Assistive Technology Resources for Children and Adults with Disabilities

Closing The Gap

February / March, 2010
VOLUME 28 - NUMBER 6

RESOURCE DIRECTORY

A guide to the latest assistive technology products for children and adults with disabilities

2010 Edition

THE MOST COMPREHENSIVE ASSISTIVE TECHNOLOGY GUIDE AVAILABLE TODAY!

This directory is the culmination of a year-round search for products for children and adults with disabilities. By knowing what initial steps to take, this directory will prove indispensible for development and implementaiton of this technology.

Q&A

WWW.CLOSINGTHEGAP.COM

Closing The Gap

28th ANNUAL CONFERENCE

Assistive Technology in Special Education and Rehabilitation

OCTOBER 21-23, 2010
Preconference Workshops
October 19-20, 2010
MINNEAPOLIS, MINNESOTA

MARK YOUR CALENDAR - PLAN TO ATTEND

THE CLOSING THE GAP CONFERENCE IS TRULY MORE THAN A CONFERENCE, IT IS A NETWORK OF INVALUABLE resources – teachers, therapists, clinicians, parents, end users and manufacturers – all emphatically working together to change lives with assistive technology.

The 28th Annual Closing The Gap Conference promises nothing less than excellence! Early registration, parent, student, group and other discounted rates are available. Visit www.closingthegap.com to learn more.

➤ **PRECONFERENCE WORKSHOPS** Day-long workshops, conducted by nationally recognized leaders in the field, providing in-depth professional skills necessary to successfully implement assistive technology in the lives of persons with disabilities.

➤ **OVER 200 PRESENTATIONS AND HANDS-ON LAB OPPORTUNITIES** Sessions describing and/or demonstrating successful strategies and practical applications of assistive technology for persons of all ages with disabilities.

➤ **COMMERCIAL EXHIBITS** Extensive exhibition area displaying and demonstrating state-of-the-art assistive technology products and implementation strategies.

A $30 "RETURN" DISCOUNT is available to **ANY** past conference registrant and must be used by June 30, 2010. This discount can be used for any preconference workshop OR conference registration and is **IN ADDITION** to any and all other applicable discounts. If registering online, you will be required to enter code RETURN at checkout.

CONFERENCE SAVINGS

ONLINE REGISTRATION AVAILABLE APRIL 1, 2010!

Conference - October 21-23, 2010 Includes Preview of Exhibits – Wednesday, October 20, 5:30 pm - 8:00 pm

Registration Received	On or Before June 30	July 1 - September 9	September 10 - September 30	October 1 - Onsite
Standard Rate	$395	$435	$475	$505
Group Discount 5+ **NEW! Group Discount 8+** *All group registrations must be received at the same time.*	Groups 5+ Deduct $30 Groups 8+ Deduct $50	Groups 5+ Deduct $30 Groups 8+ Deduct $50	Groups 5+ Deduct $30 Groups 8+ Deduct $50	Groups 5+ Deduct $30 Groups 8+ Deduct $50
Parent Rate *(A letter describing your child's disability must accompany registration)*				$275
Full-time Student Rate *(Proof of full-time student status must accompany registration)*				$275
Presenter Rate				$305
Exhibitor Rate				$305

Single-Day and Exhibit Hall Only Registration	Price
Friday Only - October 22	$250
Saturday Only - October 23	$125
Exhibit Hall Only - Wednesday evening through Saturday, October 20-23	$150

Preconference Workshops - October 19-20, 2010 Includes Preview of Exhibits – Wednesday, October 20, 5:30 pm - 8:00 pm	Price
Tuesday, October 19 *(Some preconference workshops carry an additional fee for materials.)*	$270
Wednesday, October 20 *(Some preconference workshops carry an additional fee for materials.)*	$270
BUNDLED PRICING! Tuesday and Wednesday Bundle ($60 savings)	$480

Closing The Gap

Featured Stories

Closing The Gap

Closing The Gap

www.closingthegap.com

DISKoveries

Enhancing Literacy Skills (Reading and Writing) Through Technology

By Joan Tanenhaus

Read Outloud (Don Johnston: 800-999-4660, www.donjohnston.com) Read:OutLoud 6 is an independent text reader that works with any electronic text, including the Web. When the program is launched, it uses its built-in Web browser. Enter the Web site you want to visit, highlight the text and click the Speak button. The text is read aloud, highlighting each word as it speaks. Text size can be enlarged; there are options for different voices, rate, pitch and volume. Background, text and highlighting colors can be selected. You can correct pronunciation and enter abbreviations, insert notes, etc. If you highlight an individual word and select Dictionary from the tool bar, the word will be defined, with examples, and read aloud. You can then click the back button to return to the document. You can take notes and create an outline. When you highlight a passage in the outline, you will return to the Web site. There also are templates that guide the reading. Read:OutLoud reads the following formats: NIMAS (new educational standard), PDF, RTF, HTML, DAISY, XML, TXT, Internet/Web brower and DJS (Read:Outloud 6 file type.) with a consistent interface for all file types. When you open a PDF file, a special toolbar

appears at the top of the screen. You can use the tools to navigate and adjust the size of your PDF. The toolbar lets you navigate to a particular page, to go to next or last page, and to speak aloud the entire or parts of the document. Read Outloud will read Word documents, if they are saved as .TXT files. All toolbar functions (i.e., changing font size, dictionary, bookmarking, outlining, notetaking, highlighting, etc.) will then

WordMaker (Don Johnston).

work with the document. Documents can be scanned into Read:Outloud in RTF, TXT and PDF formats. Kurzweil formats can be converted. This is an excellent program to use for students who have difficulty with reading but can comprehend documents if they are read aloud. See the Don Johnston

Web site for a detailed product demonstration, video tutorials and more information about Read:Outloud.

Co: Writer 6 (Don Johnston: 800-999-4660, www.donjohnston.com) Co:Writer is a writing assistant with linguistic word prediction that can be used to help write complete and correct sentences with fewer keystrokes. It is used together with a word processor, or e-mail program. Co:Writer lets you see and hear word choices that begin with the first letter typed. If the desired word is not listed, writers then put in the second letter and check the revised word choices. They continue this until the desired word is in the list. Word choices can be selected in a variety of ways (direct select, number entry, mouse click, scanning, etc.) Co:Writer understands many language components, such as subject-verb agreement, word relationships, proper nouns and user preferences, and predicts accordingly. It also uses a technique of FlexSpell that lets it understand invented spelling, letter reversals and letter omissions and predict accordingly. It can also read aloud words and sentences as they are typed. It includes a graded range of Main Dictionaries, a wide range of topic-specific dictionaries and an intuitive system

for creating personalized dictionaries. It also allows users to store frequently-used phrases by means of abbreviation-expansions. There is also automatic collection of new, personal words and capturing of word combinations. Different types of Co:Writer windows can focus on a sentence, paragraph or typing within a text application. It can also be set to provide predictions all the time or only as needed. There are options for the size and location of the word window and color of background and font. See the Don Johnston Web site for a detailed product demonstration, video tutorials and more information about Co: Writer 6.

Simon Sounds It Out (Don Johnston: 800-999-4660, www.donjohnston. com) Simon Sounds It Out, for Windows and Macintosh, is a phonics intervention program appropriate for students of all ages who are struggling to master phonological awareness. It focuses on beginning and ending sounds and presents six activities that teach a few sounds at a time. These words are chosen from high-frequency lists and the Dolch Sight Word List. There are 33 levels of sounds, arranged by word families and by ease of production. Students

Eye Clops Night Vision Binoculars (Jakks Pacific).

see and hear words over and over to aid in comprehension and retention. Accessibility features are built in – students who have difficulty using a keyboard use scanning for single switch access to all activities. Students who have difficulty using the mouse can use the arrow keys and enter to make selections. For each level, students identify the correct beginning sound in each word; identify the ending sound; identify both the beginning and ending sounds; spell the word; read the word (they can record the word and hear their own recording); and then pick the word that matches the spoken word. Challenge activities occur between sessions and levels. An

extensive Options section lets you set level of activity, turn Spell and Recording mode on/off, and select scanning when necessary. There are report and print options as well. Teacher Materials include screening tools, off-computer activity ideas, lesson plans, game templates, worksheets and reading lists. **Simon S.I.O. Stage 1** includes approximately 120 words in 33 word families such as at, ug, ake, all, ack, eep, ock, unk, ump, etc. with consonant sounds and some blends (sp, bl cl, pr, sm, etc.). **Simon S.I.O. Stage 2** includes an additional 120 words in 33 word families such as eet, ore, eam, uck, ank, ight, etc., other blends (br, gr, dr, sl, kn, wr, tw, scr, etc.) and ch, sh, wr, kn, etc. This is an excellent program to use with struggling readers of all ages.

WordMaker (Don Johnston: 800-999-4660, www.donjohnston.com) Created in collaboration with Dr. Patricia Cunningham, author of the Four-Blocks Literacy Model, WordMaker for Windows and Macintosh provides a systematic and interactive approach to teaching word attack and spelling skills to students of any age. Students increase decoding skills by manipulating letters, onsets and rimes to learn new patterns in contexts. They learn phonetically irregular words, or sight words, through word walls and are also challenged with unknown words to help transfer skills to new learning. Making Words activities are designed to teach the common phonics patterns in the most commonly accepted sequence: most common consonants (b, c, d, f, g, h, j, k, l, m, n, p, r, s, t, w); short vowel patterns; digraphs (ch, sh, th, ck); long vowel patterns; R-controlled vowels ; other common vowel patterns; less common consonants/digraphs (v, x, y, z, wh, qu,); blends; and endingd/suffixes. The activities in WordMaker center on developing several types of word skills: manipulating letters to spell words (making words from letters, using a different letter to change the current word to a requested word, adding a letter to the current word to make a new word, changing the order of letters to make a new word); sorting words by letter/picture match, letter/picture; sort by first letter; and sort by rhyme. This program is an excellent companion program to Simon Sounds It Out or a stand-alone program for any students working on phonics skills. WordMaker has built-in accessibility options for students with special needs. Keyboard shortcuts or single-switch scanning can be used to run all activities. There are extensive Teacher Activities, including screening tools, activity ideas, product-integrated lesson plans, integration with other products,

support materials, worksheets, Word Walls, book and reading lists, and much more.

Early Reading Booster (Merit Software: (800) 753-6488, www.meritsoftware.com) Designed for students in grades 2-3, this program can also be used for remediation by ESL, middle school or adult students. It contains interactive, illustrated reading passages, followed by comprehension questions. There are 64 passages with 512 questions and it provides practice at three levels of increasing difficulty (Tryout [assessment], Workout [practice] and Finals [test of mastery]). Context-sensitive help is available. Students will determine the meanings of unfamiliar words by using other words or phrases in the text as clues. They will choose an appropriate title for the passage, select a logical sentence to introduce or complete a passage and draw inferences by recognizing information learned from the text that is not actually stated. Pre-tests place students in appropriate areas of instruction within each level. There is a record management system that lets teachers view and print detailed reports. If you also have the Merit Text Talker, all passages, questions, answers, directions and explanations in the program can be spoken aloud (no highlighting). This makes it an excellent program to also use for students needing assisted reading and for use for auditory comprehension as well. **Picture Context Reader** is designed to help beginning English language learners, with 216 illustrated vocabulary words and 432 questions. Topics for context sentences are The Body & Health, Family Relationships, The Home, Community Resources, Shopping, Cooking, Dining and Everyday Actions. The questions, answers and explanations can be spoken aloud by using the Merit Text Talker.

My Very First Treasury of 50 Storybook Classics Preschool Stories (Scholastic Storybook Treasures: www.scholastic.com, www.newkideo.com) This excellent group of DVDs contains seven DVDs with 50 award-winning and classic children's stories. You will find many of your old favorites (Harold and the Purple Crayom, Corduroy, Mike Mulligan and His Steam Shovel, Good Night, Gorilla, Happy Birthday, Moon, The Little Red Hen, etc.) and some you might not be familiar with. They are faithfully adapted and brought to life on nearly eight hours of quality entertainment. One of them contains sing-along favorites, including There Was An Old Lady Who Swallowed a Fly, This Land is Your Land, Frog Went A-Courtin' and Over in the Meadow. Graphics are excellent and all are fully narrated. Turn on the Read Along feature and text appears and is highlighted word by word. In addition, many of the DVDs include bonus stories, including Spanish versions of some of the stories (also with Read Along Feature).

