact and potential in the area of communication. But once again, it's a complicated question. We need to be wary of putting a high tech communication device in front of our child before he or she is ready. If Benjamin doesn't understand his power to make requests and intentionally communicate then any sort of high tech communication device is a waste of money and can only cause confusion and frustration for all involved. Many professionals understand this but not all. It isn't the easy "quick fix" some might hope for. But once again, it seems to come down to my values and what I want for my child. Not everyone likes the Big Mack buttons. A message is recorded into it and Benjamin hits it. It's kind of stupid if you think about it too much. He has no part in recording what it says because he is nonverbal (and wouldn't need it if he weren't). Being told to "hit the talking box" and

everyone in the classroom circle waiting with baited breath to hear what it says—"Benjamin saw Sponge Bob Squarepants last night," does not appear to have much educational meaning on the surface. But it is a way to bring Benjamin into the classroom activity in a social way. To be an active participant rather than a passive bystander. And the kids think it's cool. They also think his "low tech" object cues are cool. They are very respectful of the outdoor cue (piece of a red visor), the swing cue and the computer cue. These are the tools Benjamin is using to communicate now.



And they serve as the barometer for gauging when he is ready for a more complicated system. But just as we need to be realistic and not rush towards high tech devices, we also must be careful not to underestimate our child's ability to make use of the technology that is available. We may see "outside the box" and believe that a piece of equipment may benefit our child in ways others may not understand at first. In our case, a CCTV is bringing objects, pictures and words to life for Benjamin. No, he may never "read" in the traditional sense, but the CCTV is enlarging objects and pages of books that he can look at as his peers read aloud "with" him. This is not a piece of equipment the school district would approve for us and it was very generously donated to his classroom by an outside organization.

In the end, I believe we must do our best to surround ourselves with supportive and knowledgeable people. No matter the age of our child there are assistive tech experts available, from the Colorado Assistive Technology Project to our school assistive technology teams that are eager to do home and school visits. These are people who thrive on technology and are excited to work with our children and see them reach their potential. And whether it's low tech or high tech or the feel of the bed sheets, that's what it's all about. Good people working in partnership with us to help our children be the best they can be.



## **“Assistive Technology for a Deaf-Blind Individual: A Personal Perspective”**

**An Editorial by Jeff A. Cook, Psy.S.  
Deaf-Blind Adult with Usher Syndrome Type 2**

*Editor's Note: A very special thank you to Jeff for writing this article for our newsletter! Jeff is the Director of the Kansas Deaf-Blind Project and one terrific person!*

Thanks to the advances in computer and other communications technologies, the general society is able to share information and communicate interactively at increasingly astonishing rates. For many people in today's world, it seems as if they just can't get enough when it comes to the latest "gizmos and gadgets" i.e., state-of-the-art assistive technology devices, that might help enhance these areas. As a profoundly deaf-blind adult the strong yearning to find "something and/or anything" that will help improve my opportunities to share information and interact with others in ways that mirror what my hearing and sighted peers can do is both very understandable and inescapable. At the same time as deaf-blind consumer, I have learned from experience that it is best to resist the temptations of finding a "quick fix" when it comes to considering any available assistive technology (AT) device and seek out the help of family, professionals, and service providers in fully researching what particular AT device might work best for me now in light of my goals, i.e., daily living, social, educational,

employment, etc.

Even before I formally entered the field of deaf-blindness professionally, people would frequently come up to me as a deaf-blind adult and ask, "What works for you?" in hopes of perhaps finding something or gaining insights into some AT device that just might "help" in their interactions with a particular deaf-blind family member, friend, student, etc., they have personal contact with. While I can and usually do share openly with these folks what I have found to personally work for me in my own unique setting and set of circumstances, I am always also reminding these people during their inquiries that, "What I have found to work for me in my individual situation and set of circumstances as a deaf-blind adult, simply may or may not match the specific needs of the deaf-blind person you know in his/her unique set of circumstances". I then try to encourage and empower these people in considering what I believe are three important aspects to take into account when considering any high and/or low available AT for a particular deaf-

blind individual. Namely I suggest considering: 1) the efficiency/productivity that the given AT device will help provide the deaf-blind individual with, 2) the adaptability of the given AT device for unique needs of the individual deaf-blind consumer in mind, and 3) the cost/effort effectiveness of the AT device for the deaf-blind person.

