

Jan/Feb 2005

Volume XII Issue 3

The Monitor

A collaborative effort of the Milwaukee Public Schools Department of Special Services Assistive Technology and the Wisconsin Assistive Technology Initiative

Brrrr... I guess I would rather be inside writing this article than doing **anything** outside! It's currently 7 degrees outside and fortunately I am not experiencing the wind chill. So, on to summer...

That's right, Summer Institute. Planning for the WATI Summer Institute 2005 is well underway. At the present moment I have over 30 workshops on the planning board and I'm just waiting to hear back from the invited presenters. I am targeting the end of February to have the program ready for distribution. It will be sent out electronically and posted the WATI website (www.wati.org). The *At-a-Glance* program may be out sooner. If you did not receive this issue of *The Monitor* directly from WATI, you may not be on our electronic distribution list. If you would like to be, email us at info@wati.org and we will sign you up.

This year's Summer Institute dates are June 20 – 24 and June 27 – 30. The first two days (June 20 and 21) will be delivered via distance education technologies. On each of those two days there will be two different workshops. Roughly, there

From the Director

will be one site for each workshop in each of the four quadrants of the state. The intent is to bring quality training closer to you AND provide you with some options as to the workshop. Too often you are limited to what comes your way. Over the course of the two days you will have four workshops to choose from.

Of course, if you want even more options, you can come to Amherst any day from June 22 – 24 and again from June 27 – 30. On most of those days you will have 5 different workshops to choose from.

Why Amherst? Because it is traditionally held there. That's one answer but not the best answer. Amherst is in the center of the state, making the trek reasonably accessible to all. That's a better answer, but still not the best. The truth is, the Tomorrow River School District (Amherst) has been great to work with, allowing WATI to use the facilities in ways that most other school districts would not consider. They are generous in providing access to their computer network, allowing us to provide technology-based training. They have a wonderfully supportive staff,

especially the technology department. As long as we are gracious guests, I hope this relationship will continue. Amherst is a small town with a huge welcome mat for the WATI Summer Institute.

Another way to avoid the cold is to head south. I'm going to do just that in a couple of days. I will be attending the Assistive Technology Industry Association (ATIA) Conference in Orlando, Florida later this week. ATIA is a member organization of producers of assistive technology. Because of the nature of the organization, many of the presentations are made by AT companies, and it provides a great opportunity to see more in depth presentations on new products. I will keep my eyes open for products that will be great additions to the WATI Lending Library. And I promise to bring back some warmth and sunshine for all of you!