Treasury of 100 Storybook Classics (Scholastic Storybook Treasures: www.scholstic.com, www.newkideo.com) This wonderful collection includes 16 DVDs with 100 classic stories, including Where The Wild Things Are, Curious George, Chicka Chicka Boom Boom, Harry the Dirty Dog, Why Mosquitoes Buzz in People's Ears and so much more. These also feature narration and read along features, as well as Spanish versions of some of the stories. Many of the stories are award winners from Caldecott. There are spooky stories, traditional African folk tales, Ezra Jack Keats stories, dog stories,
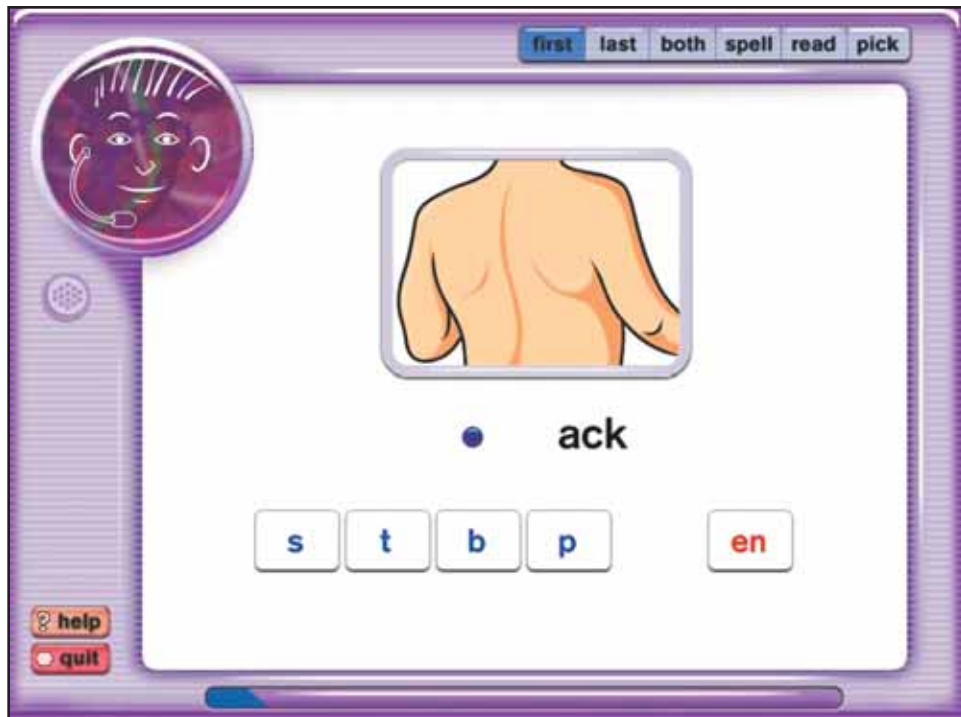
Simon Sounds It Out (Don Johnston).
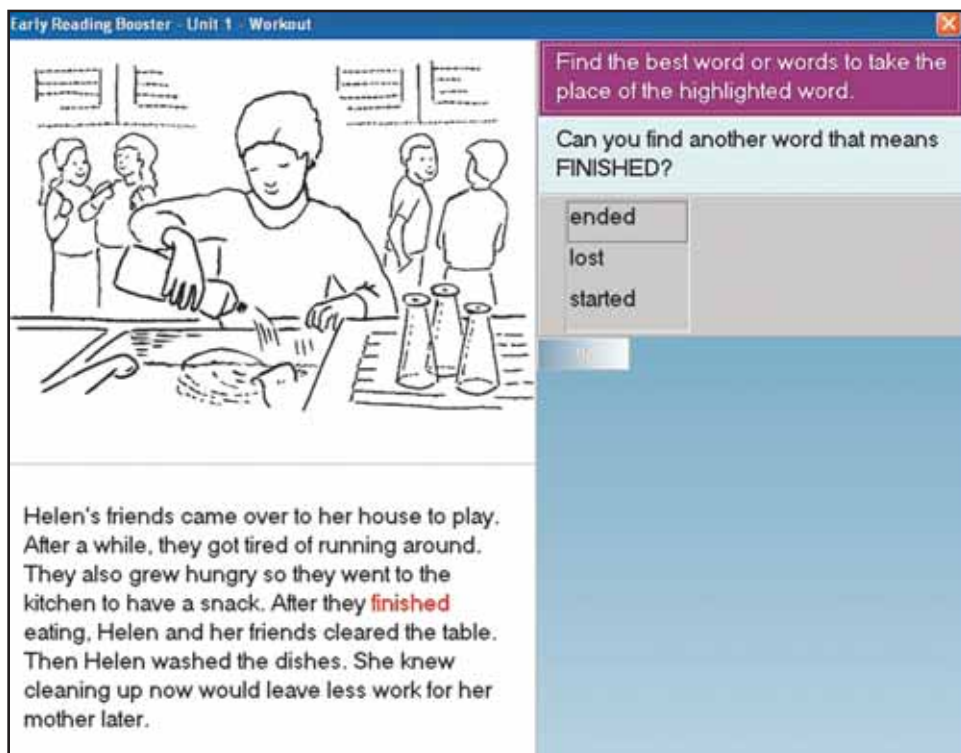
Early Reading Booster (Merit Software).

stories about friendship and sharing, and much more.

LeapFrog-Lionsgate Educational DVDs (LeapFrog, www.leapfrog.com) There are three excellent educational DVDs in this series. These are outstanding for ages 3-6 and encourage literacy skills. **Let's Go To School** will help young children get ready for school, including reassurances about being "nervous." The DVDs' animated
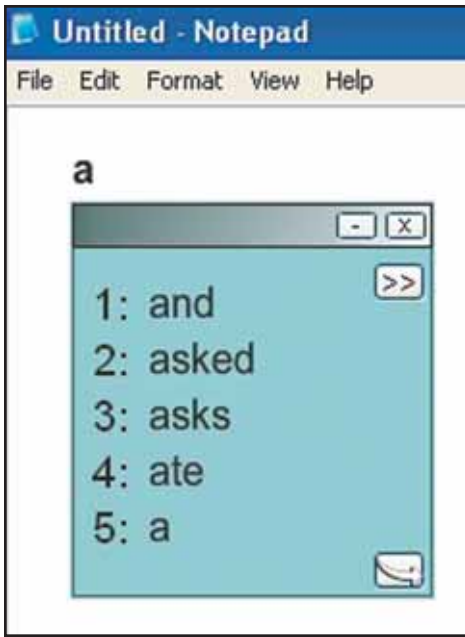
Co Writer 6 (Don Johnston).

characters, Tad, Lily and their magical firefly, Edison, give them a tour of the classroom and show them that the classroom is more nervous than they are! The DVD features basics of counting, ABCs, phonics, animal family groups, days of the week, months, seasons and manners. It also has closed captioning. **Leap Frog: Letter Factory** is a classic DVD for learning letters, phonics and listening skills. Children will see "Js jumping on trampolines" and "Ks practicing karate kicks" and learn that every letter makes a sound. Great way to learn the alphabet, letter names and letter sounds. A catchy, fun song serves as a summation of each letter's "class" and entices even the most reluctant of toddlers (and their parents) to sing each letter's sound. An interactive game follows the program and gives children a chance to practice their newfound skills of recognizing letters and their sounds. This is a great watch for the Pre-k to first grade classrooms. **Leap Frog Talking Words Factory**: This is another fun DVD for learning the alphabet, phonic skills and word building (how letters build words). It teaches that vowels act as the glue that sticks letters together (Professor Quigley's Sticky-Ick-O-Rama machine) and then teaches how to combine individual letter sounds to make three-letter words (with the Word Whammer), and to use common ending sounds to create rhyming words. Phonemic awareness, vocabulary building,

and rhyming are entertaining and fun. An interactive word game challenges viewers to fill in the missing first letter in a variety of three-letter words. Another excellent DVD for children.

The following games and electronic toys are excellent ways to encourage social interaction and cooperative play, to help children communicate with each other and to enhance language while also having lots of fun.

Disney Princess Musical Vanity (Jakks Pacific, www.jakkspacific.com) This is a great idea … two toys in one! First it is a special vanity for young girls, ages 3 and up. With a stool to sit on, the vanity has pretend beauty accessories, such as lipstick, nail polish, mirror, brush, perfume bottle and eye shadow compact. All are great for role playing and pretend play activities, either alone or with a friend. To find the second toy, just lift up the vanity cover to discover a keyboard that plays four musical instruments (piano, guitar, violin and kalimba) with four rhythms (pop, waltz, 16-beat and rock) and four different drum sounds. There are six well known Disney songs, including Beauty and the Beast, Under the Sea, Bibbidi, Bobbidi Boo and others. The beauty accessories are part of the fun, too, because they convert to musical instruments (for example, the lipstick is a whistle, the nail polish is a bell, the mirror is a tambourine, the brush is a play microphone, the compact a harmonica and more. Girls can record and play back the music they compose. Great to encourage pretend play and social interaction and communication.

Singing Scene Pop Singing Video Game (Jakks Pacific, www.jakkspacific.com) This fun musical game plugs directly into your television – no software or game console needed. Players take the microphone and are ready to sing along to pop and rock hits as the lyrics scroll across the bottom of the screen. There is a vocal meter that tells them when they hit – or miss – the right notes. Players can compete for points or sing solo. Top musical hits are built in, including top hits made famous by Rihanna, Alicia Keys, Taylor Swift, Miley Cyrus and many more. Because this is a plug and play game, it is fun to travel with – to bring to a friend, on vacation, to sleep-overs or to school for the whole class to participate with. Great for ages 8 and up – and age-appropriate for teenagers and young adults, and also for families to participate together.

Wheel of Fortune TV Game (Jakks Pacific, www.jakkspacific.com) Wheel of

Wheel of Fortune TV Game (Jakks Pacific).
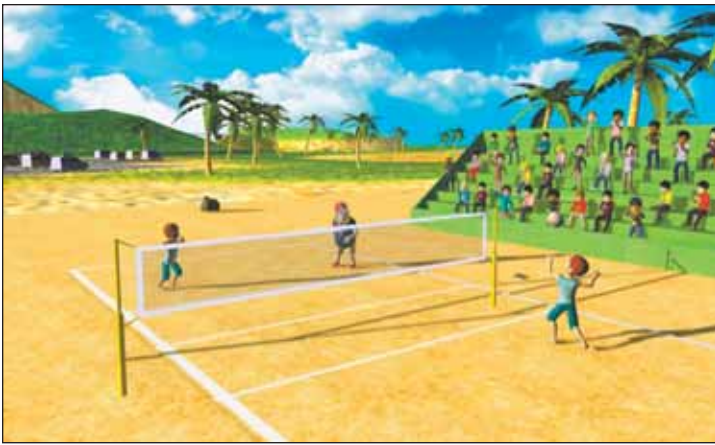
Big League Summer Sports (Activision).

Fortune has always been a great way for children and adults to interact and to enhance language and literacy skills. This version is a Plug and Play – just plug the video game controller into the television and you are ready to go. There are over 700 puzzles in over 35 categories.

Players use the spinner knob to scroll between choices and letters, and push a button to make choices. There are options for single player, multiplayer (two or three) and three difficulty levels. This is a great concept – easy to use, small and portable to take around from home to school or when visiting or even on a trip for great family fun. If you use it in a classroom, you can easily move the unit from desk to desk or place it on wheelchair laptrays for easy access.

Road Champs GX Racers and GX Motorized Multi-Launcher (Road Champs/Jakks Pacific, www.jakkspacific.com) You can expect fast speed and lots of action from these new 1:64 scale vehicles that feature interchangeable gyros. Each package includes one car, a speed gyro and rip cord. When you change gyros, you change the performance of a car – there are gyros for special stunts, side-spinners, racing, off-road, etc. With the **GX Turbo Launcher**, the GX Racers can go even faster. They can launch them on the ground, on the track or on a tightrope. The motorized launcher connects to other track sets, too, and includes one GX Racers car. Up to five cars can launch. Good for ages 6 and up.

Eye Clops Night Vision Infrared Stealth Binoculars (Jakks Pacific, www.jakkspacific.com) For children who want to explore what goes on when the lights go off, these hand held binoculars, powered by night vision technology and invisible infrared illumination, let users see in absolute darkness, up to 50 feet. In the long-range mode, the binoculars operate at full power and emit a barely visible ring of red light. In stealth mode, the binoculars operate at partial power and generate light that cannot be seen by the human eye. That means the users can see but cannot be seen. Both eyes are used so there is depth perception. Subjects can be seen in green or in a white hue. There is also a focal adjustment, eye width adjustment and a form fitting performance visor. (There's a knob on the top that lets you adjust focus.) Designed for ages 8 and up, these are great fun, even for adults. They really work!

INTERACTIVE ENTERTAINMENT SYSTEMS: NEW WII, DS AND PSP PROGRAMS

Active Life Extreme Challenge for Wii (Namco Bandai: www.namcobandaigames.com) This fun game includes a mat controller

with motion sensing, along with the Wii remote, and delivers a whole-body experience. There are 15 different activities, like kite surfing, in-line skating, rock climbing, base jumping, acrobatic double dutch, BMX biking and skateboarding. Every game uses the included mat in different ways. For example, for inline skating, you would run on the spot to speed up and jump to avoid obstacles. For rock climbing, you sit on the mat and hit the buttons in order to grab and climb. There is also a challenge mode in the game as you aim for different goals while doing the activities, such as purpose-fully hitting all the obstacles or waiting as long as possible before opening your parachute. While playing in all modes, players explore exciting detailed environments and can play alone or with friends.

Madden 10 for Wii (Electronic Arts: www.ea.com) This is the newest and completely updated Madden football game, completely redesigned and built from the ground up. There are all new player models that embody characteristics of favorite athletes and new larger-than-life stadiums showcase details found at each of the 32 NFL fields. Just point and go with the Wii remote, and you'll be throwing touchdown passes and scoring points. There's lots of game playing help, including the "Ask Madden" help option. The program also features mini-games that occur a few times during a game. Madden NFL 10 on the Wii is the most authentic and exciting football program.

Big League Sports Summer for Wii (Activision: www.activision.com) With this new game, players can play beach volleyball, tennis, baseball, football, soccer and golf. All-star challenges include home run derby, corner kicks, golf target drive and many more. In single player mode, they are a sports prospect receiving training at the world renown Pro Center. In multi-player mode, they can compete against three others in a variety of drills and exercises. Players use the

Science Papa (Activision).

Wii remote to swing a baseball bat, golf club or a tennis racket, throw a football or baseball, spike a volley ball and kick a soccer ball. This is a great program for all ages.

Science Papa for Wii (Activision: www.activision.com) Players take the role of a new member of a research team and can perform over 30 experiments, like using the remote and nunchuck to mix chemicals, heat solutions by monitoring Bunsen burners, pounding objects into dust, unearthing dinosaur bones and rewiring gadgets. Experiments are in the fields of chemistry, physics, biology and paleontology. Head to head mode lets players face off against their friends. Good fun.

Mario & Sonic Winter Olympic Games for Wii (www.sega.com) Mario & Sonic lets you play 20 real Olympic events, as well as a few fantasy games. You can play single events, a circuit (four events) and missions (multiple events with specific goals). All of these use motion-based controls, and some of them require both the nunchuk and the remote. Some just require the remote. Athletic events include the 100 meter dash, relays, hurdles, jumps, pole vault, hammer throw and javelin throw. There are rowing events, swimming, diving, gymnastics (trampoline, vault), skeet shooting and fencing. You can play as characters from the Mario and Sonic universes. From the Mario side you can select Mario, Luigi, Wario, Waluigi, Bowser, Daisy, Yoshi or Peach. From the Sonic side you can play as Sonic, Tails, Knuckles, Amy, Blaze, Vector, Dr. Eggman or Shadow. Great graphics and visuals, on widescreen and progressive scan displays.