As a profoundly deaf-blind adult, when I think of the efficiency and/or productivity that a given AT might provide me with, I find myself pondering, "What will this particular AT device do that could be of help to me right now in my own unique situation?" To do this means I personally have to be clear on what I want and need for the particular AT device to do first, and then, I personally must be very honest with myself in researching just what it can and cannot do to help me meet that/those specific need(s) right now. All of the AT devices on the market today and in various stages of development can do simply amazing things, but can they be of specific help to me right now is what I really want to know. Likewise, with every AT device there is a "learning curve" to being able to use the device fully. For example, even with a device as simple as a monocular, I had to learn to visually track to find the street signs outdoors to know which street corner I am on. While I have only 3 degrees total peripheral vision in my left eye now, simply looking through the magnified end of a monocular isn't of much help. But my O & M instructor showed me the "trick" of turning it around and looking through the opposite end (while smaller or looking more distant) as it gives me a larger visual field to view and provides me with more needed environmental and visual input in order to find where the street sign is. Then, I can turn it back around to the magnified end and find the top of the pole to read the street names on the sign. Thus, I had to be taught and practice this technique to get the full use of the benefits that the monocular could actually offer me. Fortunately for me, I tend to be a patient and willing learner with such things. On the other hand, I must also be honest in noting that my vision has decreased a lot in the past five years. Thus some AT devices that once worked for me are not much help anymore. For instance, initially I used a CCTV when my visual field was larger than it is now. The magnification, the ability to change background and print colors, and the orientation line on the screen all helped me significantly when I could actually "see more". The Kansas Department of Vocational Rehabilitation bought the device for me too, but it only took about three years before it didn't offer me any help any more, and thus, out of necessity, i.e., continual employment, daily life, etc., I found that I had to move on to becoming a much more proficient

Braille reader. The point is, though, that the CCTV cost over \$3,000 when first purchased that, "someone had to pay", i.e., an agency, myself, and/or both. So it is important to keep in mind that it is not always easy to replace/update AT equipment as rapidly as one's needs may uncontrollable change either. Thus, when considering the efficiency and productivity of a given AT device we need to also ask, "How long will it be able to offer these benefits to the deaf-blind individual?"

With considering the efficiency and productivity of the AT device, I also find I have to consider it's adaptability to my unique situation and needs too. There isn't much in the way of AT today that was developed specifically for use by/with deaf-blind consumers. Thus it is unlikely that anyone is going to find any particular AT device that will match all the accessibility needs of a given deaf-blind person "as is" and/or "right out of the box". So, before investing time, money, and efforts in the particular AT device it is best to ask, "How can it be adapted and/or made to work in the manner of which this deaf-blind person needs and desires for it to do so?" Some AT can be adapted relatively easily without a lot of expense, time, and efforts, while others will take a lot of technical assistance from a collaborative team of family members, professionals, school staff, and other service providers to just "get it to work" as needed for a particular deaf-blind individual. Before putting the time, efforts, and cost involved into doing so, it is best if issue of cost effectiveness is fully considered too.

In looking at a particular AT device it is important to address, "How much will this AT device cost me and can it be afforded?" This question by no means is limited to money alone. But rather, "Can I afford to invest both financially and emotionally in acquiring, learning use, and maintaining this particular AT device?" As noted earlier, with help of family members, various professionals and other service providers I have had to personally ask myself, "Is it worth it, i.e., emotionally and financially?" Important too comes the understanding that no one can answer this question truthfully other than the particular deaf-blind individual, i.e., not family members, school staff, service providers, and/or a host of other professionals. Neither I nor any other deaf-blind person can answer this question for the particular deaf-blind person here either. Again, every deaf-blind person's needs, circumstances, situation, etc., is as unique as the next deaf-blind consumer. Likewise, very few AT devices are ready right out of the box for any deaf-blind person to fully use and benefit from. For example, I was deaf-blind for quite a while really before I was emotionally ready to use a white cane

for my orientation and mobility needs. While a 4 piece graphite white cane it is typically sold at a modestly affordable price, being a late-deafened adult and school psychologist on a residential deaf school campus combined together to make it a real emotional milestone for me to eventual pass too. Furthermore, with cost effectiveness one must also honestly address, "How about down the road for this particular deaf-blind person?" and/or "How long will this particular AT device really be 'worth it' to him/her personally?" As I noted above, the CCTV worked about 3 years for me, but what happens after that? When should the family, school staff, and service providers while the particular deaf-blind person is actually using this new AT device, i.e., CCTV in my case, be willing to introduce needed future methods of acquiring the same printed and electronic information, e.g., via Braille reading? It may or may not happen in the foreseeable future for the given deaf-blind person. That is often very difficult, if not impossible, many times for the best experts to determine. But also it is vital that it is caringly asked, "How costly, i.e., emotionally, efforts (both individual and collective), time, financially, etc. will it be when uncontrollable changes in the deaf-blind person's vision, hearing, and other accessibility needs dictate that a change must be made?"