Liz Lahm

Milwaukee Public Schools Introduce Sound Field Technology To Their Classrooms

Joanne Colombo-Hughes, CCC-A
Educational Audiologist, Milwaukee Public Schools

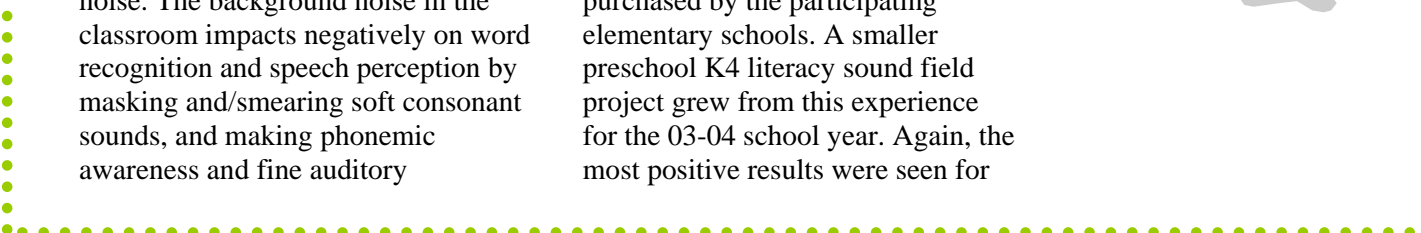
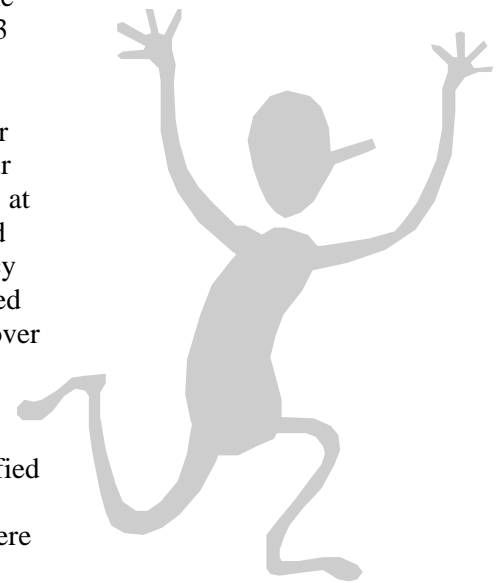
Sound field technology is a promising educational tool that allows control of the classroom's acoustic environment making spoken instruction equally accessible to all the children. A sound field unit looks similar to a public address system, but is engineered to ensure the entire speech signal (consonant and vowels) reaches every child in the room. This is accomplished through 2 to 4 wall or ceiling mounted speakers strategically installed in the classroom. The teacher uses a wireless microphone or transmitter (the size of a pager) which broadcasts his/her voice at a constant loudness throughout the classroom. This can be done through FM or infrared modes.

It is easy to see why this technology enhances classroom performance when we take a look at what we know about young listeners. First, normal hearing students function with immature auditory/brain systems until the age of 13-15 years. Children are just not 'mini-adults', therefore, they do not come to the classroom with fully developed brains, rich in auditory fibers. (Our ears are just the pathway to the brain where the real listening occurs.) Second, children do not possess years of language and life experiences to help them fill in gaps of missed information. Neurologically, children are unable to listen well in background noise, such as that found in a typical classroom due to reverberation, multiple talkers, activity, ventilation, and hallway noise. The background noise in the classroom impacts negatively on word recognition and speech perception by masking and/smearing soft consonant sounds, and making phonemic awareness and fine auditory

discrimination difficult. This developmental issue is further complicated for students who are learning English as a second language, learning disabled, have ear infection(s), or a minimal or unilateral (one-sided) permanent hearing loss. Thirdly, the student's distance from the teacher is also a major factor in classroom listening. Simply stated, the farther a student is seated from the sound source the softer or less "audible" the instruction is at his/her ear level. With students engaged in listening activities 45%-60% of the school day, it is not difficult to see how classroom sound field enhancement can help lay the ground work for reading readiness, literacy development and academic progress in our classroom environments.

MPS has worked to introduce this technology to our schools over the past three years. During the 02-03 school years four elementary schools participated in a project comparing literacy growth of four K5-3rd grade classrooms with four similar non-amplified classrooms at each school. The results indicated that students who received literacy instruction in sound field enhanced environments showed advances over the students of the non-amplified classrooms. In addition, teacher vocal related absenteeism was decreased dramatically for amplified classrooms. All 16 sound field systems loaned for this project were purchased by the participating elementary schools. A smaller preschool K4 literacy sound field project grew from this experience for the 03-04 school year. Again, the most positive results were seen for

K4 students receiving phonetic instruction in sound field environments. In January, 2004, MPS sponsored Carol Flexer, PhD, from the University of Akron, an expert on enhancing listening literacy and learning for all children and a strong proponent of classroom sound field technology, to speak to district speech and language pathologists and other interested staff. Her presentation was well received and has spurred district staff to pursue funding for systems for their individual schools. At the present time there are 35 – 40 sound field systems in use across the district, with interest continuing to grow in this valuable technology.