Tony Hawk Ride (Activision: www.activision.com) This new Wii program is played with the included skateboard peripheral. It is designed to be fully accessible to everyone – from hardcore fans to players with no prior skateboarding experience. There are a number of tutorials that help you get started. After that, there are races, tricks and short challenges. The peripheral is easy to set up, physically solid and ready to withstand hours of play. Manuals, ollies and nollies can be done. You perform manuals by raising the nose or tail of the board in the air and holding the position. You do ollies by popping the nose into the air, while nollies are executed by popping up the tail. The board is covered in sensors that detect which way you're leaning, whether the nose or tail are raised, or even if you're reaching down to mimic a grab. Brush your leg along the ground next to the board and your character on screen will push off to gain speed. Variations and more complex tricks can be done by twisting the board or leaning forward or back while in the air. Ride can be played on three different difficulty levels. On the easiest, called casual, the game does

most of the steering for you. Players only need decide when to jump and trick. (Even little children can have a great time hopping around on the board and watching things happen on screen.) There is eight-player multiplayer and online play. The ease with which anyone can pick up and play this game makes this a fun social game for friends and family to play together. It's a fun game for people of all ages and skill levels.

The Beatles Rockband for Wii (Electronic Arts/Harmonix: www.ea.com, www.thebeatlesrockband.com) This new Wii game works with all Rock Band and most Guitar Hero controllers and microphones. You won't just watch and listen as The Beatles make rock history, create landmark records and conquer the world – for the first time, you'll be part of the band. You can join John, Paul, George and Ringo on-stage at legendary shows and behind closed doors in the recording studio. More than 40 songs are included with the game, with more to follow via download through your Wii's Internet connection. (See the Web site for a complete list). Players will follow the Beatles from their earliest days in locales in Liverpool and Hamburg, to their triumphant Ed Sullivan Show appearance and beyond, including Shea Studium, Abbey Road, Cavern Club and many more. The game lets fans pick up the guitar, bass, microphone or drums and experience The Beatles extraordinary music through Wii game play that takes them through the band's legendary career.

Little League World Series Baseball for DS (Activision: www.activision.com) In this game, the best of the baseball players in the world come to play Little League World Series Baseball. There is a quickplay mode, tournament mode, and exhibition mode. There are four different activities for batting and pitching practice and a training mode, as well, to learn how to bat, pitch, field, run and use your talents, all with the DS stylus. Players can unlock numerous collectable items, such as trophies and cards.

Scribblenauts for DS (Warner Brothers: www.warnerbros.com) This is a single player side-scrolling action game for the Nintendo DS that challenges players to solve over 200 progessively more difficult levels. Players use an in-game notepad/keyboard, as well as the touch screen and stylus, to think of solutions to the obstacles placed in the path of the game's hero. Any nouns you write can be used in the game. For example, in one puzzle, a large tree is in the way. If players type in the word "beaver," a beaver will appear and gnaw the tree down. To cross a moat, type in "bridge" and a bridge will appear, allowing you to cross. Spelling suggestions are given, so exact spelling isn't a problem. The dictionary contains an amazing 22,802 words. This is great for encouraging writing and spelling skills, as well as creative thinking.

NBA 2K10 for PSP (2k Sports: www.2ksports.com) This is a fun basketball game for the PSP, with good gameplay and graphics. 2K10 focuses on team-based basketball. Shooting and passing are intuitive, and playcalling is a snap, making it easy to jump right in and play. There are many old-school legendary players, with eight teams spanning the 1950s through the 1990s (with lots of retro jerseys, too). Fun for all basketball fans.

ABOUT THE AUTHOR

Joan Tanenhaus, M.A., CCC, Speech-Language Pathologist/Assistive Technology Specialist, is Founder and Executive Director of Technology for Language and Learning, Inc., a non-profit organization dedicated to advancing the use of computers and technology with children and adults with Special Needs. (e-mail: ForTLL@aol.com). ∎

DATA: More Than Just Checks on a Clipboard

By Jane Korsten and Terry Foss

Accountability is crucial for one very simple reason … to evaluate the effectiveness of a tool or strategy. Once collected, data can be used to document progress in response to federal and local mandates, guide changes in strategies being implemented, support funding requests, settle differences of opinion, and offer necessary documentation in the event of due process. Unfortunately, there is a tendency to approach data with the philosophy "if a little is good, more is better and too much is just right." When faced with a cumbersome or overwhelming data collection system, data simply may not be collected at all. Poorly planned data collection interferes with, rather than enhances, a program. It is possible to collect the 'wrong' kind of data and fail to document change. Happily and contrary to popular belief, one doesn't have to be a rocket scientist to collect, analyze and respond to meaningful data.

> "However beautiful the strategy, you should occasionally look at the results."
> – Winston Churchill

Quality Indicators for Assistive Technology (QIAT) guides the provision of quality AT services. QIAT includes quality indicators, intent statements and common errors for eight areas important to the development and delivery of assistive technology services. The eight areas are Consideration, Assessment, Inclusion on the IEP, Implementation, Evaluation of Effectiveness, Transition, Administrative Support and Professional Development. The area of Evaluation of Effectiveness lists seven indicators critical to evaluating outcomes. These indicators are:

• Team members share clearly defined responsibilities to ensure that data are collected, evaluated and interpreted by capable and credible team members.

• Data are collected on specific student achievement that has been identified by the team and is related to one or more goals.

• Evaluation of effectiveness includes the quantitative and qualitative measurement of changes in the student's performance and achievement.

• Effectiveness is evaluated across environments, including during naturally occurring opportunities, as well as structured activities.

• Data are collected to provide teams with a means for analyzing student achievement and identifying supports and barriers that influence assistive technology use to determine what changes, if any, are needed.

• Changes are made in the student's assistive technology services and educational program when evaluation data indicate that such changes are needed to improve student achievement.

• Evaluation of effectiveness is a dynamic, responsive, ongoing process that is reviewed periodically.

The discussion that follows is rooted in these indicators and provides a context for considering how these apply to the process of collecting worthwhile data.

In order to ensure that data is being collected on what counts, consideration needs to be given to developing meaningful goals, criteria, implementation strategies and data collection systems. Data must be analyzed and adjustments in implementation strategies made in response to the analysis.

> "Not everything that can be counted counts and not everything that counts can be counted."
> – Albert Einstein

GOAL

One must start with a meaningful goal. How can meaningful strategies be determined, implemented and evaluated for effectiveness without a meaningful goal to guide the process? Some of the most common errors in selecting goals include lack of clarity; poor match between goal and the individual's needs, interests and abilities; conflict between intention and goal; and inappropriate criteria.

The goal must focus on the "task" rather than the "tool." Tools are a means to an end and the data is collected on the successful completion of the task while recognizing that successful completion of the task may require the use of a tool. For example, an individual may be presented with a switch to access a literacy activity and the goal needs to reflect the student's participation in that activity rather than the student's switch interactions. In such a situation, the goal might be to "deliver the repetitive line in the story at the appropriate time" rather than "hit the switch X number of times".

Data may be measuring something that is unrealistic, unrelated to, or in conflict with the goal. Consider a goal that the student communicate to let someone know s/he is hungry "with 80 percent accuracy on five consecutive data days?" Now consider that the data is going to be collected at a predetermined time during the day when the student may or may not be hungry. Is the goal truly achieved when food is requested and thrown in response to prompting or when spontaneously requested food is consumed? In this case, collecting data not only on the specific performance of the task, e.g. "requesting food," but also on the student's satisfaction with the results of this request may be important.

CRITERIA

Determining the criteria necessary for the task at hand is critical. Even the professional athlete doesn't have to hit a home run 100 percent of the time he steps up to bat or make every basket he shoots! Undoubtedly, someone is counting what counts to determine his ability and funding value. However, if a child is working on orientation and mobility and the task is to safely cross the street, 100 percent may mean the difference

between being hit by a car or not. Accuracy of 100 percent would not often be expected in other activities of life, but would be necessary when the skill is crossing the street. It is important to identify what the expectation is for the particular activity rather than selecting an arbitrary percentage.

Data that reflects only the number of times a request was made may not be an accurate measure of mastery. A goal with criteria that allow for the absence of a response, leading to less than 100 percent, may be a better indicator. That is to say that if the individual "consistently and predictably" asks for more to eat when hungry (as judged by consequence satisfaction) and does not request food at other times, then the response is reliable in concert with the intended goal. A 'consistent and predictable pattern' of requesting 'more' provides a better indication of mastery since it allows for the INTENT of the goal. The pattern of the response and the satisfaction with the consequence may actually demonstrate goal achievement and, therefore, must be captured in the data.

IMPLEMENTATION

Implementation strategies are the plans designed to address the achievement of meaningful goals. These strategies are developed in response to assessment or baseline data on which an implementation plan is developed. Assessment data can be gathered following the SETT (Zabala) framework, which defines the student's interests and abilities, the environment's strengths and weaknesses and the task to be achieved. *Developing a Written Productivity Profile* (de Coste) also offers strategies for gathering both baseline and implementation data. The result of this careful compilation of information drives the implementation of the plan or strategies that lead the team to support the student's efforts in the IEP.

Implementation strategies must be carefully thought out, written down and clearly communicated to the IEP team. As the strategies are implemented, the data collection system monitors progress and the effectiveness of the strategies and tools. The process is ongoing and as diligent monitoring and analysis takes place, adjustments need to be made to goals and/or strategies.

DATA COLLECTION SYSTEMS

Check marks and tallies are not the only way to collect data. Video examples of the student performing the task, samples of a 'product' and student or staff interview can also provide documentation of change. It is necessary to consider the individual, the task and the potential barriers when developing a measurement method. Meaningful data must provide a means by which to do error analysis in order to identify obstacles that may be preventing the student from reaching the desired goal.

ANALYSIS

An IEP demands an IMP or an Individualized Measurement Plan. The IMP must provide a means by which progress can be effectively and efficiently monitored for a particular individual doing a specific task in certain environment(s) with varying potential barriers. Each of these factors can be different for each student, even though they may be working on a similar skill.

In developing a data collection format that will support error analysis, consider what might prevent the individual from reaching the goal and how the data collection format can be structured to identify not only whether the criteria is achieved, but also, if it is not, which of the obstacles might be the reason? What information will you be able to glean from the data that will support problem solving the obstacles to progress? *How Do You Know It? How Can You Show It?* (Reed, Bowser and Korsten) provides samples of data collection strategies and formats to answer a variety of AT questions.

In the development of meaningful data collection systems, consider the following:
 • What is the goal?

• What is the 'minimum performance criterion' for the task at hand?

• What would it take to convince you that the strategy was successful?

• What are the possible obstacles to success?

• How and/or what can you measure that will allow you to identify not only whether criteria is achieved – but also, if not – why not?

• Who will collect the data? When? Where? How often?

• Who will analyze, summarize and share the data?

Lack of progress signals a need for change and, as with the lettuce, it is necessary to understand what needs to be changed. Failure to do this is a sign that the student is being blamed for his lack of progress.

Everyone can learn *when the appropriate strategies are employed*. For example, given the importance of frequent experience with a technology tool, perhaps the first data point is not with respect to the consumer's production, but rather to his environment. How often does the environment provide opportunities for the use of the identified technology? Does the absence of progress reflect an absence of experience or opportunity? What needs to be changed to accelerate growth? Data should provide not just a 'score', but also the information necessary to make the appropriate changes in implementation strategies and support for funding requests.

Goals and objectives or benchmarks that continue unchanged from one IEP to the next, indicate that no error analysis has taken place. When properly collected, analyzed, reviewed and shared, the data will document progress, identify barriers and guide changes in strategies and tools. It is not enough to merely collect data; it is necessary to analyze and respond to that analysis by making adjustments to implementation strategies. Good data collection systems ultimately depend on unique variables for a specific individual, in a particular situation,
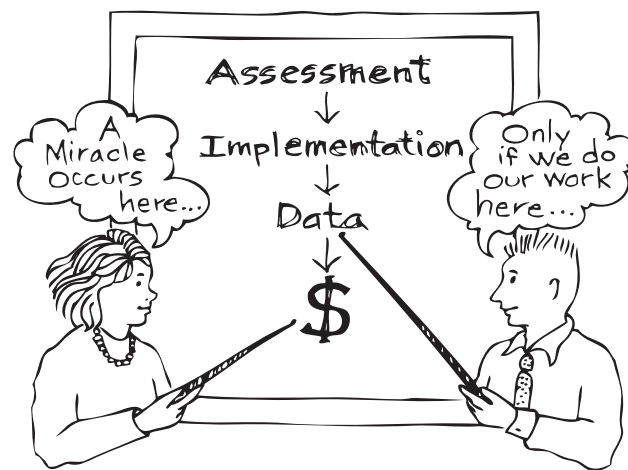
with the targeted skill. Your setting and your knowledge of the individual should determine the type and frequency of the necessary data collection system. Rarely is one strategy or tool 'clearly' better than the alternatives and final decisions are seldom made without consulting the 'available data' with respect to several key aspects of the choice at hand. Yet, how often does one recognize that these decisions have involved 'data' of some kind?

Federal and state guidelines demand 'evidence' and data is evidence. Teaching with technology can be challenging, exciting, rewarding and fun or frustrating, discouraging, disappointing and difficult – for all concerned! The direction taken from the beginning will determine the outcome. The time, thought and systematic planning invested at the outset can yield a successful solution. Meaningful goals, criteria, strategies, data analysis and response are crucial to the evaluation of the effectiveness process. Good data provides the answer to well framed questions and guides changes in implementation.

RESOURCES

Brinker, R.P. and Lewis, M. (1982). Making the World Work with Microcomputers: A Learning Prosthesis for Handicapped Infants. Exceptional Children, 49,2,pp.163-170

Bowser, G. and Reed, P. (1995). Education Tech Points for Assistive Technology Planning. Journal of Special Education Technology, 7,4, 325-338.

DeCoste, D., (2004), Developing a Written Productivity Profile. Don Johnston

Heiman, Don . Kansas' former chief information technology officer and director of the state's information technology voice, data and video infrastructure.

Korsten, J., Dunn, D., Foss, T. and Franke, J.K. (1993). Every Move Counts: Sensory Based Communication Techniques. San Antonio, TX: Therapy Skill Builders.

Reed, P., Bowser, G. and Korsten, J. (2002) How Do You Know It? How Can You Show It? Making Assistive Technology Decisions. Oshkosh, WI: Wisconsin Assistive Technology Initiative.