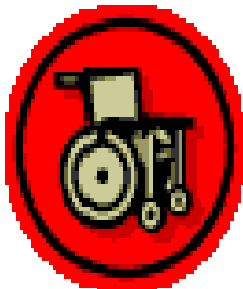
In conclusion, "What will work best" for the deaf-blind person(s) that you have contact with is a person-centered focus on considering and experimenting with the use of any AT device/technology. By so doing, the chances significantly improve that you will together make a "wise choice" in evaluating what will work best for each deaf-blind individual.



## Congress Passes the Assistive Technology Act of 2004

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Millions of people with disabilities rely on assistive technologies, such as wheelchairs, communication devices and adapted computers, to pursue their education, obtain and maintain a job and participate in their community and leisure activities. On October 8, 2004, the US House of Representatives overwhelmingly passed the Assistive Technology Act of 2004 (AT Act of 2004) (HR 4278). This positive action by the House of Representatives closely followed the Senate's unanimous support and passage of the AT Act on September 30, 2004. President Bush signed the Bill into law on October 25, 2004.



Every state and US territory has an Assistive Technology Act Program (AT Program) funded under the provisions of the Technology-Related Assistance Act of 1988. Legislation supporting the State AT Programs was scheduled to sunset on September 30, 2004. The AT Act of 2003 supports the continuance of State AT Programs.



The mission of the ATAP is to promote the collaboration of AT Programs with persons with disabilities, providers, industry, advocates and others at the state and national level and to increase the availability and utilization of accessible information technology (IT) and assistive technology devices and services (AT) for all individuals with disabilities in the United States and territories.



For the complete article or more information about the Assistive Technology ACT, please access their website at [www.ataporg.org](http://www.ataporg.org)

# Technology Resources



**ALVA Access Group Inc.**  
436 14th Street Suite 700  
Oakland, CA 94612

Phone (888) 318-ALVA (2582)  
Fax (510) 451-0878  
E-mail: [info@aagi.com](mailto:info@aagi.com)  
Website: <http://www.aagi.com/>

Hi-tech solutions for people who are blind and use computers.

**APPLE/MAC** computer accessibility

Website: <http://www.apple.com/accessibility/voiceover/>

Spoken Interface provides a combination of speech, audible cues and keyboard navigation to help blind users navigate Mac OS X with the same ease of use as sighted users have.

**EnableMart**

4210 E. 4th Plain Boulevard  
Vancouver, WA 98661

Phone: (888) 640-1999 (Toll Free)  
Fax: (360) 695-4133  
Website: <http://www.enablemart.com/default.aspx?store=10>

Markets, promotes, and distributes technology-based products and services for individuals with disabilities.

**Freedom Scientific**

11800 31st Court North  
St. Petersburg, FL 33716-1805

Phone: 1-800-444-4443 (within US)  
Fax: 1-727-803-8001  
E-mail: [Info@FreedomScientific.com](mailto:Info@FreedomScientific.com)  
Website: <http://www.freedomscientific.com/>

Technology-based products and services for those with vision impairments and learning disabilities.

**Harris Communications**

15155 Technology Drive  
Eden Prairie, MN 55344

Phone: (800) 825-6758 Voice; (800) 825-9187 TTY  
Fax: (952) 906-1099  
E-mail: [info@harriscomm.com](mailto:info@harriscomm.com)  
Website: <http://www.harriscomm.com/>

Harris Communications has been the one-stop source for sign language books, TTYs, amplified telephones, signalers and vibrating clocks and more! From wireless pagers and assistive listening devices to sign language CDs, DVDs, books, videos and novelties.