Excerpts from *Why ergonomics? The full story by Solutions for Humans (2002)*

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Ergonomics: The science concerned with the problem of how to fit a person's job to a person's anatomical, physiological, and psychological characteristics in such a way as to enhance human efficiency and wellbeing. (Taber's Cyclopedica Medical Dictionary)

Assistive technology goes beyond high and low tech equipment to include modifications of the environment. Many of you have heard of ergonomics but probably only think of it in terms of yourself or other adults. I would like you to think of your students with disabilities, as well as your own workstation and habits as you read through this article. A student's workstation is the classroom. Enhancing their efficiency and wellbeing through implementation of ergonomic principles is another one of our challenges. The following are excerpts from an article published by a company called Solutions for Humans (formerly Keyboard Alternatives and Vision Solutions Inc.). While several products are mentioned in the article, this is not intended to be an endorsement by WATI. I hope the article makes you think, and implement change. Liz Lahm, WATI Director

One Size Doesn't Fit All

The appropriate workstation is built around the individual and designed for that specific individual. We don't expect our pants, shirts, shoes and hats to be interchangeable we vary in waist size, length of our legs and arms, and size of our neck or head. So why expect a "one size" workstation or desk to fit all? For that matter, why expect a "one size" keyboard, mouse or chair to fit all?

We believe that an appropriate and ergonomically correct workstation should be designed for the specific individual from the ground up, and take into consideration one's varying height, weight, leg, arm, hand and even finger length. Additional consideration should be given to the tasks performed, as well as lighting levels, room temperature and stress level of the job.

Positioning Keyboard Trays

A keyboard tray is a tray or surface large enough to comfortably accommodate both the keyboard and mouse, mounted on an articulating arm. A good quality articulating arm allows the user to move the tray up or down and set the tray at a negative tilt with the rear edge of the tray somewhat lower than the front edge. With your feet square on the floor, bring the keyboard down to a height just slightly above your lap.

Wrist or Palm Supports-Yay or Nay?

There has been much discussion about wrist or palm supports. Some experts claim that they should be avoided because they restrict movements and cause compression under the wrist, impacting the carpal tunnel, blood flow, nerves and tendons. These experts advise "floating" your hands across the computer keyboard as though you were playing the piano, and discourage resting your wrists or palms which restricts your movement.

Others recognize that most individuals without proper support tend to rest their wrists below the level of the front of their keyboard on the hard surface of their desk, tending to support their

upper torso weight on their wrists. To avoid this bending at the wrist (ulnar deviation) we suggest placing a proper wrist or palm support in front of the keyboard. Even "floaters;" as they tire and their arms and hands drop, will make contact with the support, getting the message that it is time for a break. A good support will prevent working long hours in an improper, uncomfortable position.

So what is a good wrist or palm support? We believe that it should be wide (about 2" to 3") and flat so that the weight load of the arms is distributed and supported over a wide area. Watch out for curved supports that focus the support under only a very small part of your wrist. A good support should allow for some degree of compression and "give" under your wrist-but watch out for too much give. Some supports allow so much compression that you are resting on only a thin layer of foam between you and the hard desktop.

Warning: Avoid gel supports that are enclosed by a hard plastic frame. The gel often breaks down to the point that the user is supported by only the hard plastic frame.

Monitors

The monitor should be positioned directly in front of your face, never to the right or left, which may contribute to neck and back discomfort.

Conventional wisdom says that the top of the monitor should be level with your eyes as you look forward. Does that mean the top edge of the monitor or the top of the viewing area? It further states that the top of the monitor should be tilted back, positioned as though you are reading a book or magazine, and positioned so your eyes must look down to view the center of the screen. CONT.

Excerpts from *Why ergonomics? The full story* by Solutions for Humans (2002) CONTINUED

In theory this is fine, but when this rule was originally developed most of us were working with 14" monitors. Many computers are now sold with 17" or even 21" monitors. Also various applications often require us to view different areas of the screen. For example, in QuickBooks you may tend to work closer to the top of your viewing area. In Word you may start typing at the top but once your cursor has wrapped towards the bottom of the screen your gaze remains there until you start a new document.

Which Keyboard?