Thich Nhat Hahn – Peace Is Every Step: The Path of Mindfulness in Everyday Life.

The QIAT Consortium Leadership Team. (2000). Quality Indicators for Assistive Technology Services in School Setting. Journal of Special Education Technology, 15(4), 25-36.

Quality Indicator / Evaluation of Effectiveness (2001). www.QIAT.org

Zabala, J. S. (1994). The SETT framework: Critical questions to ask when making informed assistive technology decisions. (on-line). Available: www.sac.uky.edu/~jszaba0/JoySETT.html

AUTHOR CONTACT

For additional information about the authors, please visit www.everymovecounts.net. ∎

Tips and Tricks for Reading with your iPod

By Lisa Peterson

WHY READ WITH AN IPOD?

If students are not readers by middle school, how do we provide them with tools to read and become lifelong learners? One strategy is to provide auditory books in a socially accepted media. In addition, administrators are asking school personnel to embed assistive technology into the curriculum for ALL students – because it's the law.

We know that students that can read will read. Using an audio presentation takes longer, so it is natural for students to abandon audio supports when they no longer need them. Those who can benefit from audio supports include students with severe learning disabilities, students reading two to three years below grade level, those with cognitive delays, as well as students with visual impairment and physical disabilities. The process to provide audio support in the classroom was developed out of necessity and implemented by a busy teacher.

FROM TEACHER TO TEACHER

This article will describe how I used iPods to bridge my student's reading deficits and how you can do it too! I want you to grab an iPod that no one is using, bring it into your classroom and use it to spark the love of independent reading for your non-readers.

TIPS FOR FINDING IPODS

First, get an iPod. Ask for donations of old iPods. As the technology changes, those of us who like iPods now have a couple. Ask your techie friends to go into their junk drawers and give you their old iPods. Your friends need to sign ownership over to you, so the Apple Store will replace the batteries as needed. The price has come down to $50 for a 2G Shuffle, which is great for students with visual impairments because they talk! A 4G Nano is about $149. I prefer iPod Nanos because the screen makes it easier to search for your reading.

TIPS FOR FINDING BOOKS

Next, open an iTunes account. Any teen can help, but your school tech support might have to open the account if iTunes is blocked at your school. If you have money, purchase books from iTunes. If you are like most teachers, walk over to your media center and check out an audio book on CD. The public library is another wonderful source for audio books. Check the copyright rules in your district before you use them. Before loading, look at the CDs – if the disc is scratched they do not download well. Out of print audio books may be available through online sources. Transfer the audio book to your iTunes music, and then upload it to your donated iPod.

TRICKS FOR CLASSROOM MANAGEMENT OF IPODS

So you have your book on the iPod and nothing else – no music, no games – just books or parts of books for your student's reading enjoyment. As a classroom management tool, remember that you can control what you want your student to read – for example, chapters four to seven only. This "guarantees" your students will be reading their assignments. You need to model the use of the iPod in your classroom. Most students know how to operate an iPod, but some may be unfamiliar.

In my classroom, we developed a set of rules when using the devices (see notes for display on white board, Figure 1). I purchased plastic boxes to store the paperback book, the iPod, a pen and other supporting materials (see picture and list of box contents, Figure 2, page 16). This kit was checked out at the beginning of a reading session. Students were not allowed to leave the classroom once iPods were out – not even the students who were not using the iPod. This kept the iPods from "walking" out of the classroom. The iPod was always visible on the top of the desk and a plastic "glove" for the device kept it stuck to the desk. This also gave some protection for an accidental drop. Students were required to have eyes on text to follow along with the audio recording. Some students brought their own head phones to use during the 30-minute session. For students who could not tolerate headphones, small inexpensive speakers were provided. If two students were reading the

- iPods stay on desk at all times
- Do Worksheet and listen with 'eyes' on text
- Talk with teacher or peer when finished with that day's reading
- Check in equipment with Ms. Peterson

Thanks, Ms. Peterson

Figure 1: Using the iPod (posted on Smart Board).

same book, they sometimes used an adapter that allowed multiple people to listen to one iPod. They flagged unknown words with tabs provided in the kit and kept reading. Any misuse of the iPods, like an unintentional drop to the floor, resulted in using an alternative reading method that involved a 1980s style boom box (no cool factor involved)!

WORK LOG FOR READING PRACTICE

Just like proficient readers, I wanted my students to read, analyze, synthesize and summarize. This was done through pair-share – a reading strategy where students talk to one another about what they have read. Pair-share included review and then completion of an iPod Reading Log (see picture). Writing aids were available throughout the classroom, including a computer and a portable word processor with printer. At the end of the session, students came to me to review vocabulary and main events of the chapter, as well as to check in their kit. If time was short, I could scan the written product (see iPod worksheet, Figure 3), ensuring accountability for daily work. We spent 45 minutes on this activity.

At the next session, students used their worksheet to post unknown words on a word wall and discovered word meanings as a group, without a traditional dictionary in sight! If no one knew the word, online resources with text to speech and hand-held talking dictionaries were available. We started the lesson as a group, even if students were reading different books. It was a great time to share the book they were reading and get others interested in reading their book.

CASE STUDY

I'd like to introduce you to James, the reason behind this project. James was a middle school student in an urban environment where 92 percent of the students qualified for free or reduced lunch. He

- Clear box with attached lid
- List of box contents taped to lid
- Number box and label all materials
- iPod with non skid cover
- Head phones andcords
- Splitter
- Book
- Worksheet
- Pen with flags or flags and pen
- Super sticky 4x4 Post-it notes
- Franklin Talking Homework Wiz (optional)

Figure 2: The iPod Reading Kit.

desperately wanted to read Harry Potter but after years of reading intervention, was stalled at a first grade level of reading. I did not have time to read Harry Potter to him nor did he want me to. No matter how hard he tried, he was unable to take in grade level text through traditional methods. His listening comprehension was at grade level. He could think and respond at grade level. That's how this intervention was born. When he first listened to the British accent of Jim Dale who reads Harry Potter, he was intrigued by a voice he had never heard and kept listening. Another time, he counted the "nevers" in Lemony Snicket and realized that reading can be fun!

In the year that James used audio supports, he also received reading strategies in his language arts class and skills development in his special education classroom. I don't know which of these strategies raised his independent reading level without audio support from first to third grade level. I do know that his love of reading was sparked by the use of audio supports. His vocabulary was enriched by exposure to text he could not have read independently. He was able to participate in the school-wide reading rewards program. He realized that every book was available to him and he became an independent reader with audio support. For the first time in his life he could be an active participant in discussions about books that peers were reading. He gained an appreciation and love for reading, and an understanding of why people enjoy good books.

SO WHY READ WITH AN IPOD? HERE'S WHAT MY STUDENTS SAID:

"It's cool"
"I can read a book that is too hard for me to read."
"Earn lots of reader points"
"Not doing the same old thing"
"I wish I could bring it home"

What student can you introduce to the joy of reading through the use of an iPod?

ABOUT THE AUTHOR

Lisa Peterson works for St. Paul Public Schools and is based at Gillette Children's Specialty Healthcare. Her e-mail is lpeterson@gillettechildrens.com. This article was written with support from Patti Bahr, MSE; RET pbahr@gillettechildrens.com Gillette Children's Specialty Healthcare. ■

iPod Reading Log

Name: Start Date of Book:

Book Title:

Day:
Number of Pages Read: ___ to ___

Three questions I have about what I read (wondering?)

Three vocabulary words I did not know as I read

Summary of today's reading

Figure 3: iPod Reading Log.

More Than a Vacation

By Mary Lenertz

In October 2009, a group of clients and staff from Lifeworks, Inc. – a nonprofit organization that helps people with disabilities live fuller lives that are integrated into the flow of community experience – traveled together to Denmark. Their itinerary included standard tourist fare, including Kronborg Castle (made famous in Shakespeare's *Hamlet*) and Stroget, Europe's largest pedestrian shopping street.

But the trip was more than a vacation. It was a cultural exchange that provided an opportunity to learn about services for people with disabilities in Denmark.

"One of the greatest aspects of the trip was the ability to witness a different culture though the lens of disability services," says Adrian Freeman, training coordinator, Lifeworks Service Innovation, who served as the trip's blogger, photographer and videographer. "On most trips, people can travel around to see historic sites and eat delicious foods. We were able to do those things, but we were also able to see a specialized part of Denmark. It made the trip much more than a simple vacation. It made it life-changing and inspirational."

Grand Prix of Handicapped Bands, a Danish music festival featuring 10 bands comprised of people with disabilities.

This is the fourth time Lifeworks has invited people with disabilities to travel to Denmark. Most of the travelers on this trip had never been outside of the United States and were excited for the opportunity to go to Europe. Many clients described the journey as the trip of a lifetime. Families of

nately, many do not have the opportunity to travel because of the cost, accommodation complexities and the support required to coordinate a trip.

Lifeworks saw firsthand the value of taking people with disabilities on international trips when the VASAC Band came to Minnesota on an American tour in May 2005. "The band members gained a confidence in themselves that they did not have before the trip," says Henning Jahn, coordinator of the trip.

Lifeworks has witnessed a similar growth in confidence among its own clients who have traveled abroad, including Jim Lundquist, who traveled to Denmark with Lifeworks in 2005. Lundquist describes the experience as life changing: "I used to feel like a glass of orange juice only half full and now I feel full to the top, like a normal man." Lundquist returned from Denmark with a new attitude and vision for his life. He decided to propose to his girlfriend, Sarah, and they were married on Feb. 14, 2008. The Lundquists were both part of the 2009 trip, and Jim was anxious to introduce his wife to his friends in Denmark and show her the places that he says touched his spirit.

After seeing how travel affected Lundquist and other clients, Lifeworks was eager to offer the experience to more people in 2009. Trip information was distributed to Lifeworks Career Development and Social Enrichment clients, who almost immediately filled the trip to capacity.

Visiting Hamlet's Castle.

THE DENMARK CONNECTION

For more than 15 years, Lifeworks has had a learning exchange with a company in Denmark called VASAC, which provides services to people with disabilities. Staff and clients from both agencies have visited each other's programs 21 times since 1994. This particular trip was inspired by an invitation from VASAC for Lifeworks to attend the

clients liked knowing that their loved ones were traveling with Lifeworks staff that they knew and trusted.

BENEFITS OF INTERNATIONAL TRAVEL

Most people value vacations as a time to get away, relax and rejuvenate. People with disabilities are no exception. Unfortu-

At our vacation home .

Tour of VASAC programs.

Pop & Company – winner of Grand Prix.

AND THEY'RE OFF!

Prior to departure, the travelers got together several times to get to know each other, get comfortable with the staff, and learn about Danish language and culture. This preparation helped make everyone involved more comfortable. As families dropped off their loved ones at the airport, there was an air of excitement and not worry.

Once in Denmark, the Lifeworks group took advantage of many preplanned tours and activities, visiting famous Danish landmarks. A highlight for the group was visiting Kronborg Castle, the setting that Shakespeare wrote about in Hamlet. Another highlight was watching the changing of the guards at Fredensborg Slot Palace, where the crown prince of Denmark lives with his family. The group also toured Copenhagen by canal boat and shopped on Stroget, the famous walking street. A favorite experience for many in the group was riding a ferry from Kronborg Castle to Sweden. Many of the travelers were of Swedish descent and were thrilled to visit the land of their ancestors, if only for a few hours.

In addition to traditional tourist activities, the Lifeworks group toured programs for people with disabilities, which provided an opportunity to interact with the locals. The group toured six VASAC programs. Each was

Jim and Sarah Lundquist.

unique, with its own way of blending into the community. The programs included a secondhand shop, a coffee shop at a museum, a café in a library, a graphic design and embroidery shop, a candle making shop, and a variety of center-based work. VASAC was most proud to show Lifeworks their community employment sites, as they were developed after VASAC staff came to Minnesota and toured Lifeworks.

A RESOUNDING SUCCESS

Back in Minnesota, all the travelers agreed the trip was wonderful and they would go back again. Perhaps the highest compliment came from Aaron Valdez, a client who had gone on the trip only because his mother kept telling him that it was a trip of a lifetime. Aaron told staff "It was a great trip" – high praise from an individual not known for this type of expression.

The group will reunite in January to share photos and foster the new friendships that blossomed more than 4,000 miles from home.

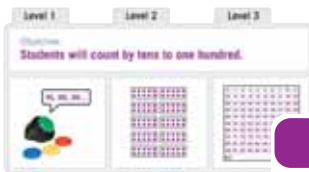To learn more, visit the trip's blog at www.lifeworksdenmark.blogspot.com.

ABOUT THE AUTHOR

Mary Lenertz is Director of Service Innovation for Lifeworks Services, Inc., 2965 Lone Oak Drive, Suite 160, Eagan, MN 55121; Phone: 651-365-3749; E-mail mlenertz@lifeworks.org; Web site: www.lifeworks.org. ■

VizZle: Visual Supports for the Entire ASD Spectrum Made Easy, Fun and Accessible Anywhere

By Terrence Murphy and Lauren Stafford

The aphorism, "If you've met one child with autism … you've met one child with autism," sums up one of the most daunting tasks faced by parents and educators confronted with helping children with autism: trying to find a viable intervention that can be used effectively for any individual, no matter where they fall on the spectrum. The word "Spectrum" in the clinical designation Autism Spectrum Disorder reflects just how varied a range of symptoms, needs, abilities and disabilities reside under the umbrella of an ASD diagnosis.

A group of educators, clinical researchers and software developers picked up the gauntlet thrown down by ASD and have used the best of leading edge technology in a solution that makes effective interventions available to anybody with a Web connection. This new solution is called VizZle™ (the name reflects its roots in Visual Learning), and it is getting attention in both special education and technology circles, winning six educational software and technology innovation awards since the initial release in February of 2009.

WHAT MAKES FINDING SOLUTIONS SO DIFFICULT?

There is no "typical" when it comes to describing the individual academic, speech and language, occupational therapy, social or emotional interventions needed for each child with ASD. While it is both possible and preferable to design a curriculum for each student with ASD that blends the most appropriate types of interventions from the current pool of evidence-based educational paradigms (ABA, TEACCH, Floortime etc.), it is not even remotely possible for a school to afford a separate set of tools and materials to implement each of those curriculums.