**Independent Living Aids**

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Hicksville, NY 11802-9022

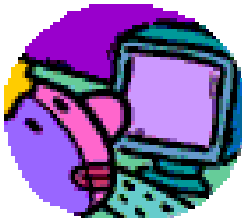
Toll-Free Sales: (800) 537-2118  
Technical Support: (516) 937-1848; Fax: (516) 937-3906  
E-mail: [can-do@independentliving.com](mailto:can-do@independentliving.com)  
Website: <http://www.independentliving.com/home.asp>

Low vision aids for a more independent lifestyle.

**Internet TV for AT**

TV Worldwide.com Inc.

Phone: 703-961-9250  
E-mail: [info@tvworldwide.com](mailto:info@tvworldwide.com)  
Website: <http://www.at508.com/>



Provides the public with a single point to find solutions to Section 508 compliance, and to showcase the companies responsible for the technological breakthroughs necessary to enable true Section 508 compliance.

**Family Center on Technology and Disability**  
Academy for Educational Development (AED)

Phone: (202) 884-8068

Fax: (202) 884-8441

1825 Connecticut Avenue, NW, 7th Floor  
Washington, DC 20009-5721

E-mail: [fctd@aed.org](mailto:fctd@aed.org)

Website: <http://www.fctd.info/>

Reviews assistive technology resources such as books, newsletters, training manuals, software and web sites.

**MaxiAids**

42 Executive Boulevard  
Farmingdale, NY 11735

Phone: (800) 522-6294 - (To Order)

(631) 752-0521 - (For Information)

(631) 752-0738 - (TTY)

Fax: (631) 752-0689

Website: <http://www.maxiaids.com/store/default.asp>

Products for Independent Living

**Mobile Accessibility**

Website: <http://www.codfact.com/english/products.html>

Computer application which makes mobile phones accessible in different ways and allows its uses to be adapted to the needs of the visually handicapped.

**Signtel Interpreter, Inc.**

79 Bayard Avenue  
North Haven, CT 06473

Phone: (203) 248-0600

E-mail: [info@signtelinc.com](mailto:info@signtelinc.com)

Website: <http://www.signtelinc.com/products-free.htm>

Free sign language software for schools and individuals for residential use. There is a \$6.95 fee to cover shipping and handling. The disk translates text into sign language viewed on a computer screen in real-time. It recognizes over 30,000 words and 1,400 idioms and phrases.

**Telesensory Corporation**

520 Almanor Avenue  
Sunnyvale, CA 94085

Phone: (408) 616-8700; Fax: (408) 616-8720

E-mail: [info@telesensory.com](mailto:info@telesensory.com)

Website: <http://www.telesensory.com/>

Helps visually impaired and blind people achieve greater independence through technology-based products.

**TelTex, Inc.**

404 E. 13th Ave. North  
Kansas City, MO 64116

Toll Free (888) 515-8120; Voice/TTY (816) 221-6316

Fax (816) 221-6830

E-mail: [info@teltexinc.com](mailto:info@teltexinc.com)

Website: <http://www.teltexinc.com/>

TelTex, Inc. is an online resource for amplified telephones, TTYs, TDDs and assistive devices for the deaf, hearing impaired and hard of hearing.





## MORE RESOURCES!

### Web Resources Specific to Blindness/ Low Vision

**The Low Vision Gateway** (<http://www.lowvision.org/>) -- includes low vision aids, books, educational resources, braille information, and much more.

### **Resources for Parents & Teachers of Blind Kids**

(<http://home.earthlink.net/~deedaze/>) -- an incredible site, overflowing with useful information.

### **Speak to Me: Catalog of Talking Products**

(<http://www.speaktomecatalog.com/>) -- or call (800) 248-9965 for a paper catalog.

### **Technology Guide to Assist Students With Visual Impairments in Meeting Curriculum Goals**

(<http://www.setbc.org/special/virg/>) -- the title says it all

**Blind Related Links** (<http://seidata.com/~marriage/rblind.html#adaptech>) -- another list of links to blindness related information

**Technology for the Blind** (<http://www.nfb.org/tech.htm>) from NFB

### **DB LINK Has Great Information on Low and High Technology!**

*Information about Calendar Systems:* [http://www.tr.wou.edu/dblink/lib/topics/single\\_topic.cfm?topic=Calendar%20Systems&d\\_topic=Calendar%20Systems](http://www.tr.wou.edu/dblink/lib/topics/single_topic.cfm?topic=Calendar%20Systems&d_topic=Calendar%20Systems)