Split Keyboards

Many of our clients prefer split keyboards positioned on a negative-tilting keyboard tray. These keyboards offer a traditional layout so clients have little to re-learn other than a slightly new and more comfortable position. Some models offer the ability to fan apart the alphabet to fit individual positioning needs. Split keyboards include adjustable and non-adjustable style keyboards.

Short Keyboards

Short keyboards may be the solution for petite clients, clients who are left-handed and would like a detached number pad on the left side, or clients who are developing injuries in their right hand, arm or shoulder as a result of extending beyond the number pad in order to control the mouse.

Traditional Keyboards with a Twist

Left-handed clients who want the number pad on the left side, clients who want the mouse device (glidepoint) incorporated into the

keyboard, or who would like to reposition certain keys, are well-served by these keyboards.

One-Handed Keyboards

Keyboards are available to accommodate clients who are limited to the use of one hand. The Maltron, available in both right and left versions, is most favored. Clients who prefer a traditional keyboard but who want to work more efficiently should consider Half QWERTY software (downloadable demo available from our website) which allows the user to momentarily reprogram the keys on one side of the keyboard to perform the functions of the opposite side. Schools that must address the needs of one-handed users may want to consider the Kinesis keyboard, which can be used in either aright-or left-handed mode.

Detached Number Pads

Detached number pads can be moved out of the way when not in use, allowing the individual to more easily control the mouse. Number crunchers will appreciate the ability to move the keyboard out of the way and to focus on the number pad and the mouse. Left-handed users can place the number pad on the left side.

Mice

The traditional mouse often causes discomfort resulting in painful injuries due to incorrect size for the user's hand, a need to constantly click or hold a button, or supporting the hand in an improper position. The size of the client's hand, the type of mouse work the client is engaged in, and even which hand the client tends to work with all affect the decision as to which is the correct mouse. Because of the great variety of mouse devices available, including small mice, pen mice, touchpads, pen styli, trackballs, etc., we recommend giving us a call to discuss your particular mouse needs.

Foot Pedals and Foot Controls

Individuals who have injured their hand(s) or specific fingers who can no longer control a mouse or click on a specific key on the keyboard often find that foot controls are a very workable alternative. Foot controls are used for everything from controlling mouse movement and mouse clicks to controlling keyboard functions such as the tab key, enter key, backspace key or macro functions. Foot controls can also be used in conjunction with CAD (computerassisted design) pucks (input switches) and special applications.

Voice Dictation Software

There are a number of excellent, not hard-to-learn voice dictation software applications available to supplement or totally replace keyboard and mouse work, and some clients are able to teach themselves how to work using voice. However, many more clients require a great deal of training and support in the use of the voice dictation software, the Windows operating system and Windows applications in general. A real investment is required in time and effort to study and learn the software. Training can amount to a significant cost.

**Solutions for Humans
537 College Avenue
Santa Rosa, CA 95404-4102**

WATI Used Equipment Marketplace

The Used Equipment Marketplace offers a place to list items that you want to sell or donate because you no longer need them. You can also use the Used Equipment Marketplace to look for an item you need to buy or receive as a donation. WATI does not physically collect or keep these items. We are a liaison between the seller and the buyer. To receive contact information about an item that is listed, call WATI. Tell them what item you are interested in and they will give you the appropriate information.

You will find the form for using the Used Equipment Marketplace on our web site or call to request one. Please submit your form to WATI at the following address:

WATI
 Andrea Britz
 Polk Library
 800 Algoma Blvd
 Oshkosh, WI 54901

If you have any questions, you can call Andrea at 800-991-5576 or email her at abritz@cesa6.k12.wi.us.