So the challenge is to find and take advantage of the commonalities among this incredibly diverse group of individuals, and find an intervention that can be used effectively for any individual, no matter where they fall on the spectrum or what educational model works best for them.

THREE COMMONALITIES

One of the first commonalities is, ironically enough, the individuality among the population. So the ability to customize materials in every way – from the content to the graphics and every reinforcer in between – is vital to meet their diverse needs.

Research has proven that individuals with ASD typically use visual processing as their dominant information-processing mode and, because of that strength, they usually possess a heightened interest in visual materials (Furth, 1981). Children on the autism spectrum have extensive interest in computers, television and video, and the majority choose to spend more time with electronic media than with all other forms of play combined (Shane & Albert, 2008).

What most parents and teachers will anecdotally attest to has been well documented: Children with ASD are more attracted to, and engaged by, materials presented interactively on a computer. In one of the many studies available, they were attentive to a computer-generated lesson 97 percent of the time (learning 74 percent of the targeted nouns) but attentive to a teacher-directed lesson only 62 percent of the time (learning 41 percent of the targeted nouns). (Moore & Calvert, 2000).

Dr. Howard Shane and a clinical research team from Children's Hospital Boston (CHB)/ Harvard Medical School worked with educators at The Monarch School for Children with Autism (Monarch) in Shaker Heights, Ohio to develop and research a successful Visual Language Programming model that takes advantage of the strong visual processing capabilities and natural affinities of students with ASD (as documented in his book Visual Language in Autism [Plural Press, 2008]).

Dr. Shane treats children on the spectrum at his Center for Communication Enhancement at CHB and conducts major research
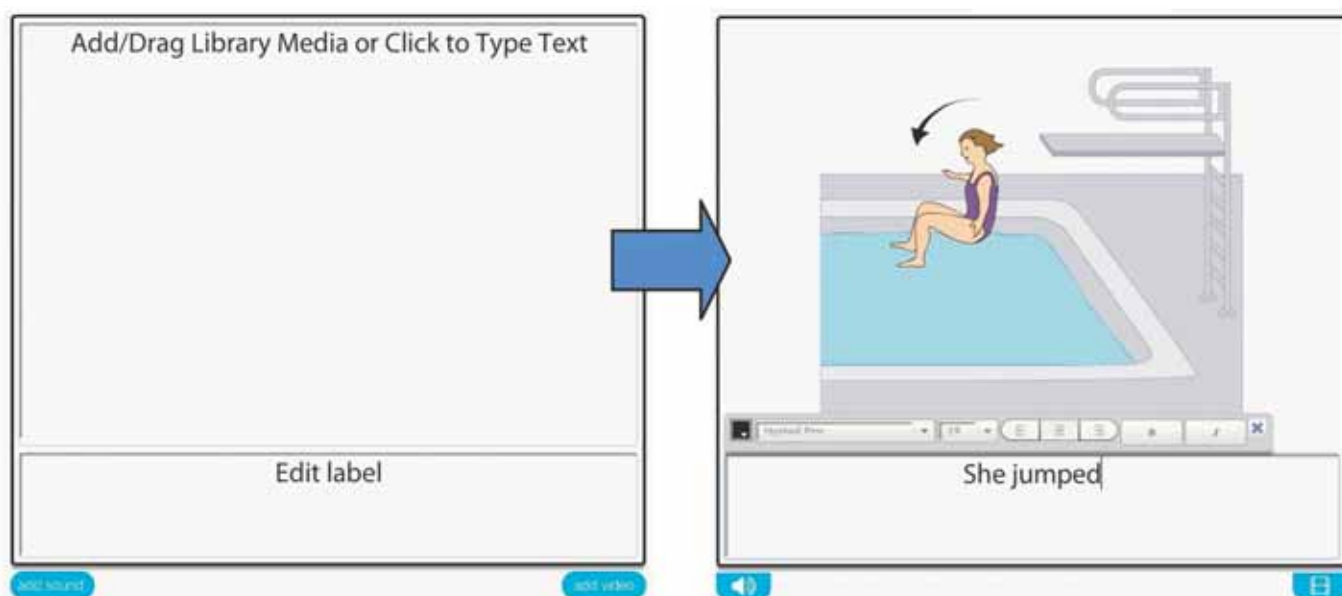

Figure 1: The creation tile is the basic unit of creation for every kind of interactive VizZle lesson. Drag–and-drop in images, audio or video, one-click TTS or recorded voice, and control every aspect of the text with a popup text editor (pictured: a blank creation tile and a loaded tile with the text editor open).

initiatives like the one at Monarch (which is entering its eighth year). He says, "We know ubiquitous use of individualized, meaningful visual supports for organization, expression and instruction is very effective with this population. Presenting those supports interactively on a computer or electronic writeboard makes them even more effective."

WHY AREN'T VISUALS USED MORE?

Producing all the visuals necessary for even just one child can be a daunting task. The time it takes to make everything needed for a classroom of students is even more so. Laura Kaufman, M.A., C.C.C./SLP, is a Speech Language Pathologist at Monarch, a specialist school that brought all its resources to bear on providing ubiquitous visuals and computer interactivity to their students from Pre-k through age 22, all of whom have intensive needs. Despite its mission, Kaufman relates some of the constraints on the use of visuals that hampered Monarch.

Even with access to computers and electronic writeboards in each classroom, Kaufman lacked appropriate materials to use on them. "If it's not completely customizable, we most often can't use it. These kids can't just ignore something that isn't exactly right – one little detail that you can't change, like a certain kind of reinforcer that they start to perseverate on, can make the whole program useless." And Monarch, too, felt the weight of the expense involved with typical printed visual supports. "We inevitably got

the, 'Slow down on the printing and lamination!' e-mail towards the end of each month," Kaufman says.

"We felt there had to be a better way, not only to produce and present visuals, but to somehow be able to efficiently share them and not reinvent the wheel each time a teacher needed visual materials," says Debra Mandell, Director of Monarch.

TURNING TO TECHNOLOGY

It became immediately apparent that technology held the answer – two prime features of technology are easy sharing and drudgery reduction – and that making a tool that was powerful and flexible, yet quickly and easily mastered by any user, was the core challenge from a technical standpoint. That was how Monarch Teaching Technologies (MTT) and its Web-based, interactive visual language software, VizZle, was conceived. Years of development and testing in both Monarch classrooms and in public special education classrooms ensued.

THE VIZZLE TOOLS

The software is divided into three main sections: Share is the peer-reviewed, shared library, where users can find and preview pre-made lessons; Teach lets users store lessons, lets them access special folders for each student that have IEP tracking and team collaboration features, and lets them launch lessons for play on computers, touchscreens or electronic writeboards; and Create lets users quickly edit lessons, lets

them make lessons from scratch using a number of available templates, or lets them print lessons for tabletop use.

Lesson templates include visuals for instruction, like Matching Boards (ideal for concept building and quizzing), Build-a-Book (a format for stories for social learning or for instructional material, with popup reinforcers and quizzes to further comprehension) and Game (perfect for review and group lessons). Templates for organization include Scheduler (for building visual schedules), Token Boards (with multiple formats to choose from), Timers (which can stand alone or be incorporated directly into lessons) and First/Then Boards (which can be used for providing choice, directing the activity or as a tool for sequencing practice). Templates for expression include the newly added Expression Builder and Concept Builder, both of which were funded in part by an NIH grant (they let users sequence video modeling clips to illustrate a concept or check for comprehension of the concept). Pix-To-Go is a blank slate available for any print project.

The basic unit of every interactive lesson is the creation tile (Figure 1). Every creation tile allows the user to drag-and-drop in images – either from the image database or directly from the desktop. Each has a text editor that lets the user control all aspects of the text. Video or audio clips can be directly drag-and-dropped onto the tile. Text to speech is one click. Recording the user"s own voice is done in three clicks. It is simple to use, but hugely flexible and powerful.

VizZle takes advantage of the inherent collaborative nature of the Internet and of recent advances in the delivery of rich multimedia via the Web. Being Web-based has many implications, not the least of which is that every user immediately has access to added materials or new features added to the program. And with a continuous development and improvement schedule in place, major releases of upgrades and new features take place, on average, four times a year. The screen shot of the VizZle Landing Page (Figure 2.) is the newly redesigned gateway into the product making its debut in VizZle 3.2 in Spring, 2010, and an illustration of how VizZle is constantly evolving in response to users' needs and requests.

TEACHER AND THERAPISTS' REACTIONS TO VIZZLE

In the few months Vizzle has been available, it has already made a big impact. Kaufman has noticed a marked reduction in self-stimulatory behaviors in her students using VizZle, and greater accuracy than with traditional call and response lessons. "And the students genuinely like it, which makes them more willing to try new materials."

Figure 2: This prototype for the new gateway into VizZle is scheduled to be part of the VizZle 3.2 release in Spring, 2010. Major releases of new features, improvements and enhancements are scheduled on average four times a year. Because VizZle is Web-based, these updates become immediately available to all VizZle users immediately upon release.

Kaufman also notes that data collection is far easier, even if she doesn't take advantage of the powerful built-in reporting features, because she doesn't have to juggle the materials and try to present them, as well as take notes – instead she can just observe. "And because it is so easy to edit or change a lesson right then and there, VizZle allows me to use my clinical judgment more freely. I'm not forced to use pre-planned materials that may or may not be end up being what I really needed." Another feature she finds invaluable as an SLP is how easy it is to record her own voice to accompany a lesson. "I can reinforce prosody and melody, yet still give the student independence. Anything we can do to promote independence is really valuable – it's what they will need in the real world."

Courtney Monastra, an Autism Unit Teacher at Hinkley Elementary School in the Highland Local School District in Ohio, teaches four boys in her special education classroom, with ages ranging between 2nd and 4th grade, and with a wide range of abilities and needs. Monastra sees the independence factor as a major benefit as well.

"The playlists are just like the TEACCH work bins we use, but without all the materials all over the classroom," she says. "VizZle is great because it is tailored to the exact goals the student is working on, and it is motivating, but not too crazy with wild graphics and sound effects that may be appealing to a typical student, but overwhelming for a student with autism."

"In our classroom," says Monastra, "we always have tons of file folder games and hands-on manipulatives that are great, but take up a lot of space for storage and take hours to make. With VizZle, we are able to have hundreds of different learning activities and store them in files on the computer. It is much easier to keep organized and ideal for keeping a simple work space, which is best for students with Autism."

Monastra also appreciates the shared library. "I can sit down in the morning and think, 'We'll do something with penguins ..,' search it, and instantly have 10 lessons about penguins already made that I can choose from. If they aren't exactly what I need, I can make the changes so they fit my students' specific needs. I am able to make lessons in

10 minutes, and save them to use instantly or in a year. I don't always have to find the material, print it, cut it, laminate it and put Velcro on it. It saves tons of time."

Katherine Deneke, M-SLP, CCC-SLP, speech-language pathologist for the Brunswick City School District in Brunswick, Ohio, works with both mild to moderate students in grades K-5, and students with moderate to intensive needs from grade 9 until age 23 at Hickory Ridge Elementary School and Brunswick High School. Deneke appreciates the wide range of visuals she can choose from pre-loaded in the image database. But even more, she likes being able to quickly and easily import exactly the visual she needs, with each automatically saved and easily accessible whenever she wants to use them again. "These real-life representations hold much more meaning for students with autism than black and white symbols with little relation to the objects they mean to symbolize," she says.

She has found that VizZle does more than she initially expected of it. "With VizZle, I am able to meet the needs, not only of the moderate-intensive population, but also my
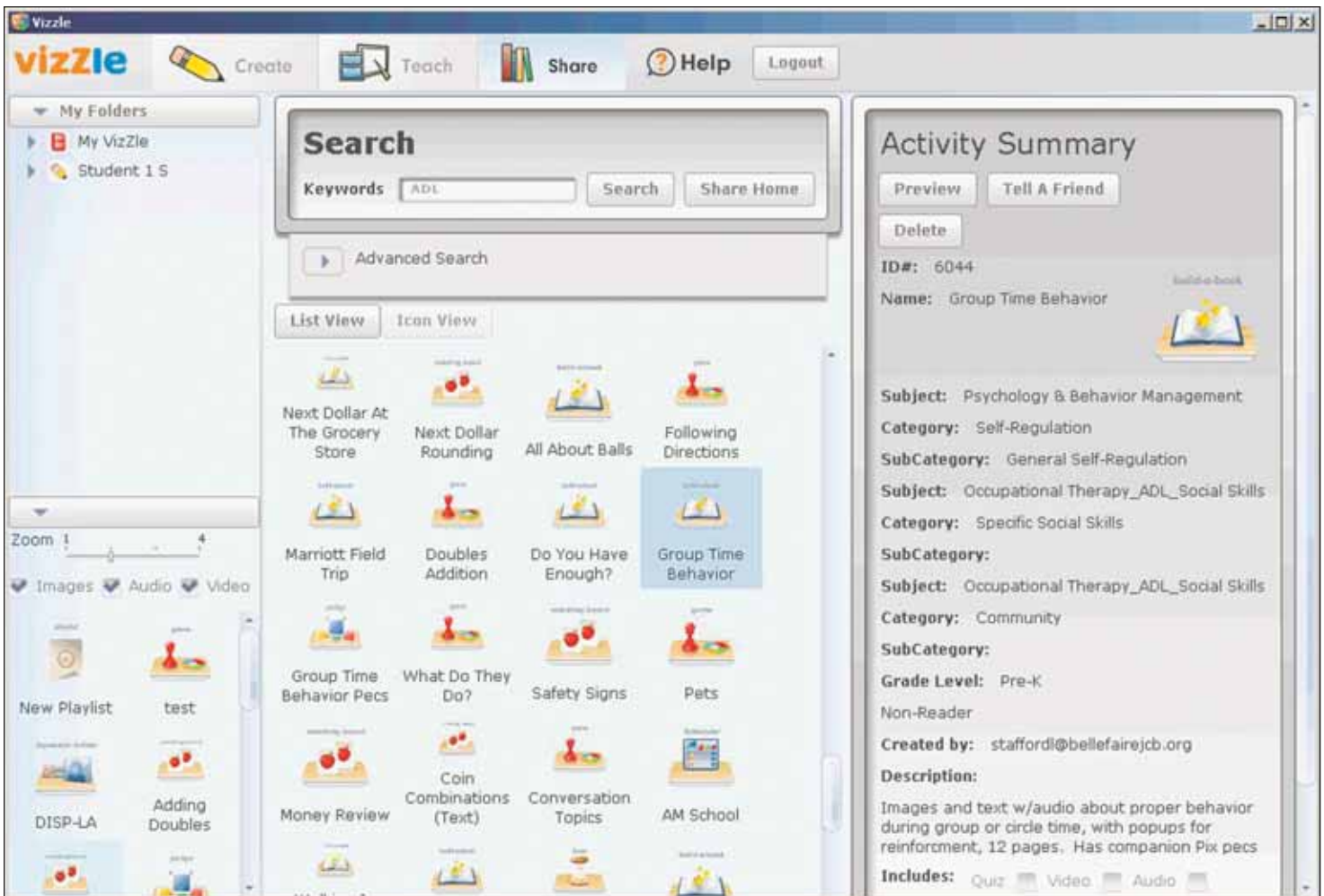