*Information about Technology Resources Specific to Deafblindness:* [http://www.tr.wou.edu/dblink/lib/topics/single\\_topic.cfm?topic=Technology&d\\_topic=Technology](http://www.tr.wou.edu/dblink/lib/topics/single_topic.cfm?topic=Technology&d_topic=Technology)

### **Articles about Technology and People with Deafblindness**

*Computers in Our Classroom* by Wendy Buckley - <http://www.tr.wou.edu/tr/dbp/pdf/dec99.pdf>

*FM Systems for Children Who Are Deaf-Blind* by Barbara Franklin and Megan Jones (p. 7-9) - <http://www.tr.wou.edu/tr/dbp/pdf/may98.pdf>

# Assistive Technology Partners: ATP Services

## Training - (303) 315-1283

- Ongoing workshops and seminars which focus on skill development in such areas as assessment, implementation strategies, empowerment; and hands-on training regarding AT equipment. [Learn more about ATP trainings](#)

## Technical Assistance & Consultations - (303) 315-1280

- Answers to challenging questions and consultations concerning AT devices and services.

## Information and Referral - (303) 315-1280 or 800-255-3477 in Colorado

- Up-to-date information about disability related resources and services at the national, state and local levels.
- Toll Free Number - 800-255-3477 in Colorado

## Open Labs - (303) -315-1280

- Drop on by! Assistive Technology Partners is sponsoring another round of free events for the community. These open houses are a great opportunity to see assistive technology up close and to ask any questions you have to their knowledgeable staff.
- Open houses take place in their center at 1245 E. Colfax Ave. Suite 200 from 3:30 PM -5:30 PM and at the Grand Junction Office. For more details follow the link below. To schedule a drop-in appointment please call (303) 315-1280. [Learn more about Open Labs](#)

**Outreach Services - (303) 315-1284:** Presentations, trainings and consultation services to all Coloradans with an emphasis on the underrepresented, seniors, minorities and those living in rural areas of the state.

## Written Information Resources - (303) 315-1280 or 800-255-3477 in Colorado

- Written resources to educate Coloradans about AT for increased participation in life activities; more in-depth descriptions of a variety of AT devices and services; instructions for making simple low-tech products, and names and phone numbers of national, state and local resources. All information is available in alternate formats.

## Funding Information - (303) 315-1280 or 800-255-3477 in Colorado

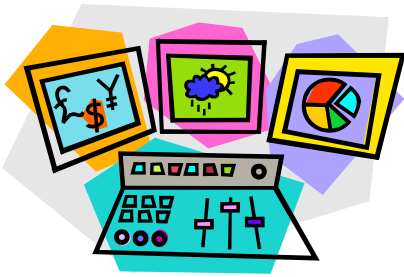
- Information regarding a variety of funding resources available in communities across Colorado.

## Advocacy - (303) 315-1284

- Written materials, referrals and answers to questions regarding the procurement, funding, maintenance and training of assistive technology devices and services.

## National Assistive Technology Resource

- Visit the National Public Internet Site at [www.assistivetech.net](http://www.assistivetech.net) for additional information about assistive technology



# Teaching Technology to Students who are Blind/Visually Impaired / Deafblind

By Karla Bryant, CSDB Technology Specialist

Understanding, using and integrating technology are the major keys to success in our society. It is critical to remember this key point, technology **enhances** skills- it does not replace them! Technology builds on the individual's strengths while taking into consideration necessary adaptations for independent use of the device to complete the designated task. (Technology is not the be all to end all).

Technology, as outlined in the Expanded Core Curriculum, which is key to all students with a visual impairment (including those students with deafblindness) is a great equalizer, enhances communication and learning, expands the world of individuals who are blind/visually impaired in many significant ways and is a tool to master. Not every new dazzling piece of hardware or software is appropriate for each student. The technology selected for the student should be a match between the student's skills, abilities and the task required. There is a compromise between these essential components.

In technology- just like in the rest of education, a strong knowledge and skill base is crucial in continuing to build and acquire knowledge and skills and to reinforce the life long learning model. A great deal of teaching technology is problem solving, where to go, where to look, what questions to ask. There are **5 building blocks** to remember and refer to when planning and implementing a successful assistive technology program students who are blind/visually impaired and deafblind.