ITEMS FOR SALE

ITEM NO.	DESCRIPTION	Price
200A	KidCart in excellent condition. Adjustable stroller/wheelchair with oxygen tank holder and shelf for equipment.	\$2500
200B	Detecto Scale (pediatric) in excellent condition. Weight capacity is 40 lb/17.5kg. For sitting or laying down.	\$275 or B/O
201A	Hoyer Lift, new, never used (child through adult)	\$500
201B	Guardian Bath Chair Model #98400, mesh w/restraints, PVC frame, excellent condition	\$100
201C	Rifton Potty Chair Model #E82, size large, wood w/restraints, excellent condition	\$100
201D	Rifton Swing Model #E431 size large, mesh w/restraint straps, PVC frame, excellent condition	\$50
205A-205K	Alpha Smart 2000... is a small portable word processor which can be used with a Mac or PC computer. Retail price \$408 (11 for sale)	\$100
205L-205P	Touch Window by Edmark 9-15 inch monitor ABD Retail \$400 (5 for sale)	\$75
211A	1988 GMC Conversion Van w/ Wheelchair Lift Custom interior, CB radio, TV, table & bench seats, new brakes & battery, 115,000 miles	\$7500
212A	Words + and Message Mate 40/600 (1999). Aug Com device w/up to 40 buttons and 10 mins of recorded speech. With owner's manual and charger. See Words-plus.com for details.	\$500 obo
213A	1998 Chevy Blazer w/wheelchair topper, wheelchair lift, Wells-Enberg hand controls, auto start, 4 wheel drive, power steering/brakes, leather seats, 78,000 miles.	\$10,000 obo

Used Equipment Marketplace, Continued...

ITEMS WANTED

- 102 Macintosh with Color Monitor, Color Printer, CD Rom
- 107 Electric wheelchair or scooter to support up to 350#, right hand use, wide seat, leg lifts on wheelchair. (This lady is in a nursing home would like to have donation or small payment.)
Looking for used equipment in range of \$500-\$1000
- 111 Grab bars for tub/shower, Telephone w/ emergency wearable button
Electric heaters, Electric hospital bed, Insulation for walls, Double pane windows
Also- would like to hire a general handyman (Bruce, WI, area)
- 112A Treadmill, motorized or non-motorized
- 112B Schwinn Air Dyne or similar exercise bike

FREE ITEMS

- 212 A Computer Access Device- This keyboard is a miniature version of Unicorn Board. Active surface is 5"x10". SCSI port IS REQUIRED.
- 213A Switch interface box for MAC, allows attachment of up to 5 switches to operate specifically-designed switch activated software.

Revised 2/16/2005

Literacy for Little Ones by Julie Maro

My "baby brother" is expecting his first baby. In preparation for this blessed event, we have been cleaning out our kids closets and bookshelves. Tons of "treasures" have been unearthed to pass on to my new nephew. Included among these valuables are countless storybooks. My mother's home has become the designated dumping ground for our bags and boxes of stuff. My brother is sorting through everything during his trips to Appleton and slowly taking things back to his home in Chicago.

Recently my mother called. She said my brother liked the books but did not see a need to take them until his son was much older. That comment reminded me of the educational philosophy that prevailed when we started our early schooling. During the mid to late 1960's, it was widely believed that the term "literacy" only referred to reading and writing and that this process did not begin until a child was in first grade.

Fortunately, much has changed regarding our beliefs and views of

literacy. The definition has been broadened to include speaking and listening. It is also now understood that the process of becoming literate begins at birth - and maybe even before. Our vocabulary has expanded to include the term "emergent literacy". This refers to the time period between birth and when a child learns to read and write conventionally. It reflects the belief that all young children are in the process of becoming literate.

One of my favorite quotes from Dr. David Yoder is that "no student

Literacy for Little Ones, continued

is *too* anything to be able to read and write". Too often, we hear it said of special education students that they are *too* physically disabled or *too* distractible or *too* cognitively challenged to learn literacy skills. Fortunately, this philosophy is changing.

One of the teaching strategies that is most helpful when working with children who have special needs is to break down a large task into its smaller steps. There are now a variety of emergent literacy skills lists and checklists that allow us to do just that. One such list of "Three-to Four-Year-Old Accomplishments" can be found at: <http://wilearns.state.wi.us/>. This site also contains a wealth of other information and activity ideas for helping children develop literacy skills. A google.com and/or scholar.google.com search of "emergent literacy checklist" will provide numerous other resources.