Figure 3: VizZle's peer-reviewed library gives users access to well over 1,000 lessons (the number grows every day) shared by other educators. Teachers and therapists benefit from each other's expertise, and no longer have to "reinvent the wheel" every time they need a visual lesson.

mild-moderate students. The VizZle games and matching boards are ideal for small group lessons or whole group inclusion activities, and it allows me to create social stories with the greatest of ease. I have been able to use the program not only for students with autism, but also for articulation, vocabulary, phonemic awareness and language activities."
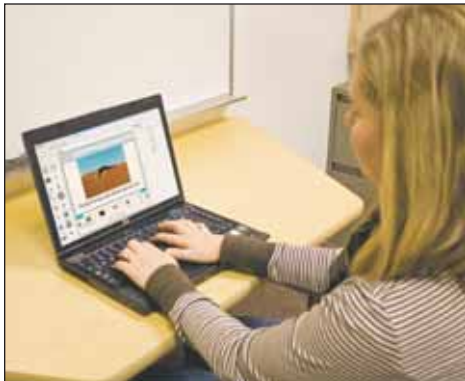
SLP Laura Kaufman appreciates that VizZle is Web-based because, "I can access all my folders from any computer with a web connection. I don't have to go search out where I stored something – it finds me instead."

A FINAL THOUGHT

There is no one right answer when it comes to treating autism – the problems are too individual and unique. But now, thanks to research, practical experience and leading edge technology, there is a tool available that can work for children anywhere on the spectrum.

AUTHOR INFORMATION

Terence Murphy is the CEO and Co-Founder of Monarch Teaching Technologies (MTT), established in 2005 with Wingspan Care Group (the parent of Monarch School for Children with Autism). Mr. Murphy has been involved in healthcare and technology start-ups for 20 years. He has co-authored a book, written numerous articles for industry publications, and is a funded NIH researcher in the autism field. Mr. Murphy has an adult brother with autism. He can be reached at tmurphy@monarchtt.com.

Lauren Stafford is Director of Instructional Design for MTT. An Intervention Specialist with over ten years of experience in the field of Autism, she has worked with students in public and private school settings in Virginia and Ohio. Ms. Stafford worked as an Inter-

Autism Unit Teacher Courtney Monastra instructs one of her students using VizZle on an electronic writeboard. VizZle can be used on any Web-connected computer, as well as with touchscreens and writeboards.

vention Specialist, and later as Academic Supervisor, for Monarch School where she collaborated with Dr. Howard Shane, Monarch staff and software developers on VizZle's curriculum design. She can be reached at lstafford@monarchtt.com .
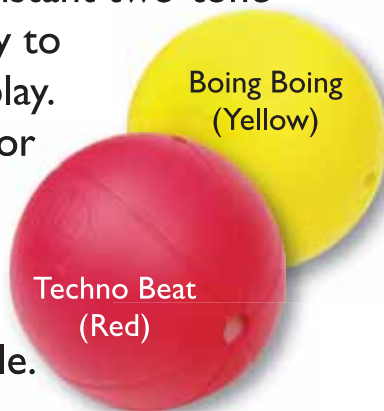
The school staff version of VizZle retails at $940 per year before promotional discounts, and $150 to $300 for the parent/home version. Please visit www.monarchtt.com for more information or a free trial. ∎

The Gift of Reading

BY YNEZ PETERSON AND SHARON GRIMSTEAD

Recently, at a workshop, we heard a parent thank the special educators present for a wonderful gift. You see, a special education teacher had taught her daughter to read. This parent's daughter has cerebral palsy and is dependent for all activities. Since her daughter could read independently, she could occupy herself. This gave the daughter a hobby and it gave the mother time to attend to other family needs without feeling guilty. The mother was not responsible for entertaining her daughter 24/7. This thank you was an affirmation for us. We work with students with intellectual disabilities, including severe physical involvement and developmental delays. Our students, just like this mother's child, will always need assistance for personal care and mobility needs. So it was good to hear that developing hobbies, such as reading, was also an important activity for individuals with disabilities to learn.

Computer-assisted reading can give individuals who have difficulty accessing traditional literacy activities the joy of reading. Reading opens the doors of the imagination, pumps the flow of creative energy and reveals the power of communication. Through the use of assistive technology (AT) and computer-assisted reading (e-books), children with physical disabilities can become more interactive with reading. Instead of passively listening to a story being read to them by someone or the computer, they can actively participate in the process of reading. Just as typical developing children read, stop at the end of the page and then turn to the next page, through AT, our students can also turn the pages of their e-books. They are required to be interactive, to "do something," to hit their switch to move on to the next page. Through use of AT devices, even individuals who cannot read print can enjoy the language and animation that computerized books can provide. Using a single switch and a switch interface, individuals with disabilities can independently advance the progression of these stories at their speed (not yours or mine).

This is a great time for reading and readers. Advances in technology and software have increased opportunities for individuals with disabilities to actively and partially participate in literacy activities. Audio books are more and more popular. Many organizations are publishing engaging and fun animated storybooks on the Web to play online or download to the computer. Several of these Web sites provide navigation buttons that can be controlled with minimal adaptation. We have found that having the advance button in a consistent location makes an Easy Access Design (EAD) Web site that our students can control. When the mouse cursor is placed on the advance button, the user can press their switch to advance the story to the next page. Now individuals with the most severe physical impairment have the potential to control the story. So these EAD Web sites, though not specifically designed for individuals with special needs, can be accessible for all.

There are several Web sites that provide this type of interactive reading experience. With a song just their own, each announces that reading fun is about to begin. Here are a few of our favorites:

One More Story (One More Story, Inc.: www.onemorestory.com, 212-925-9416) is a subscription-based online library of children's classic and contemporary literature. A truly enjoyable experience, with over 50 animated stories that can be read to you or read independently. In the "hear a book" mode, each word is highlighted as it is read. Best of all, the page cannot be advanced until it has finished being read. One More Story has subscription rates for school, library, home use and a special gift for hospitals. Check out their Web site for a sample of their books.

The **TumbleBooks** collection (TumbleBooks Inc.: www.tumblebooks.com, 416-781-4010) is a subscription-based collection of three libraries of online reading fun. The TumbleBook Library

contains over 300 animated storybooks, games, quizzes and puzzles. TumbleReadables are read-a-long books for elementary through high school students. TumbleTalkingBooks is an online audio library. In these collections, hundreds of books, both classic and contemporary, provide for hours of reading. The TumbleBook Library can be controlled by single switch in the manual mode. TumbleBooks offers a 30-day free trial.

StoryPlace, The Children's Digital Library (Public Library of Charlotte and Mecklenburg County, Charlotte, North Carolina: www.storyplace.org, 704-416-0100) is a free virtual library. The online stories in the Pre-School Library can be advanced with a single switch by placing the mouse cursor on the green arrow. Occasionally, the cursor will need to be moved to select a particular character but, generally, the switch user can control most of the stories.

For individuals who would like to hear stories in languages other than English, there are many options. StoryPlace has stories spoken in English and Spanish. TumbleBook Library has stories in English, Spanish, French, Italian, Chinese and Russian.

Childtopia (Childtopia, SL.: www.childtopia.com) a literacy learning Web site from Spain, provides stories spoken in English, Spanish, French, Catalan, Basque and Galician. The sections on listening comprehension and tales have the best activities for single switch access. This Web site is free with ads or, for a small fee, can be viewed without ads.

A wonderful free Web site from Australia that is adding more single switch accessible books is **SillyBooks.net** (SillyBooks.net: www.sillybooks.net/Catalog.htm, +61 (0)3 9593 1790). Many of their online books are appropriate for the older reader. Appropriate AT devices used with their click-through version gives children with disabilities increased independence with reading. SillyBooks are fun and engaging. It's hard to stick with only the click-through versions.

New in fall 2009 was **Easy Learning Books** (Easy Learning Books: www.easylearningbooks.com, 281-955-9855). A subscription-based online library of books on everyday topics and activities. The interactive books on this site are well written to provide basic information on the topics discussed. Picture Symbol

Cues give additional input to target the main concept on each page. Teachers will enjoy the teacher database for saving the results of the online quizzes (switch users will need partner-assisted scanning to complete these quizzes and the other learning activities). This Web site is great for older students who need age appropriate books at a beginner level.

If you like PowerPoint books, you'll love the stories from **Hiyah.net** (www.hiyah.net). This parent shares PowerPoint stories she makes free for teachers and parents to download or play online. Though she directs the user to press the space bar, a mouse click will also advance the story. Both of these options will allow singe switch access. These files are sure to keep your switch user engaged with dozens of pages in each file. Many of the titles show children engaged in the everyday activities of life. And the beauty of using PowerPoint is that you can adapt these files further by hiding slides not wanted if you own PowerPoint. If you don't have PowerPoint, no fears, it comes with the PowerPoint viewer included in each installation download. It may even give you encouragement to make your own PowerPoint books.

Another option that can be viewed in PowerPoint is **Tar Heel Reader** (University of North Carolina at Chapel Hill: www.tarheelreader.org). This free website allows the reader to read and listen to the books provided. One can also contribute books to its listing. It is intended for individuals who are beginner readers of all ages. The web page can be configured to meet a variety of sensory needs. The font and screen color can be changed. The voice used can be set to child, woman or man voice. Books in eleven different languages can be found. It is designed to work with a variety of AT devices, from overlays to switches. In addition to downloading in PowerPoint, books can also be downloaded in Flash and Impress.

As therapists, we both use these types of reading activities to teach switch activation skills. Giving our students the opportunity to turn the page of the story on the computer, independently, allows them to practice switch activation skills in an engaging and fun activity. This ability to direct literacy activities can help them learn how to interact and control devices in their environment. Skills, such as timing, targeting, repetition, etc., needed for interacting with a computer book also teach the skills needed to control a computer, power wheelchair, augmentative communication device and much more.

Frequently, once you have found these reading activities, you want more and more. Finding a variety of literacy activities that could be controlled by single switch was difficult. In 2008, besides Tumble-Books, we had limited Web sites that our students could access by single switch. The online e-books and audio books would progress like a movie, not requiring input once the story was selected. Since the goal is to provide interactive activities and encourage repetition of skill practice, these Web sites did not provide the practice our students needed. Contacting RJ Cooper (www.rjcooper.com) to get assistance led to Application Clicker (RJ Cooper: www.rjcooper.com/application-clicker/index.html, $119 for single license). This software,
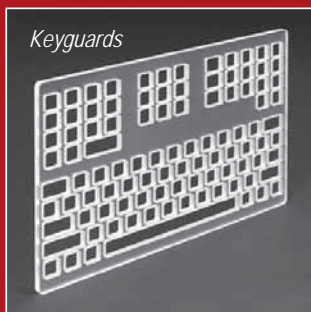
designed by RJ, puts a timer on the software that is providing the story. If the software, like Flash and Windows Media Player, has the play/pause button at the same location, then Application Clicker can be used as a timer to pause the reading after a pre-set time limit. This gives us our Easy Access Design (EAD) and we now have single switch access to many more Web sites.

Application Clicker can give single switch control to **Storyline Online** (The Screen Actors Guild Foundation: www.storylineonline.net). This free on-line streaming video collection has Screen Actor Guild members reading children's books aloud.

Raz Kids (Learning A-Z: www.raz-kids.com; 866-889-3729 (option 5)) is a subscription-based online leveled reading library. Application Clicker works wonderfully to make books in their Listen mode an interactive experience. **Mighty Book** (MightyBook, Inc: www.mightybook.com; 281-955-9855) is another subscription-based Web site. SillyBooks.net and Mighty Book are expanding their click-through or interactive books version, but all of their books are appealing. In order to make their other books interactive consider using Application Clicker. **Book Box** (BookBox Inc.: www.bookbox.com; English versions $2.99 per download) comes out of India and provides their stories translated into 21 different languages. These stories can be downloaded to provide listening without being connected to the Internet and work well with Application Clicker in the small screen version of the story. We have noticed that sometimes, especially with DVDs, that the navigation buttons are hidden when in the full screen version. Application Clicker needs to use the advance/navigation button to work. DVDs like those from **Rabbit Ears** (Rabbit Ears Entertainment, LLC: www.rabbitears.com) are reasonably priced (less than $15 per title) and work well for making enjoyable interactive activities. Rabbit Ears stories include classic children's stories, folk tales and fables.

Windows Media Player combined with Application Clicker give interactive control to audio books. For individuals who get irritated from animation, audio books maybe a better alternative. **Story Nory** (Blog Relations Ltd.: www.storynory.com) comes out of England and gives a wonderful variety of stories to hear for free. Their selections include classic fairy tales and original children's stories. Download the files to your computer to use with Application Clicker. **Kids Learn Out Loud** (LearnOutLoud, Inc.: www.kids.learnoutloud.com/Kids-Free-Stuff) provides audio books and podcasts for listeners of all ages (some free, some not).

Their large selection includes recordings that are truly educational, engaging and inspirational. Basketball fans will remember the Jim Valvano 1993 ESPY Award Address.