**1. WHEN** At every milestone in a student's educational career, it is critical to review the needs and future needs as well as the student's current skill level and ability. At minimum a yearly review in conjunction with the IEP. Although, as different tasks are presented requiring technology assistance – there is a continual need to evaluate and make changes to the student's assistive technology use.

\*Remember, teach the technology skill required to complete the task independently *BEFORE* the task is required. The student needs practice and reinforcement of skills and concepts in isolation before generalizing the technology skill to an educational task. (by doing this, the anxiety and frustration levels of the student will greatly

decrease) Just think, it's like someone handing you a book in another language and before you know how to translate they want you to do a book report!

**2. HOW** Planning, an essential component to effective teaching, but also a critical piece in presenting assistive technology to students with vision loss. There are many concepts that a student needs to understand regarding hardware and software. They need to understand and form an accurate mental representation of the function they are carrying out. If the student only learns the commands and does not truly understand the overall picture of the tool they are using they are at a distinct loss. It is so important that they make connections and bridge information in various ways when working with technology. Incorporating an appropriate amount of instruction and practice time are essential. Consistency is a major key with student learning and successful progress with assistive technology.

**3. WHAT** Very simply, begin at the beginning. Turning on/launching the technology, utilizing basic commands, and being able to explain what this technology does and how it will help them. There needs to be "BUY IN" from the student!!! They need to be excited and motivated to learn the technology, if not, it will be a difficult and frustrating experience for the teacher and the student.

Keep the lessons sequential, one thing that I have found helpful is to utilize the checklist of commands that come with the hardware and software, the information is at your finger tips and you are able to keep the skills and commands you teach in sequential order. This also aides you in data and information collection for IEP goals as well as assessment information when determining a student's current level of performance.

**4. WHERE** Begin in with the skill in isolation, 1:1 maybe small groups. It is best to begin instruction and/or a new concept with the educational task removed from the situation.

Remember, teach the technology then incorporate the educational relevance of completing a specific task *independently*. The student will achieve greater success and a solid foundation with the technology

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if the emphasis is only on learning, and (enjoying) the technology at first. The instruction begins in an educational setting. As much as possible, there needs to be carryover in other areas of the student's life. However, with the cost of technology, many times this is not feasible. Although it is crucial that the student understand how this technology will assist them in all facets of their lives, not just in education -even though that is the main focus at the time.

What is the environment? Classroom, resource room, is it easily accessible for the student? Other aspects of the environment that are critical for students who are blind/visually impaired are: lighting, positioning, accessibility, sound and portability.

**5. WHO** As with all special education there is a team approach. Having different perspectives only enriches the education of our students. It is so important though that the each educator that interacts with the student has an understanding of the technology as well as basic information to assist the student if the student becomes confused, needs

some assistance.

Students in grades K-6 need much experience and exposure as to many different forms of various educational technologies specific to individuals with vision loss, with or without additional disabilities. Whereas middle and high school, and Transition students need instruction and practice with determining the most appropriate forms of technology as it relates to their jobs, post-high school education as well as how to obtain and maintain the technology themselves.

Teamwork, it is so important that all the players are on the same side. As seen here, the focus is the student- do not lose sight of that. The common interest for the benefit of the student is priceless. We cannot do this alone, sharing ideas, resources and time among other things is valuable, effective and very beneficial for our students. A lot of times we get caught up in the day to day and lose sight of our focus and the bigger picture.



## Books and Videos on Assistive Technology in Our Lending Library

If you would like to order any of these materials, please contact Gina Quintana at (303) 866-6681 or [quintana\\_g@cde.state.co.us](mailto:quintana_g@cde.state.co.us) For a complete listing of the library's inventory, please go to our website at:

<http://www.cde.state.co.us/cdesped/SD-Deafblind.asp>



### Technology and Equipment Topics

#### Order\_Code:

- T1** Selection and Use of Simple Technology in Home, School, Work, and Community Settings, by Jackie Levin and Lynn Scherfenberg, AbleNet, Minneapolis, MN, 1987.
- T2** Mier Van Der Roh's Home School: Construction Notes for Active Learning Equipment, by Mary-Jane Goodrich and Donald Goodrich, Blind Children's Fund Resource Center, 1995.
- T3** Touch Toys And How To Make Them, by Henriette Zegers ten Horn, Touch Toys Inc., Rockville, MD, 1988.
- T4** Selection and Use of Simple Technology in Home, School, Work, and Community Settings, by Jackie Levin and Lynn Scherfenberg, AbleNet, Minneapolis, MN, 1987.
- T5** AAC Idea Book: Creative Ways to Use Talking Photo Albums, by Sarah W. Blackstone and Harvey Pressman, Augmentative Communication, Inc. , 2002.
- T6** Making Connections: A Practical Guide for Bringing the world of Voice Output Communication to Students with Severe Disabilities, by Peggy Locke Ph.D. and Jackie Levin M.A., AbleNet, Inc. 2002.
- T7** Emergent Literacy Success: Merging Technology and Whole Language for Students with Disabilities, by Caroline Musslewhite and Pati King-DeBaun, Creative Communicating, 1997.
- T8** Can We Chat: Co-Planned Sequence Social Scripts, (with CD) by Caroline Ramsey Musselwhite and Linda J. Burkhart, 2001



- 42.** The Early Communication Process Using Microswitch Technology, by Charity Rowland and Philip Schweigert, Communication Skill Builders, 1993, 1:31:33 min. Accompanying materials listed as C24 under book section.
- 49.** Low Vision Enhancement: Field Report #1, by Visionics.
- 84.** Use of Assistive Technology with Deaf-Blind, from the California Deaf-Blind Services. This is a collection of 5 videos from a teleconference that was facilitated by Dr. Barbara Franklin. The teleconference was held at San Francisco State University on June 5-9, 2000. The topics include:
1. Overview of Assistive Technology for the Blind by Jim Carreon from the California School for the Blind.
  2. Overview of Computer Skills for the Blind, Jim Carreon and Joan Anderson, California School for the Blind.
  3. Your Third Ear: When a Hearing Aid is not Enough (FM Systems) by Charles Kuratko, Phonak
  4. Overview of Non-Computer Technology for Deaf-Blind Children by Megan Jones, Doctoral Candidate and Consumer
  5. Assessing and Adapting Technology for Use of Deaf-Blind Children by Megan Jones.



# What is NEW in the Lending Library?

AAC Idea Book: Creative Ways to Use Talking Photo Albums, by Sarah W.

Blackstone and Harvey

Pressman. The Talking Photo Album is easy to carry about and access. It is helpful to both children and adults and has a multitude of purposes. Practitioners, teachers, caregivers, parents, spouses, and individuals who rely (either temporarily or permanently) on augmentative and alternative communication (AAC) techniques and devices can benefit from using it. Talking Photo Albums can help people share information. Because they provide a shared context, they can also foster social closeness. To use them, most people require little or no training. Order #T5

Classrooms the Work: They Can ALL Read and Write, by Patricia M. Cunningham and Richard L. Allington. A particular strength of the book is its coverage of struggling readers and readers from diverse backgrounds, making it a text truly designed for the teaching of every child. Order #G64

First Things First: Early Communication for the Pre-Symbolic Child with Severe Disabilities, by Charity Rowland, Ph.D. and Philip Schweigert, M.Ed., Design to Learn, 2004. First things first describes instructional strategies for teaching early communication skills to children with severe disabilities. This book focuses on children who are not ready to use symbols to communicate. It provides strategies for teaching children how to use pre-symbolic behaviors such as gestures, facial expression, vocalizations and switches to gain attention, request more and communicate choices. Order #C36

Making Connections: A Practical Guide for Bringing the world of Voice Output Communication to Students with Severe Disabilities, by Peggy Locke Ph.D. and Jackie Levin M.A. If you are an educator, family member or care provider, paraprofessional, or friend of an individual with severe disabilities who does not use a voice output communication system, this guide is for you. If you have tried and abandoned a communication program and/or do not feel your present approach for introducing voice output communication is successful, this guide may meet your need. Order #T6

Emergent Literacy Success: Merging Technology and Whole Language for Students with Disabilities, by Caroline Musslewhite and Pati King-DeBaun. Writers in emergent literacy often speak of making language and literacy accessible to the learner through whole language approaches. This book has the goal of making emergent literacy and whole language approaches accessible to the student with disabilities, including students who are nonspeaking. Order # T7.

Can We Chat: Co-Planned Sequence Social Scripts, (with CD) by Caroline Ramsey Musselwhite and Linda J. Burkhart. In this book, we will describe strategies for developing 'sequenced social scripts' so that students who are not yet highly successful communicators (for a variety of reasons) can get a 'feel' for successful conversations. Order #T8.