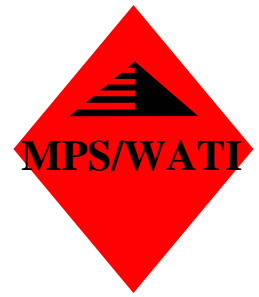
Musselwhite and DeBaun (Emergent Literacy Success: Merging Technology and Whole Language for Students with Disabilities, 1997)

have taken one of the emergent literacy checklists and provided adaptations ideas so that children who have special needs can demonstrate each of the skills. For example, one of the items listed is requesting familiar stories. A child who has verbal skills may demonstrate this skill by saying "read trucks". A child with special needs may use adaptations such as: sign language, pointing to pictures, eye-gazing to a favorite book or by saying the name of a book using a single message switch or a simple voice output communication system. Another skill involves examining pictures in books. Adaptations for this would include eye pointing, using a light beam pointer or a head pointer.

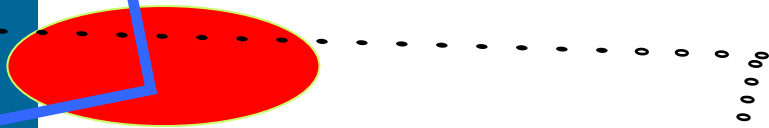
One of the best ways to foster emergent literacy is to read, read, read -especially to preschoolers!!! Years ago, I saw a most ingenious physician's prescription pad. Each page contained a pre-printed prescription for a daily dose of parent-child reading! Parents should be provided with ideas for

emergent literacy activities that can easily fit into their daily routines. These may be as simple as pointing to a stop sign and saying "that says stop", to showing the child the words on a shopping list, to reading books at bedtime. Taking these little literacy steps each day will add up significantly over the preschool years. In fact, one study found that children who came from homes where literacy was valued entered school with approximately 1000 hours of informal in-home literacy instruction.

We have come a long way in our views and ideas about literacy. My new nephew will have many opportunities much earlier than I did to discover the exciting world of reading and writing. Maybe my Mom should just FedEx all those good books down to Chicago right now. Although my nephew is not even born yet, it's never too early to start enjoying a good story!



Monitor Schedule
 September 15
 November 15
 January 15
 March 15
 May 15



Websites to Visit

Online Books and More

TumbleBook Library

Coming from Canada is a service providing public and school libraries with electronic books through subscriptions. There are two forms of books available ,talking and large print. At www.tumbletalkingbooks.com, subscribers have unlimited remote access to a customized collection of online streaming audio books. Books are available for readers of all ages and abilities and those learning English as a second language. It is ideal for students with vision and mobility disabilities, providing access 24/7, wherever there is Internet access. The books can be read aloud or without audio for manual reading. There are word helpers for assistance with pronunciation, online texts, and book review

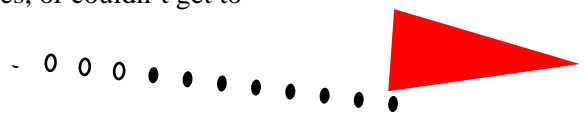
templates, plus many other features.

www.tumblereadables.com is a collection of large print books to be read online. The site features a font slider so books can be viewed in up to a 34 point font size. A short virtual tour of the library is available at www.tumblebooks.com/LibraryTour.html A 30-day trial membership is also available.

scholar.google.com

Google is beta testing a new search engine that is geared toward professionals interested in retrieving scholarly literature. How many times have you been frustrated by library search engines, or couldn't get to

the library (or preferred to stay home)? This new engine searches academic publishers, professional societies, reprint repositories and universities, in addition to what is on the web. And good just got better - it automatically analyzes and extracts citations, presenting them as separate results! This is a true gift to any researcher, students included! To read more about Google Scholar, visit the Frequently Asked Questions at <http://scholar.google.com/scholar/about.html#about>.



Articles due the first of the month

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