Yes, these are only a few of our favorite literacy Web sites for single switch activation. Some listed have the Easy Access Design (EAD) where the navigation button remains in a consistent location, while others require Application Clicker, software by RJ Cooper, to convert them so that single switch activation can be used. Some Web sites are fee-based subscriptions, others are free. For those in the military, the Military OneSource Web site (www.militaryonesource.com) provides TumbleBooks free for military families (just search for TumbleBooks under the Military Family section). Many school and public libraries offer TumbleBooks and One More Story free for their consumers – all you need is a library card. For additional literacy Web sites that may be of interest, go to www.guest.portaportal.com/otr4access. There you will find a host of information on Web sites to explore. For all of these Web sites, consider contacting them to let them know you enjoy the ability to access their Web site by single switch. For the ones that take donations, maybe you could make one. We all need to let these organizations know we like what they are doing and want them to continue. It may be the incentive they need to keep going.

With the appropriate AT devices and Easy Access Design Web sites, children can be given additional exposure to literacy activities. In a sense, individuals with disabilities can be given the gift of reading, specifically, the gift of control and autonomy during their reading activities.

AUTHOR INFORMATION

Ynez Peterson is an OTR. She can be contacted at St. Mary's School for Disabled Children/SECEP, 6171 Kempsville Circle, Norfolk, VA 23502; E-mail: peterson.ynez@secep.net

Sharon Grimstead is an OTR. She can be contacted at St. Mary's School for Disabled Children/SECEP, 6171 Kempsville Circle, Norfolk, VA 23502; E-mail: sgrimste@nps.k12.va.us

Note: Ynez Peterson worked with RJ Cooper to develop Application Clicker but does not get any revenues from its sale. ∎

Creating Visual Supports with Board-Making Tools Can Benefit Many Learners

By Bridget Gilormini and Meghan Kunz

Visual strategies have long been used to help visual learners, such as students with autism, organize their life, improve their understanding of language and navigate unfamiliar situations. Visual supports, however, can benefit a broad range of learners. In fact, many people use visual supports on a daily basis. When at a fast-food restaurant, do you read the menu or look at the pictures? Do you remember what's on your schedule at the end of the week, or do you use a calendar as a reminder? Do you know which groceries you need but still make a list? If you answered "yes" to any of these questions, then you most likely benefit from using visual supports.

Visual supports are also a great universally designed element. We can find many examples, including the large golden arches that beckon us to come for a bite to eat, the parking lots at the Mall of America that use state names, letters and pictures to help us remember where we parked, and those bathroom visuals that help us distinguish the men's restroom from the women's restroom.

To understand how visual supports can benefit students, especially those with disabilities, consider how an adult with autism once explained his thinking process. "I think in pictures. Words are like a second language to me," said Dr. Temple Grandin. "I translate both spoken and written words into full-color movies, complete with sound, which run like a VCR tape in my head. When somebody speaks to me, his words are instantly translated into pictures."

When implemented correctly, visual supports can gain a student's attention, improve understanding, decrease anxiety, improve communication, provide skill support and reduce challenging behaviors. You can create a visually friendly environment using pencil and paper, pictures and photographs, and computer software programs that provide customized visuals to meet individual needs. Iden-tifying the need for visual strategies often involves finding the events in a student's schedule that cause recurring frustrations, and then breaking that event into smaller steps. Learners often benefit from a daily schedule – and even mini schedules – that translate their activities into smaller, more manageable steps.

CASE STUDY ONE

Johnny is an eight-year-old boy with Down Syndrome. When he gets off the bus from school, he is supposed to use the bathroom and wash his hands before having a snack. When Johnny gets off the bus, meltdowns often occur. Johnny's parents are looking for ways to eliminate Johnny's frustration and help him with this transition time.

SOLUTIONS

Upon closer examination, it appears that Johnny is having a difficult time predicting what is expected of him when he arrives home from school. To help Johnny be more successful during this transition time, a visual schedule was made. This schedule clearly labels and provides picture supports for Johnny's routine (off of bus, bathroom, wash hands and snack). The schedule was made with photographs and corresponding step-by-step directions and printed onto an 8.5x11 piece of paper. It could be laminated for more durable use or include check marks that Johnny could attach with Velcro as he follows the schedule and completes each task.

In addition, a direction board could be made to further break down the steps for using the bathroom and washing hands (turn on water, check the temperature, apply soap and rub hands together while singing the ABC's). This board might be mounted in the bathroom near the sink and would be a simple visual for Johnny to follow. To provide even further support, picture choices could be used when offering Johnny his after-school snack.

Breaking down Johnny's after-school routine into smaller steps with visual supports helps Johnny predict what is required of him. It prepares him for the transition and provides him communication supports to use if necessary. As Johnny grows more familiar with using visual supports, he can learn to be more independent as he becomes more responsible for setting up his calendar,

TOOLS FOR CREATING VISUAL SUPPORTS

When the time comes to create your own visual supports, there are several products to choose from. You can compare software tools that can be used to make visual supports by viewing Figures 1 (page 30) and 2 (page 34). These comparison grids explore the following 10 different board-making tools and lists the different features of each so you find the one that best meets your needs. While the list is not exhaustive, it contains several comparable programs for creating visuals.

Boardmaker V6 and Boardmaker Print Editor – Many of you may be familiar with the Boardmaker software program. Boardmaker has been the industry standard for many years and contains many features that make it a robust program. The most recent version, Version 6, is available for both Mac and PC users. Boardmaker also recently released its new Web-based board tool, Boardmaker Print Editor. Boardmaker Print Editor is available online through Adapted Learning, a Web-based environment for sharing Boardmaker boards. It provides users of Boardmaker a place to post, share, and borrow great ideas. Print Editor is a Web-based version of Boardmaker that allows you to edit the boards uploaded to your account at Adapted Learning. Adapted Learning is free, although you do need Boardmaker to open downloaded files. Print Editor is available as a yearly subscription to current owners of Boardmaker. It is not meant to

be a creation tool, but allows you to access and edit your creations via the Internet without the need for a software CD. Pricing starts at $79 a year. Find more information about Print Editor and Adapted Learning at www.adaptedlearning.com or through www.mayer-johnson.com.

Mrs. Riley Page Builder is one of several new products this year. A Web-based application, Mrs. Riley gives you access to your materials anywhere you can use the Internet and a computer, preferably one with a high-speed Internet connection. Mrs. Riley is also a card-making tool that provides board templates and offers an easy-to-use drag and drop feature. With this program, you can search cards that other users have created, create a new card by searching the Mrs. Riley symbol library, upload your own image, or search Flikr and Yahoo for symbols and pictures. Pricing starts at just $5 a month and features a pay-as-you-go schedule. Learn more at www.mrsriley.com.

Overboard is a software program developed by Gus Communications, Inc. that is compatible with both Mac and PC computers. It includes a unique symbol set and a simple interface, 5,500 communication symbols, and more than 250 device communication templates. The program's features, such as page linking to create interactive communication boards, and its activities and voice output turn the software into a high-tech augmentative and alternative communication system or interactive learning tool. Overboard with Microsoft Speech costs $169; Overboard with Neo Speech costs $199. Find more information about Overboard at www.gusinc.com.

PHOTOsyms is a free flash program that allows you to quickly and easily create custom symbols from digital photographs. Created by a team of students from the University of Minnesota, PHOTOsyms is compatible with both Mac and PC. When you first open the program you will see two working windows. One lets you view your board and one allows you to grab and edit images. When the program is downloaded, it saves a MySymphotos folder to the desktop. It's important to remember that the photos and images you want to use must be stored in the MySymphotos folder in order for the program to work with them. How you label and save your photos in the MySymphotos folder is how they will appear in the board. The seven available boards give you a range of options and allow you to place two to 54 symbols on a page. Although you do not have the ability

to save and edit your boards, you can save your file as a PDF and print copies by using Cute PDF Writer (www.cutepdf.com/products/cutepdf/Writer.asp) on a PC or the Save as PDF option on a Mac. Find more information about PHOTOsyms at www.photosyms.org.

Picture It by Slater Software is another program available that can be used to support literacy and create visually supported activities. The Picture It program contains 6,000 literacy support pictures that can be printed in black and white or color. In addition, the program has voice output so users can hear directions, communication boards or activities read aloud. The program has some basic customizing capabilities, such as the ability to move and resize pictures on the page, and is available for both Mac and PC. It costs $295. More information is available at www.slatersoftware.com.

Picture This is a collection of high-quality photographs by Silver Lining Multimedia, Inc. The original program, Picture This Standard Edition, contains 2,700 photos in 30 different categories while its professional version, Picture This Pro, contains more than 5,000 pictures. Silver Lining Multimedia also makes a PeekaViewer program. PeekaViewer allows users to easily find photos from the different collections and preview the images before inserting them into a board. Some of the highlights of the collection include crisp clear photographs, the ability to place a "no" stamp on top of an image, print labels in multiple languages, search by sound location or by phonetics, and place the picture on one side and the word on the other. Pricing varies for each collection but ranges from $39.95 to $89.95. Learn more about Picture This and other programs at www.silverliningmm.com.

Pogo Boards is another new product. A Web-based program, Pogo Boards makes use of Microsoft's Silverlight technology. The program features a unique symbol set called SymbolStix, designed and developed by News-2-You for use in its weekly Internet newspaper. The program also uses the PiCS Symbol Set and can pull in visuals from Google images. You can also type in a specific Web site to gather images. As with other Web-based board-making tools, Pogo Boards gives you access to your material anywhere you have a computer and an Internet connection. Additional features of this Web-based program include private and public sharing of files, many communication device templates and the ability to create visual scenes. Pricing is per person

and starts at $9.95 a month. Learn more at www.pogoboards.com.

TheraSimplicity – More than just a board-making tool, TheraSimplicity features hundreds of pre-made activities in the areas of language and communication. TheraSimplicity's board-making tool, TheraBoards, allows you to create boards with one to 32 cells, search hundreds of images on the site or import up to 100 of your own. Several templates are built in and can be used to create visual supports for a sequence or for learning. The program also features a tool for creating story boards and informational handouts on many categories of speech and language. Cost is $169 a year. Learn more at www.therasimplicity.com.

Tobii SymbolMate – Tobii ATI recently released a board-making tool called SymbolMate. SymbolMate is a collection of 15,000 SymbolStix line-drawn symbols. The program also includes a large library of templates for communication devices, calendars, creating schedules, storyboards, and more, and allows you to import Bliss, Widgit, PCS and Pictogram symbols. Symbols can also be printed in multiple languages. Cost is $299. Find more information at www.tobii.com/assistive_technology/products/symbolmate.aspx.

Microsoft Word, Pages, Open Office Writer – When considering options for creating boards, don't forget the tools you already have. Although Microsoft Word's intended purpose is for word processing, certain features of the program allow you to use it as a board creation tool. Using Microsoft Word, you can insert text and import clipart symbols or realistic photographs. If you don't own Microsoft Word, many of the same features can be found in Pages (a word processing program for Mac) or Open Office Writer (a free, open-source program for word processing).

Most of the programs mentioned in this article provide a free trial or demo version that allows you to test it before you commit to making a purchase. Check the individual Web sites listed for trial and demo information. For more information about these programs, please contact PACER Center's Simon Technology Center by calling 952-838-9000 or e-mailing stc@pacer.org. More information about PACER (8161 Normandale Blvd, Minneapolis, MN 55437), can be found at www.PACER.org

ABOUT THE AUTHORS

Bridget Gilormini is the director of PACER's Simon Technology Center, and Meghan Kunz is the coordinator of PACER's Simon Technology Center. ∎

	1. Boardmaker	2. Mrs. Rily Page Builder	3. Overboard	4. PHOTOsyms	5. Picture It
Vendor	Mayer-Johnson	Emergent Behavior LLC	Gus Communication Devices, Inc.	PHOTOsyms	Slater Software, Inc.
Contact	800-588-4548	703-621-3660	866-487-1006	651-428-0453	877-306-6968
Web site	www.mayer-johnson.com	www.mrsriley.com	www.gusinc.com/overboard	www.photosyms.org	www.slatersoftware.com
Cost	$329	$5 / 1 month to $45 / 12 months	$169	Free	$295
Version	6	Online subscription	2.28	Online download	4
Operating system / System requirements	Windows 2000 or higher; Mac 10.2.8 or higher	Windows XP, Vista; Mac OS X; (works with most current browsers)	Windows XP, Vista; Mac OS X	Flash player (works on both Mac and PC)	Windows 98 - XP; Mac 8.6 - 10.4
Ability to print	X	X	X	X	X
Ability to save	X	X	X	-	X
Addendums	$FEE	Symbol additions come with subscription	Symbol additions come with subscription	-	-
Black & white symbols	X	-	X	-	X
CD required to run	X	-	-	-	-
Color symbols	X	X	X	-	X
Color photographs	-	X	-	-	-
Ability to import symbols or pictures	X	X	X	X	X
Customizable grid	X	X	X	X	X
Customizable symbols	X	-	-	-	-
Languages	44	1	1	1	2
Line drawn symbols	X	-	X	-	-
Page linking features	Boardmaker Plus and Speaking Dynamically Pro only	-	X	-	-
Resizable symbols	X	-	X	-	X
Search symbols by category	X	-	-	-	-
Search symbols phonetically	-	-	-	-	-
Speech synthesizer	Boardmaker Plus and Speaking Dynamically Pro only	-	Standard with Microsoft Speech; Neo Speech additional	-	Text-to-speech
Symbols	4,500	3,000+	5,500	-	6,000
Templates	350+	X	250+	X	-

Figure 1: Software comparison chart.

Closing The Gap
28th ANNUAL CONFERENCE
Assistive Technology in Special Education and Rehabilitation

OCTOBER 21-23, 2010
Preconference Workshops
October 19-20, 2010
MINNEAPOLIS, MINNESOTA

C A L L   F O R   P A R T I C I P A T I O N

CONFERENCE: CLOSING THE GAP'S ANNUAL CONFERENCE HAS AN INTERNATIONAL REPUTATION AS A LEADING SOURCE FOR INFORMATION ON INNOVATIVE APPLICATIONS OF ASSISTIVE TECHNOLOGY FOR PERSONS WITH DISABILITIES.

The 2010 Conference builds on a tradition of providing a comprehensive examination of the most current uses of technology by persons with disabilities and the professionals who work with them.

Topics will cover a broad spectrum of technology as it is being applied to all disabilities and age groups in education, rehabilitation, vocation and independent living. People with disabilities, special educators, rehabilitation professionals, administrators, service/care providers, personnel managers, government officials and hardware/software developers will share their experiences and insights at what has become known as the best educational AT conference in North America.

Groups or individuals who wish to participate in Closing The Gap's 2010 Conference should send their proposals for one-hour and multiple-hour presentations as soon as possible. Directions and information are found within. Please fill out the proposal form completely; incomplete proposals will not be considered.

PROPOSALS:
Closing The Gap will consider proposals for one-hour or multiple-hour sessions that describe and/or demonstrate successful applications of assistive technology for persons with disabilities.

Proposals are invited that report results of current applications, research, development of hardware, software, or adaptive devices, model programs or procedures used by and for persons with disabilities.

Proposals for sessions that demonstrate the use of software programs, adaptive devices or the innovative use of assistive technology are highly encouraged – especially specific how-tos, tips and tricks and product comparisons.

Proposals should focus on practical applications and best practices rather than theoretical discourse.

Proposal content should be supported by evidence and should include quantitative performance data.

Proposals for open forums in which participants discuss, comment openly and share ideas and opinions relevant to a primary subject or focus are also encouraged.

Because the median computer sophistication level of Closing The Gap Conference participants advances each year, Closing The Gap encourages proposals for sessions directed at persons who are actively using assistive technology in education, rehabilitation, vocation or independent living – typically intermediate to advanced level computer users.

Closing The Gap recognizes the continued need for introductory activities as well, and will select a range of proposals that meets needs across the assistive technology experience continuum and facilitates a balanced interchange between special educators and rehabilitation professionals.

PROCEDURE:

ABSTRACT: A 300- to 500-word abstract must accompany a copy of the proposal form found within this Call for Participation. This abstract will be reviewed by a conference panel and is critical in determining the quality and acceptance of the presentation.

SUMMARY: A separate, 100-word summary must also be submitted for inclusion in the Conference Directory. This summary should be written in the future tense, using person-first language, concisely stating presentation sequence and scope, and highlighting concrete examples and products. This summary must be congruent with the content of the actual presentation. It will be used by participants as the basis for attending and evaluating the presentation.

PROPOSAL FORM: The proposal form must be completely filled out and returned with the abstract and summary. If there will be more than one presenter, a lead presenter must be designated and complete contact information provided for each presenter.

Also, please only list those persons who will actually attend and present at the conference. You may note the appropriate author/ creator of your presentation on your abstract, but do not list the author(s) or creator(s) as presenters unless he, she or they will be present at the conference.

SUBMISSION DEADLINE:
The proposal form, abstract and summary must be received by Closing The Gap on or before 2:00 pm Central Daylight Time on Thursday, May 6, 2010. Incomplete submissions will not be considered.

NOTIFICATIONS:

Confirmation of presentation proposal acceptance/declination, and confirmation of specific date, time and hotel of accepted presentation will be mailed by the first week in August.

In offering to present a paper, it is expressly understood that the presentation may be scheduled at any time on any of the conference days at the discretion of the conference organizers.

Presenters will be expected to provide all handouts at the conference. In addition, handouts must be made available to Closing The Gap for posting on Closing The Gap's Web site. Failure to adequately supply handouts, both on-site and Web, will result in nonconsideration of future proposals.

Selected manuscripts submitted by conference presenters will be published in the Closing The Gap magazine and/or on Closing The Gap's Web site. Guidelines for submitting materials for these proceedings will be sent upon confirmation of presentation acceptance.

REGISTRATION:
Presenters may register for the three-day (October 21-23, 2010) confer-ence for $305 (regular registration is $435).

Presenters do not have to register for the conference to present. However, only those presenters who have registered may attend conference sessions/exhibits other than their own.

Cancellations must be received in writing by Closing The Gap on or before October 1, 2010. There is a $75 cancellation fee for each one-day preconference workshop, each one-day conference registration, or each exhibit hall only registration; $125 cancellation fee for each three-day conference registration.

No refunds after October 1, 2010. Unpaid balances are due in full. Replacements are welcome and must be submitted in writing.

All-day preconference workshops are scheduled for October 19-20 and cost $270 for one day or $480 for two days.

Online submission available at
www.closingthegap.com

Closing The Gap
P.O. Box 68, Henderson, MN 56044
Phone: 507-248-3294; Fax: 507-248-3810 • E-mail: info@closingthegap.com

2010 PRESENATION PROPOSAL FORM

Presentation title:_____
_____

Presenter name(s): (If more than one presenter, designate lead presenter and provide complete contact information for each presenter. List only those persons who will actually attend and present at the conference.)
_____
_____

Professional experience:_____
_____

Position / Title(s):_____
_____

Institution / Company:_____

Address:_____

City:_____ State / Country:_____ Zip / Postal code:_____

Phone:_____ Fax:_____

Summer phone:_____ E-mail address:_____

Web site:_____

Have you or any co-presenter(s) presented this proposal before? ❏ yes   ❏ no
If yes, please indicate when and where:_____

Will you or any co-presenter(s) submit this proposal to or present this proposal at any other national conference in 2010?
If yes, please indicate what conference, when and where: _____

The content of this session is supported by evidence and references are provided. ❏ yes   ❏ no
This session includes quantitative performance data. ❏ yes   ❏ no

TYPE OF PRESENTATION:

❏ demonstration   ❏ lecture   ❏ networking session / discussion   ❏ Macintosh hands-on workshop
❏ PC hands-on workshop   ❏ iPod workshop   ❏ hands-on workshop (no computers; presenter-provided devices / materials)

If hands-on: ❏ Closing The Gap-provided computers / iPods   ❏ participant-provided computers / iPods*   ❏ either is fine

If computer is participant provided, this information must be included in the session's description.

    List software to preinstall (if any):_____

    List computer platform: _____ List operating system requirements: _____

    List Web browser requirements (if any): _____

*If iPod is participant provided, this information must be included in the session's description.

    List of Apps to preinstall (if any): _____

    List iPod OS version: _____   Is USB connecting cable required? ❏ yes   ❏ no   Are headphones required? ❏ yes   ❏ no

PRODUCT DEMONSTRATION / COMPANY AFFILIATION:

If this is a product demonstration, is the product available for purchase at this time?   ❏ yes   ❏ no

Are you or any co-presenters affiliated in any manner with a company or organization whose commercial products you will be presenting or

demonstrating? ❏ yes   ❏ no If yes, please explain affiliation: _____

Please note, if representing or endorsing a product, please be very careful to share information, strategies and implementation ideas rather than to "sell the product." Participants have commented and requested this to be the case.
_____

LENGTH / SOPHISTICATION:

Length of Presentation: ❏ 1 hour ❏ 2 ½ hours
Audience computer sophistication level: ❏ beginner   ❏ intermediate   ❏ advanced   ❏ n/a
Presentation subject sophistication level: ❏ beginner   ❏ intermediate   ❏ advanced   ❏ all

EQUIPMENT:

Standard equipment in each presentation room:

- ■ projection system used for computer and / or video display
- ■ wireless Internet connection
- ■ one screen
- ■ two wireless microphones

Equipment requested from Closing The Gap: ❏ Mac ❏ PC ❏ no equipment requested

Additional equipment that you, the presenter, will supply:_____

If you supply your own laptop computer, it is necessary for you to list the make and model: _____

If you plan to connect to the Internet with your laptop, please provide a wireless networking card.

_____

PRIMARY SUBJECT OF PRESENTATION (please be specific; if more than one is applicable, rate 1, 2, 3):

___ accessible instructional material

___ assessment

___ augmentative communication

___ autism

___ cognitive redevelopment

___ curriculum development / modifications

___ deaf communications

___ differentiated instruction

___ early childhood development

___ employment / job accommodation / job training

___ environmental control

___ functional living skills

___ funding

___ geriatrics

___ IEP / IPP

___ inclusion / cooperative learning

___ keyboard alternatives

___ language development

___ learning styles (LD)

___ legislation

___ literacy

___ professional development

___ research

___ response to intervention

___ screen alternatives
   (Braille / large print / speech output)

___ seating / positioning / mobility

___ technology integration

___ transition

___ universal design for learning

___ Web 2.0

___ other (please state):
   _____

LEARNING OUTCOMES: As a result of this activity, participants will be able to:_____

_____
_____
_____
_____

(Check the CEU area of the AAC Institute Web site for appropriate verbs to be used for learning outcomes statements. <www.aacinstitute.org>)

PRIMARY FOCUS OF PRESENTATION (please be specific):

___ administration

___ rehabilitation

___ service / care

___ special education

___ cognitive disabilities

___ hearing impaired / deaf

___ learning disabilities

___ physical disabilities

___ speech / language disabilities

___ vision impaired / blind

___ behavioral / emotional disorders

___ traumatic brain injured

___ infant / toddler skill level

___ preschool skill level

___ kindergarten-grade 6 skill level

___ grades 7-12 skill level

___ adult skill level

COMPUTER TYPE ADDRESSED:

❏ Macintosh ❏ PC ❏ other (please state): _____

	6. Picture This Pro	7. PogoBoards	8. TheraSimplicity	9. Tobii SymbolMate	10. Microsoft Word
Vendor	Silver Lining Multimedia, Inc.	Talk to Me Technologies	TheraSimplicity	Tobii ATI	Microsoft
Contact	888-777-0876	877-392-2299	800-906-8302	800-793-9227	800-936-5700
Web site	www.silverliningmm.com	www.pogoboards.com	www.therasimplicity.com	www.assistivetech.com	www.microsoft.com
Cost	$49.95 - $89.99	$69 / year	$189 / year	$299	$150
Version	Professional / Standard	Online subscription	Online subscription	1.0	2007
Operating system / System requirements	Windows 95 or higher for Pro/Standard; Pro, Mac OS 8.5 or higher, OS X for Pro, Standard not OS X	Windows XP, Vista, Mac OS 10.4.8+, Recent browser (Microsoft Silverlight+)	Internet Explorer for PC; Firefox for Mac	Windows XP and Vista	Windows 2000, XP, and Vista; Mac OS X (version 2004 or 2008)
Ability to print	X	X	X	X	X
Ability to save	X	X	X	X	X
Addendums	$FEE	Symbol additions come with subscription	Symbol additions come with subscription	-	-
Black & white symbols	-	X	X	X	Clip art
CD required to run	X	-	-	-	-
Color symbols	-	X	X	X	Clip art
Color photographs	X	-	X	-	X
Ability to import symbols or pictures	-	X	X	X	X
Customizable grid	X	X	X	X	X
Customizable symbols	-	-	-	X	-
Languages	5 Pro, 1 Standard	-	1	5	1
Line drawn symbols	-	X	X	X	Clip art
Page linking features	-	-	-	-	-
Resizable symbols	-	X	-	X	X
Search symbols by category	X	X	X	X	-
Search symbols phonetically	X in Pro version only	-	X	-	-
Speech synthesizer	-	-	-	-	-
Symbols	5,000 Pro, 2,700 Standard	20,000+	12,000	15,000	Clip art
Templates	Picture This Pro	X	X	X	(Microsoft Word)

Figure 2: Software comparison chart (continued).

NEW!

Visit our newly designed Web site:
www.closingthegap.com

Find the *Right* AT Strategies and Solutions for your Special Needs

See for yourself how Closing The Gap Solutions makes finding and comparing AT products, implementation strategies and solutions easier than it has ever been before.

Learn more about an
Online Solutions Subscription at:
www.closingthegap.com/solutions

FREE 14-day Trial at:
www.closingthegap.com/trial

Electronic Textbook

College and university instructors across the country have been choosing Closing The Gap Online Solutions as their textbook of choice!

Students qualify for a special $40 one-year subscription rate. Inquire for more details.

Closing The Gap
Assistive Technology Resources for Children and Adults with Disabilities

---

Assistive Technology Resources for Children and Adults with Disabilities

Discover Solutions, the print and online resources of Closing The Gap.

Closing The Gap
······ SOLUTIONS ·······

P R I N T   S U B S C R I P T I O N S :

In the United States
- ❑ One year (six issues) $36
- ❑ Two years (12 issues) $64

Canada – Airmail
- ❑ One year (six issues) $52 (U.S. Funds)
- ❑ Two years (12 issues) $92 (U.S. Funds)

❑ Combination, One-year Print and Online Subscription $75 (U.S. and Canada)

Receive a **Free** Resource Directory with a NEW 2-year subscription to *Closing The Gap*

Resource Directory
$16.95 plus postage and handling
($7 in the United States; $7 to Canada)

Quantity Discounts:
1-9	$16.95
10-24	$14.50
25-49	$12.25
50-99	$10.50
100-999	$9.50
1,000 or more	$8.00

Free *shipping and handling*
If check in full payment accompanies an order for 10 or more directories (shipped within the United States only) Closing The Gap will pay shipping charges. Shipping and handling charges will be added to all invoices and credit card payments. Purchase orders will be accepted.

O N L I N E   S U S B S C R I P T I O N S :

Single subscription:

❑ One-year Subscription $50

❑ One-year Student Subscription $40
(Proof of current enrollment must accompany order. E-mail or mail statement to Closing The Gap.)

❑ Combination, One-year Print and Online Subscription $75 (U.S. and Canada)

Site license:
Site License – number of users: _____
(Purchase orders accepted.)

Number of Users	Discount	Unit Price
10-49	25%	$37.50
50-99	50%	$25.00
100-299	60%	$20.00
300+	70%	$15.00

Please complete the following:

Name _____

Organization _____

Mailing Address _____

City _____ State / Country _____ Zip / Postal code _____

* Phone _____ Fax _____

* E-mail _____
    * Required for Online Subscription and/or credit card orders

Occupation_ _____

Where did you hear about Closing The Gap? _____

❑ **Check is enclosed $** _____

❑ **Please charge $** _____ to ❑ Visa ❑ MasterCard

  Credit card account number _____

  Expiration date _____

  Cardholder signature _____

  Cardholder address _____

❑ Purchase order attached # _____
(Allow 8 - 10 weeks for delivery of your first issue.)

Orders accepted on-line at www.closingthegap.com
Secure Sockets Layer Encryption (SSL) ensures the safety of your credit card transactions.
28/6